The College Ladder:

Linking Secondary and Postsecondary Education for Success for All Students

JENNIFER BROWN LERNER

BETSY BRAND

AMERICAN YOUTH POLICY FORUM

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Jennifer Brown Lerner and Betsy Brand, authors
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Executive Summary

Much has been written about the failure of many American high schools to adequately prepare a large percentage of young people for college, work, and citizenship. The most prevalent figures state that only 70% of students nationally complete high school (Barton, 2005, p.3); of those, only 53% enter college directly from high school and only 35% earn a degree (Adelman, 2006b, p. 11).

Since the current design of high school is effective for only a small percentage of youth, it makes sense for communities to offer other options and choices to help youth succeed. One option to increase rigor and motivate students that has been gaining favor is to allow high school students to take college-level courses. Arrangements that allow high school students to participate in college classes come in many forms and designs, including dual enrollment, Advanced Placement (AP) courses, Tech Prep, and middle and early college high schools. They share important common elements of strong academics keyed to postsecondary standards, increased student engagement through interesting classes and/or attendance on a college campus, and exposure to adult expectations and milieu, and often are accompanied with supports to ensure student success. From our perspective, these programs are high value programs, because they provide many of the important elements that have been missing from high school for most students: challenge, engagement, access to the adult world, and support.

The College Ladder: Linking Secondary and Postsecondary Education for Success for All Students is the result of a two-year effort to identify, summarize, and analyze schools, programs, and policies that link secondary and postsecondary education to help students earn college credit or take college-level courses. To be inclusive of the variety of models and programs that link secondary and postsecondary education, AYPF will use the term **Secondary-Post-Secondary Learning Options** (SPLOs). AYPF focused on identifying SPLOs serving first-generation, low-income, and low-performing students, students with disabilities, and underrepresented minorities.

Purpose

This compendium is designed to help national, state, and local policymakers and practitioners better understand what SPLOs are, the various ways they are structured, and their impact on student outcomes. By helping policymakers gain a better understanding of successful or effective interventions, they can implement policies that will support student preparation for and access to postsecondary education. By profiling SPLOs, practitioners can learn what models and strategies are effective with various student populations.

AYPF's efforts were driven by the following guiding questions:

- Is there evidence that these different models of SPLOs are effective at increasing academic performance, closing the achievement gap, and increasing entry to and retention in postsecondary education, particularly for first-generation, low-income, or students of color and students with disabilities?
- Do financing mechanisms support equity and access by all students? Is there evidence that these programs are cost effective?
- Are college courses for high school students as rigorous and at the same level as regular college courses?
- What evidence exists to demonstrate that these programs meet their respective goals of serving a specific target population or solving a specific problem?

Secondary-Postsecondary Learning Options (SPLOs) are schools and programs that link secondary education with two- and four-year institutions of higher education and allow high school students to participate in college-level courses for credit and not for credit.

- Who should pay for high school students to take these courses and what are some of the financing structures? Should federal student aid dollars be used to support high school students?

- On what outcomes should these programs be measured: high school graduation or grades, attainment of college credit, entry to postsecondary education, and/or completion of degree?

Unfortunately, due to limitations in the data, AYPF was unable to answer many of these questions. More specifically, we were unable to gather enough data to answer questions about specific categories of students. Instead, the available data allowed us to consider the following program characteristics and issues: type of student served; sources of funding; course rigor, as it is related to program location, teacher and faculty preparation, prerequisites for participation, and program length; extra supports; formal sanctioning; transferability of credit; and data.

Programs Reviewed

AYPF undertook an extensive literature review to identify research, evaluations, and studies on SPLOs. Programs in this compendium either have a third-party evaluation or have participated in a semirigorous data collection effort. Twenty-two programs were identified as meeting our criteria and have been categorized by program type described below.

Dual Enrollment

Dual enrollment includes programs that provide opportunities for high school students to participate in college-level coursework in hopes of earning postsecondary credit. Programs are offered both on campuses of colleges or universities or in high school classrooms. Within this compendium, the dual enrollment section includes institution-specific dual enrollment programs, Advanced Placement (AP),[1] and statewide dual enrollment programs with an emphasis on implementation at one site.

Tech Prep

Tech Prep is a planned sequence of study in a technical field that typically provides students the opportunity to earn postsecondary credit toward a technical certificate or diploma. Tech Prep is funded under the Carl D. Perkins Vocational and Technology Education Act through federal grants to states.

Middle/Early College High Schools

Both middle and early college high schools are located on or near a campus of a postsecondary education institution. Both types of schools supplement their course offerings by enrolling students in college courses for both secondary and postsecondary credit. Middle college high schools graduate students with a high school diploma and some postsecondary credit; early college high schools encourage students to remain for a fifth year to graduate with both a high school diploma and an associate's degree.

Programs Serving Disadvantaged Youth

A number of SPLOs are targeted at out-of-school or disadvantaged youth and provide an opportunity for them to participate in challenging, college-level coursework with appropriate support. Most of these programs are designed and operated by community colleges or community-based organizations in partnership with an institution of postsecondary education.

College Access Programs

A number of programs focused on college access also provide an opportunity for their students to enroll in postsecondary coursework. These programs typically do not offer their own SPLOs, rather they encourage students to participate in existing SPLOs. The compendium provides short descriptions of these programs and some information on their outcomes, but does not consider them with the results of the 22 evaluations.

Outcomes

The evaluations included in this compendium considered a variety of outcomes at both the secondary and postsecondary levels. Only a limited number of the included evaluations have longitudinal data; instead, most have outcome data at a specific point in time, such as at high school graduation or after one semester or one year of postsecondary education. While these outcomes are useful, they do not provide a complete understanding of the long-term effects of participation in a SPLO. None of the evaluations in the compendium considers all the outcomes listed below, and most only collected data on three to six outcome measures. Moreover, very few (approximately 15%) of the included evaluations were able to compare these outcomes to a control group to determine statistical significance.

Credits earned during high school

Of the 22 programs in the compendium, over half were able to provide the number of credits students earned while in high school. Unfortunately, the evaluations typically do not indicate whether these credits are transferable to the postsecondary education institutions that students subsequently attended. Credits earned ranged from zero credits (for students who participated in a course, but did not earn a grade eligible for credit) up to two years worth of credit, equivalent to an associate's degree.

High school standardized tests

Seven of the evaluations included results of SPLO students' scores on state-mandated tests during high school. Often, these results were compared to students in the district not participating in the SPLOs to demonstrate that SPLO students were outscoring their peers.

High school completion

Eleven of the included SPLOs, particularly those serving formerly out-of-school youth, reported their high school completion rates. High school graduation was important for this population as it potentially was the only credential that students would receive. Other SPLOs, such as some of the Tech Prep programs and the middle and early college high schools, reported their dropout rates and attendance rates, which typically were better than the district from which they drew students. Since some of the included SPLOs were targeting out-of-school youth or students who were at risk of dropping out, there is some evidence that SPLOs helped to decrease the district's overall dropout rate.

College-going rates

College-going rates are important, particularly for students who had not anticipated going to college prior to participation in a SPLO. Of the included evaluations, 15 provided information on either the percentage of graduates that enrolled or planned to enroll in postsecondary education upon completion of high school. On average, college-going rates for SPLO participants, especially middle- and low-achieving students, were higher than for nonparticipants. College-going rates are a good indicator that SPLOs are increasing access and participation in higher education for historically underserved student populations.

College placement tests

Six evaluations included college placement test scores when students applied to participate in a SPLO or once they became a fully matriculated student after participation in a SPLO. The pre-program test scores were often used as admissions criteria for SPLOs and served as a qualifier for participation in credit-bearing courses. A few evaluations included scores on placement tests administered once a student matriculated to an institution of higher education. Typically, students demonstrated mastery on these assessments and subsequently were placed into nonremedial, credit-bearing courses. Data indicate there were some students with prior credit, mainly in technical areas, who were unable to meet standards for nonremedial courses, usually academic courses. Typically, the technical or vocational courses did not require students to demonstrate the same level of mastery in core subject areas such as English or math.

College course grades/GPA

Nine of the included evaluations gathered information on students' grades and GPAs when they participated in a SPLO or when they enrolled in postsecondary education. Both these indicators are helpful in understanding the value of SPLOs. SPLO participants' grades and GPAs in college-level courses indicate whether students were adequately prepared and appropriately screened for participation. Some evaluations compared the course grades of high school students dually enrolled in college courses with those of traditional college students. These results indicated that high school students participating in these programs typically did as well or better than their traditional-aged classmates. Consideration of student participants' grades upon matriculation, particularly in subject areas where students had earned prior credit, is an indication of how well the SPLO courses prepared students for the rigors of college courses. On the whole, the information from the evaluations demonstrate that SPLOs are generally selecting students who are academically-prepared for rigorous college-level coursework and ensuring their course offerings are rigorous enough to prepare them for future college courses.

Retention

Five of the evaluations include student retention data for SPLO participants compared to data for nonparticipants in a college or university's first-year class.

Unfortunately, only two studies look at retention rates beyond the first semester or first year. The other three included retention data indicating that SPLO participants are more likely to persist from their first semester to their second semester and from their first year to their second, inferring that students with some experience with college-level courses are able to make an easier transition into higher education.

Degree attainment/time to degree

There are six evaluations that follow SPLO participants to college graduation or degree attainment; however, middle and early college high schools are not included in this outcome because data on this outcome were not available for them. There is limited information on the time it takes SPLO participants to complete a degree. One of the included programs makes a claim of cost savings because of shortened time, but there is no convincing evidence that SPLOs shorten time to degree, or that participating in a SPLO results in significant cost savings.

Job market outcomes

Five of the evaluations included self-reported job market outcomes. These evaluations were focused on students who had received technical training and/or occupational certificates through SPLOs. Two evaluations indicated that students with technical training received during high school through the SPLO were earning more than their peers who had not received specialized training. If not self-reported, job market outcomes are the most difficult to collect because they require tracking students from a postsecondary education data system into a labor market data system, requiring cross agency collaboration and data sharing, which is not common.

Findings and Lessons Learned

From AYPF's analysis, the following are findings and lessons learned for policymakers, practitioners, researchers, parents, students, and community members to consider to increase the effectiveness of SLPOs.

Type of Student Served

SPLOs are viewed as a strategy to increase postsecondary access for underserved populations.

When SPLOs were first introduced, usually in the form of dual enrollment, they were accessed primarily by academic high achievers. More recently, SPLOs have been viewed as a strategy to increase postsecondary access for underserved populations. One example is the "AP for all" movement, which encourages schools and school districts to open up their AP classes to all interested students. Some programs have made outreach efforts to students who will be the first in their family to attend college. Through the limited available student demographic data, there are indications that some of the middle and early college high schools included in this compendium have served or are serving a large percentage of students who qualify for free or reduced-price lunch. Some alternative education programs with a dual enrollment component included in this compendium also describe serving a similar target population.

Funding

Funding formulas must distribute dollars fairly, so that institutions are paid based on the amount of services they provide to students.

Funding for SPLOs can be a complex equation as students are participating simultaneously in both secondary and postsecondary education. While both secondary and postsecondary education systems typically rely on student headcounts to receive their funding allotments from the state, many questions arise as to how to count SPLO participants. The ideal scenario, according to many participating systems, is for the K-12 system to maintain its full average daily attendance (ADA) funding for students participating in SPLOs (despite their being out of the school building for a period of time each day) and for the institution of higher education to be able to count these students as part-time students in their full-time equivalent (FTE) headcount for state reimbursement. Alternate funding structures involve schools or districts reallocating some of their ADA dollars to the postsecondary institutions where their students are enrolled in courses for dual credit. Other SPLOs rely on the postsecondary education institution to bear the entire financial cost of student.

While many SPLOs have made claims of cost savings for students, families, and taxpayers, AYPF was not able to fully investigate these claims based on the available data, but has provided the available information regarding funding in each profile.[2]

Course Rigor

SPLOs need to ensure they provide college-level courses and work. Several program elements, including location, faculty preparation, prerequisites,

and program length, contribute to course rigor. Most SPLOs strive to ensure that the quality of curriculum and instruction meets college-level standards; however, in a number of cases, SPLOs provide classes for high school students that are not at a collegiate level. Because of this, a distinction should be made between "college-level" and "college-like" courses.

AYPF considered a number of characteristics of SPLOs, including program location, faculty preparation, prerequisites for participation, and program length, which we believe contribute to a rigorous experience for students.

Extra Supports

For students to be successful, SPLOs need to provide appropriate experiences and supports to their students based on their individual needs.

To serve their student populations, particularly those less academically qualified, many SPLOs provide a range of extra supports for students. These supports vary from intensive preparatory coursework to advising services. Based on the practices of SPLOs included in this compendium, AYPF has identified the four most common extra supports that have proven effective with middle- and low-achieving students: caring adult advisors, academic assistance and tutoring, college success classes, and a safe environment and peer support network.

Formal Sanctioning

While many states have some state framework to support SPLOs, many SPLOs have grown as a result of flexible local policies.

Currently, 40 states have some state legislation or regulations that sanction or govern dual enrollment or the operation of SPLOs. While many of these policies do not specifically address funding, most provide a framework for the organization of programs and student eligibility requirements.

However, many SPLOs have grown out of flexible local policies that have no formal legislative or regulatory sanctioning. Rather, they exist based on local arrangements and agreements made between a high school and a postsecondary education partner.

Transferability of Credit

Very little data is available on what courses transfer for credit or how students use credit earned from their participation in a SPLO.

Some programs, such as AP, are designed for the college credit to be extremely portable, as all students are required to take the same test and demonstrate mastery of the same material, no matter where or when the course was taken. In other SPLOs, college credit is not as easily transferable beyond the institution from which it was earned. Course transferability can also be limited by the accepting institution through a cap on the number or type of courses that students are eligible to earn from other institutions. These limitations on transferability could negate some of the benefits of SPLOs and could potentially prove costly to the student.

Collaboration

Collaboration between secondary and postsecondary teachers and administrators helps create a supportive environment for SPLO participants.

SPLO students straddle two educational systems that have very different pedagogies and course content. Effective SPLOs must share responsibility between both secondary and postsecondary education systems to ensure students' needs are being meet. Working at the intersection of secondary and postsecondary education requires strong knowledge of both systems.

Policy Considerations

As SPLOs gain favor as a way to help youth succeed, policymakers and practitioners should proceed with some caution as they seek to expand or create programs.

One of our primary goals with this project was to try to answer the question of whether or not SPLOs resulted in savings to families and the public, based on reduced time to degree, by looking at the research and evidence. Unfortunately, that research and evidence does not exist, and from a purely objective perspective, we cannot claim that SPLOs reduce the time to degree or result in savings in any significant manner. What we do see is that students may need fewer credits to graduate, but this may not lead to a reduction in time spent in college.

The included SPLOs also demonstrate that students are earning credits, but questions emerge about what happens to those credits after students graduate from high school. What we see from our review is that many students who earn credits in high school do not use or count those credits for various reasons. Also, students, in general, now take longer to complete both two- and four-year degrees due to financial and personal pressures. However, it appears

that even if credits earned through SPLOs do not necessarily reduce a student's time to degree, they do have a positive effect on the student's likelihood of earning a degree.

While the primary purpose and value of these programs is to provide students with an opportunity to earn college credit, it is evident that many of the programs have served an additional, equally important, purpose: enabling more students to experience college and to believe they are capable of succeeding in postsecondary education. For these students, the goal may not be about shortening time to degree or reducing the number of credits needed for graduation, but simply giving them a new vision that they are as able as any other student to climb the ladder to college, and this may be true particularly for students from low-income or first-generation families.

A number of other key policy considerations were identified, including funding, alignment of programs and systems, equitable access to SLPOs, transferability of credits, quality and accountability, and data collection and research.

Funding

Funding for SPLOs varies significantly across programs and states, and SPLOs rely on contributions from a number of systems at the federal, state, and local levels. As policymakers consider dual enrollment legislation, the funding structure needs to be addressed so that it is clear who is responsible for the cost of a student's participation in a SPLO and to ensure that students, particularly low-income students, have access to these programs. States need to consider whether they should target funding to help all or certain populations of students participating in SPLOs. In addition, the K-12 and the higher education system need to align their policies to ensure adequate and fair cost-sharing for SPLOs. At the federal level, there is limited financial support for students participating in SPLOs; the federal Tech Prep program and Advanced Placement Incentive Program are the exceptions. Some are advocating for the federal government to make federal student financial aid dollars available to needy students during high school to finance SPLOs.

Alignment of Programs and Systems

As evidenced by the number of SPLO participants who need remediation upon matriculation to higher education, it is important to align high school curricula with college admissions requirements. This will ensure that all students are required to take the foundational classes that prepare students for college-level coursework, and these efforts should begin in the middle grades.

Equitable Access to SPLOs

Although the number of SPLOs has increased in recent years with more students than ever before participating, issues of access to programs continue to persist. Many programs still require students to meet the same admissions criteria as traditional students, which precludes lower-performing students from participating. To compensate for students with limited skills, some SPLOs are beginning to identify potential candidates at younger ages and provide intensive academic support or opportunities to take remedial coursework or preparatory programs on the college campus. Another issue that limits access to SPLOs is location and technology. Policymakers need to consider providing online opportunities and multiple locations for programs, particularly for rural areas.

Transferability of Credits

There are often problems regarding transferability of credits to and between postsecondary education institutions. At most colleges and universities, credit transfer is dealt with on a case-by-case basis, which is costly to the receiving institution and time-consuming to students. Policymakers can aid in the development of common course numbering systems or standardized procedures for credit transfer or acceptance to help avoid many of these problems.

Quality and Accountability

The quality of SPLOs is a subject that was barely addressed in the evaluations we reviewed. Questions were raised in our work about the level of rigor in some SPLOs, and we often ran into the terms "college-level work" and "college-like work"—a significant distinction. Before states or communities move forward with the creation or expansion of SPLOs on a large-scale, policymakers and program administrators need to ask some hard questions about who is overseeing the quality of programs and what measures are being used.

Data Collection, Evaluation, and Research

With limited data, we were not able to answer many of our original questions, and we noted many gaps

in research and evaluation. States have an important role to play in the support, encouragement, and funding of state longitudinal data systems that link K-12 and postsecondary education. These data systems are necessary to determine the effectiveness of SPLOs because they will allow researchers to track students across systems. Program providers must also try to disaggregate student demographic data, and we encourage the use of research techniques that include measures of statistical significance.

Conclusion

There is evidence to support the effectiveness of SPLOs, yet as the field grows, the research must become more rigorous in order to answer additional specific questions on who benefits and in what ways. We learned that SPLOs provide students access to rigorous academics, exposure to the world of college, and an opportunity to imagine a different future—many of the things that are missing from their high school experience. For these reasons, SPLOs should be included in the range of options that communities and educators make available to young people. SPLOs, while in need of further data to measure their success, are indeed improving outcomes for high school-aged youth, and continue to build a strong track record of success.

Notes

1 AYPF recognizes that AP is a unique SPLO, but did not find any evaluations that considered AP alone; thus, it has been categorized with dual enrollment. AP is described in more detail in the Introduction.

2 For more information on funding and recommendations of funding structures, please see Hoffman, N., (2005, April). *Add and subtract, Dual enrollment as a state strategy to increase postsecondary success for underrepresented students*. Boston, MA: Jobs for the Future.

PART I

Background
Introduction
Research Notes

Background

College matters. It matters to individuals and it matters to our country. Going to college, earning a degree, even taking college-level classes and earning certifications can make a large difference in family and societal outcomes. The earnings gap between those with a high school diploma (or less) and those with a four-year college degree is significant, particularly considered over a lifetime, and it shows no sign of lessening. In addition, most labor market projections show that family wage jobs will require some level of postsecondary education or training well into the future.

Fortunately, parents, policymakers, and educators are getting this message, realizing that it behooves our nation to prepare every young person for postsecondary education and to help them make the transition to college. But the reality is that many young people face great challenges in finishing high school and entering, completing, and paying for college. Many of the barriers to postsecondary education relate to poor academic preparation in high school, lack of funding to pay for college, fear of the unknown, or the perception of not being college-material (Social Science Research Council Project Transitions to College: From Theory to Practice, 2005, p. 11). Additionally, as many as one- third of students need remediation in at least one core course while they are in postsecondary education, (NCES, 2003, p. 18) indicating that their high school preparation was weak or not aligned with the demands of college-level work.

National statistics and research demonstrate the depth and breadth of some of these barriers, especially for students who come from low-income families, belong to certain ethnic and racial groups, have disabilities, or are English language learners.

The high school graduation rate has changed little over the past 20 years and hovers at 70% (Barton, 2005, p. 3). Meanwhile, rates of graduation for different groups of students vary widely. White students graduate from high school at a rate of 72%, compared to 51% for black students and 52% for Hispanic students. Of students who graduate, only 32% leave high school qualified to attend four-year colleges. These college readiness rates, again, vary widely by student subgroups. The rates for white and Asian students are 37% and 38%, respectively, while the rates are 20% for black and 16% for Hispanic students (Greene, 2003, p. 2).[1]

For those young people who are able to graduate from high school, entrance to and persistence in postsecondary education continues to be a problem. Of high school graduates, about 66% enroll in some kind of postsecondary education institution immediately following high school, but only about 25% of them earn a degree (Education Trust, 2001, pp. 8–9). As with high school graduation rates, students from various backgrounds and racial/ethnic groups enter postsecondary education and experience success at widely differing rates:

- The college-going rate for Asian students is 91.4%; for White students 79.4%; and for African-American and Latino students 69.5% and 70%, respectively (Adelman, 2004, p. 24).

- At four-year institutions, only about two-thirds of all entering students earn a bachelor's degree within six years, and the success rates vary for different groups, with 52.1% of African-American and 45.4% of Latino undergraduates persisting to a degree compared to 67.6% of White and 67.9% of Asian students (Adelman, 2006a, p. 92).

- Students from families in the top income quartile are about seven times as likely as students from families in the bottom income quartile to earn a bachelor's degree (Education Trust, 2001, p. 9).

Fortunately, over the past several years, a high school reform agenda has emerged that is squarely focused on increasing the academic rigor of secondary curricula to better prepare students for college and careers. Key strategies and policies being considered require students to take higher level math, science, and English courses, increase the numbers of students who take Advanced Placement (AP) or college-level courses, and align high school curricula and exit exams with college entrance requirements.

Early calls for high school reform came with the seminal report, *Breaking Ranks: Changing an American Institution* (1995), by the National Asso-

ciation of Secondary School Principals, followed by the American Youth Policy Forum's *High Schools of the Millennium* (2000). Both reports challenged the current structure of the American high school and argued that the goals of a high school education must be to prepare every student for postsecondary education in order to meet the needs of the global workforce. The *High Schools of the Millennium* report recommended that along with a rigorous curriculum and high expectations, students should be allowed to progress through high school based on their performance and given opportunities to earn postsecondary education credit while in high school.

In *Ready or Not: Creating a High School Diploma That Counts* (2004), The American Diploma Project urged states to elevate their expectations for high school graduates so that high school exit requirements align with the real-world demands graduates face in postsecondary education and in high-growth, high-performance jobs. In *The Lost Opportunity of Senior Year: Finding a Better Way* (2001), the National Commission on the High School Senior Year looked at the "class structure" of high schools, including the way that unacceptable methods of sorting—preparing some students for postsecondary education and others for the world of work—play against the demands of today's economy and result in students being ill-prepared for either college or work. The Commission recommended connecting all levels of education to smooth students' passage from one level to another.

Despite recent efforts to align K-16 education systems, *Fast Track to College: Increasing Postsecondary Success for All Students* (2004), asserted that most education reform efforts have ignored the need to improve connections between secondary and postsecondary education. The report stated, "If the end goal is having more young people attain postsecondary credentials more quickly, attention should focus not only on better preparation at each level, but also on the connections between the K-12 and postsecondary education systems" (Pennington, p. 11).

According to Kazis, Conklin and Pennington (2004), "The answer lies in a policy agenda that can simultaneously improve student achievement and increase the efficiency of public secondary and postsecondary sectors" (p. 56). Such a policy agenda involves staunching leaks in the education pipeline (high school and college dropout rates, postsecondary remediation, and gaps in college enrollment and completion), eliminating inefficiencies of lost human potential, redundancies and waste, and considering the education system as a single pipeline toward postsecondary credentials.

States are moving, in some cases quite aggressively, to increase the number of courses needed for high school graduation or to require more rigorous coursework for all students. The American Diploma Project (ADP) Network, a coalition of 23 states, is dedicated to aligning K–12 curriculum, standards, assessments, and accountability policies with the demands of college and work. The State Scholars Initiative, now in place in 22 states, utilizes business leaders to motivate students to complete a rigorous course of study in high school by demonstrating the importance of academics for success in the workplace. The National Governors Association High School Honor States Program is supporting 26 states as they improve high school and college-ready graduation rates. All of this activity shows that the debate has finally shifted from whether or not we should expect every student to take rigorous coursework to a discussion of how best to provide rigorous instruction to every student in our very diverse communities.

While the high school reform agenda must focus on academic rigor, it cannot be the sole focus. Young people drop out or fail high school for many reasons, but a major factor is that they find school boring and do not see the connection between their school work and their future (Bridgeland, DiIulio, and Morison, 2006, p. iii). High schools often lack the fundamental characteristics that make them attractive to youth: a foundation built on youth development principles, engaging learning, connection to the adult world, and strong underlying supports to meet individual students' needs. Many, perhaps most, high schools in the United States lack these characteristics, and the push for more rigor has not necessarily translated into more engaged learning or stronger connections to the adult world. The high school reform agenda needs to include an equal focus on making learning engaging, relevant, and connected to the future.

Options and Choices for High School Success

If the current design of high school is effective for only a small percentage of youth, it makes sense for communities to offer other options and choices to help youth succeed. Educational offerings can range from newly created small high schools with

a career theme, to alternative education placements for certain groups of students (such as pregnant and parenting teens or young people involved with the juvenile justice system), to high schools located on the campus of a postsecondary education institution. These options should provide differentiated learning with a strong focus on a rigorous curriculum, engaged learning, and individual supports.

One option to increase rigor and motivate students that has been gaining favor is to allow high school students to take college-level courses for credit. Arrangements that allow high school students to earn college credit come in many forms and designs, including dual enrollment, Advanced Placement (AP) courses, Tech Prep, and middle and early college high schools. They share important common elements of strong academics keyed to postsecondary standards, increased student engagement through interesting classes and/or attendance on a college campus, exposure to adult expectations and milieu, and often supports to ensure success. From our perspective, these programs are high-value programs, because they provide many of the important elements that have been missing from high school for most students: challenge, engagement, access to the adult world, and support.

These programs, which we have termed Secondary-Postsecondary Learning Options (SPLOs), are increasingly viewed as one option that communities can offer to improve student outcomes.

Purpose of SPLOs

Despite their growth in recent years, however, questions have been raised about the goals of SPLOs and, the specific problem they solve. For instance, for many years, communities have made SPLOs available to gifted and advanced students (through AP and dual enrollment). Should this continue to be a goal of SPLOs? Can they demonstrate success with middle- and low-achieving students? Do communities use them as a strategy to increase high school graduation rates alone, college-going rates alone, college persistence rates alone, or a combination of the three? Are they strategies for all students, or just some students? Are SPLOs a strategy to engage youth in the adult world that ends up being more of a motivating factor in their learning and less of an academic intervention? Are SPLOs, by marrying the high school and postsecondary institution, a new hybrid structure, and if so, what does that mean for the financing of secondary and postsecondary education, teacher certification, accountability requirements, and the time-honored tradition of having all students spend four years in high school?

Secondary-Postsecondary Learning Options (SPLOs) are schools and programs that link secondary education with two- and four-year institutions of higher education and allow high school students to participate in college-level courses for credit and not for credit.

Suffice it to say, there has not been a sustained dialogue about SPLOs and their role in high school reform. Rather, many versions of SPLOs have been implemented in various forms, with various student populations, and with varying degrees of funding, institutional and policy supports, and outcomes. There is not a single model or common body of knowledge across programs, and this variety makes it difficult to generalize or draw conclusions about the value of these programs or their role in secondary school reform.

This Publication

Our intent with this publication was to identify evaluations of SPLOs, analyze their outcomes and impacts on various groups of students, and report to policymakers and practitioners on the findings. We had hoped to keep a strong focus on programs serving disadvantaged youth (first-generation and low income students, those with disabilities, English language learners, members of underrepresented groups), but we found that relatively few programs keep accurate data on student demographics, and many of the evaluated programs are intended to serve higher-achieving students.

As a result, while we are able to provide lessons learned about successful strategies to help students and can describe positive outcomes for students who participate in SPLOs, we hesitate to claim that SPLOs are the silver bullet to helping disadvantaged youth succeed. However, they are clearly one option that communities should have in their repertoire of services and programs for high school-aged youth.

We look forward to working with our many

dedicated colleagues around the country who are doing the hard work of running SPLOs and helping young people succeed, and we particularly encourage more rigorous and longitudinal evaluations that will allow us to truly understand the contributions of SPLOs to student success.

Notes

[1] Please note that throughout the compendium we have used the terms to describe ethnic and racial groups that were used within the research or evaluation.

Introduction

The American Youth Policy Forum (AYPF) set out to create a compendium highlighting best practices and policies that link secondary and postsecondary education, particularly for first generation, low-income, and low-performing students, students with disabilities, and members of underrepresented racial and ethnic groups. Although the concept of secondary-postsecondary linkages is not new in the field of education, it traditionally has only been available to high achievers. More recently, this strategy has been used to engage middle- and low-achievers in education and increase college-going rates[1] for underrepresented student populations. Our intent for this work was to evaluate these efforts based upon the research in the field. Unfortunately, the necessary research to match our intentions was not available, as many of these programs are quite new and have neither been evaluated by a third party nor have built the capacity to effectively collect and use data. However, the data did reveal a number of important questions to consider as this field continues to grow. This compendium represents our best efforts to use the available information from the research and from interviews with program managers to identify the best practices and policies and raise important issues to consider as programs expand.

AYPF uses the term Secondary-Postsecondary Learning Options (SPLOs) to describe the variety of programs that link secondary schools with two- and four-year institutions of higher education and allow students to participate in college-level courses for credit and not for credit while they are still in high school. This compendium investigates a number of different SPLOs that are briefly defined below:

Dual Enrollment[2]

Under dual enrollment, high school students and dropouts who have returned to an educational program are allowed to enroll in postsecondary education courses prior to receiving a high school credential. These courses count as credits toward a high school diploma and potentially earn the student college credit. Courses are taught by either high school or postsecondary faculty, in classrooms located either at the high school or on a college campus. For example, postsecondary institutions may design courses specifically for implementation at high schools by high school faculty who have earned adjunct status at the higher education partner institution. In rural areas with limited access to postsecondary education institutions, dual enrollment is often available through distance learning, satellite campuses, or online courses. Some school districts use dual enrollment to provide additional classes, particularly upper-level courses, when there may not be enough students at any one school to justify a particular course offering. A large number of dual enrollment courses are also taken in career and technical fields. Typically, students must qualify to participate in college-level courses. Admissions requirements can be based on high school GPA, attendance, and/or by passing a college placement test. Often dual enrollment and concurrent enrollment are considered together, but there is an important distinction between the two. Dual enrollment describes courses from which students receive both high school and college credit simultaneously. Concurrent enrollment represents college courses for which students only receive college credit and are ineligible for credit from their high school.[3]

Advanced Placement (AP)

Advanced Placement, which AYPF considers as a form of dual enrollment since the research often groups these SPLOs together, allows high school students to take college-level classes in high school settings. These culminate in a nationwide exam aligned with college-level content and expectations. Depending both on the examination score received and on the college attended, these courses may lead to advanced placement by serving to count as credit for entry-level or other courses. AP courses are taught by AP-trained high school teachers who follow course guidelines developed and published by the College Board. Students can also access AP through independent study, and some states sponsor online AP courses. It is important to note that while participation in an AP class is available to students at no cost, each examination currently costs $82. Typically,

there is financial assistance from schools, districts, or states and a fee reduction from the College Board for students with demonstrated financial need.[4]

Tech Prep

Tech Prep is a planned sequence of study in a technical field beginning as early as the 9th grade but most often beginning in the 11th grade. After completion of secondary instruction, during which students have opportunities to take dual enrollment courses, the sequence extends through two years of postsecondary occupational education or an apprenticeship program and culminates in an associate's degree or certificate. The program prepares students for a highly skilled technical occupation that enables them to either enter the workplace directly as a qualified technician or continue their education. Tech Prep is funded under the federal Carl D. Perkins Vocational and Technology Education Act through grants to states.

Middle College High Schools

Middle College High Schools (MCHS) are secondary schools, usually Grades 10–12, located on college campuses with underserved students who have the potential to benefit from a rigorous academic curriculum offered within a supportive and nurturing environment. MCHSs use the facilities and resources available at their host postsecondary education institution, which includes allowing qualified students to enroll in college courses. It is important to note that not all students enrolled in a MCHS are eligible to take college-level coursework, but they benefit from attending school on a college campus.

Early College High Schools

Early college high schools (ECHS) are small high schools from which all students graduate in either four or five years with an associate of arts degree or enough college credits to enter a four-year baccalaureate program as a college junior. Like MCHS, they are typically located on the campus of a postsecondary education institution, yet they differ, as their focus is on ensuring all students receive both a high school diploma and an associate's degree or equivalent transferable credits at graduation. Although early college high schools begin in Grade 9, students typically do not begin college-level coursework until their junior year.

Programs Serving Disadvantaged Youth

These SPLOs, which target disadvantaged students including low-achievers and out-of-school youth, include dual enrollment as a mechanism to challenge students and to provide pathways to postsecondary education and careers. Included in this category are also alternative education models that incorporate dual enrollment, based on the belief that high school students, even those who are dropouts, low performers, or behind in high school credits, can earn a high school diploma and complete challenging college-level work if provided adequate and appropriate supports. Most of these programs are designed and operated by community colleges or community-based organizations in partnership with an institution of postsecondary education.

College Access Programs

A number of programs focused on college access provide an opportunity for their participating students to enroll in postsecondary coursework. While these programs are not designed to be a SPLO, they take advantage of the above-described programs by incorporating aspects of them or encouraging students to participate in dual enrollment courses. For example, Advancement Via Individual Determination (AVID) prepares and encourages students to enroll in AP courses offered in their high schools. Included in this compendium are brief descriptions of several national college access programs that encourage dual enrollment.

AYPF recognizes that this compendium is not inclusive of all the options available to students who would like to earn postsecondary credit while still in high school. Programs not included are:

- *International Baccalaureate (IB)*, a demanding two-year pre-university course of study leading to criterion-referenced examinations where each student's performance is measured against well-defined levels of achievement. IB is designed for highly motivated secondary school students ages 16 to 19 throughout the world. The IB diploma is accepted by universities in more than 100 countries.[5]

- *Career academies*, small, career-themed schools or learning communities that provide a college preparatory curriculum in partnership with employers, higher education, and the community, offer stu-

dents the opportunity to take college-level career/technical courses related to the career theme.

- *Summer enrichment programs*, typically offered by colleges and universities for recruiting purposes, provide qualified students an opportunity to experience college courses through participation in a summer school program on campus. The coursework typically does not earn students credit at either their high school or at colleges or universities, but allows them exposure to the rigor and expectations of college courses.

As noted earlier, this compendium does not include a comprehensive listing of every program that allows students to earn college credit or participate in college-level courses. Rather, we have decided to focus on programs that either have made an effort to specifically target underserved and disadvantaged populations or that have undergone a program evaluation, thereby providing information on effective practices.

Other Typologies of SPLOs

AYPF has grouped the SPLOs included in this compendium by type as outlined above in order to discuss similarities and differences among programs within types. In addition, this method of categorization allows us to answer our research questions both by site and program type.

Others who have done work in this field have created different ways of categorizing these programs best suited to their research questions. For example, Bailey and Karp in *Promoting College Access and Success: A Review of Credit-Based Transition Programs* (2003), catalogue programs by intensity of experience as their goal was to identify programs that were effective with middle- and low-achieving students. Their categories include:

- *Singleton programs—stand-alone, college-level courses*
  Singleton programs typically are elective classes with the goal of exposing students to college-level work. These classes count as a portion of a student's high school experience and are usually taught by high school faculty on the high school campus. Designed to enrich the high school curriculum and to offer an opportunity to earn college credit during high school, singleton programs do not provide other services that assist with the transition to postsecondary education. The most common singleton program is AP, which is described above. Singleton programs generally serve high achievers, as student participants are generally required to be academically qualified for college-level coursework. Other examples include dual enrollment programs that allow high school students to enroll in classes at a college or university, but do not provide additional support to these students.

- *Comprehensive programs—programs that subsume most of the student's academic experience*
  Comprehensive programs have students taking most, if not all, of their classes during their last two years of high school as college-level courses on a college or university campus. Like singleton programs, comprehensive programs aim to provide college-level academics, not necessarily a college experience, to students. While college experiences might be a by-product of the model, the primary goal of the program is to help students earn college-level credit and prepare academically for college. Comprehensive programs are similarly targeted at high achievers, as students are expected to succeed in college-level courses without additional supports. One model, Tech Prep, is aimed at middle achievers and typically provides some limited support services such as academic advising and counseling services to assist with transition into postsecondary education.

- *Enhanced comprehensive programs—college coursework coupled with guidance and support to ensure students' success in postsecondary education*
  Enhanced comprehensive programs are the most intensive of these three categories, as they prepare students both academically and socioemotionally for college coursework and expectations. These programs typically encompass a student's entire high school curriculum and offer a variety of courses for either high school or college credit or both. Many of the classes are prerequisites to prepare students for college-level academics, either later in high school or once students matriculate to postsecondary education. These programs include both the academic coursework and support services such as counseling, academic assistance/tutoring, and mentoring through the

college application and financial aid processes. The most common example of enhanced comprehensive programs is the middle college high school, specifically designed to serve low-achieving students with the academic potential to succeed in postsecondary education. The additional support services provided in enhanced comprehensive programs have proven necessary for the success of students less qualified for college-level coursework (pp. 13–20).

Beyond levels of intensity, SPLOs can also differ on a number of programmatic variables. Other researchers (Karp, Bailey, Hughes, & Fermin, 2004; Bragg, 2001; Clark, 2001; Johnstone, & Del Genio, 2001; Orr, 2002) have created classification systems that include variables such as:

- site (classes on the college campus or at the high school);
- program instructors (regular college faculty or specially certified high school teachers);
- groupings (high school students only or high school and college students taught together);
- the manner in which credits are earned—i.e., students earn college credit upon course completion (transcript credit), or credit-in-escrow (e.g., when students enroll in postsecondary education, or have their knowledge validated through a test);
- how course costs are covered (e.g., students pay for tuition and other costs such as books, the high school pays for tuition through public average daily attendance (ADA) funds, the college pays through full-time equivalent (FTE) funds, or the school district and postsecondary education institution agree to share costs through a combination of ADA and FTE).

This classification system allows us to consider SPLOs in groups that prove particularly helpful in making recommendations about policies governing a specific aspect of the programs. In this compendium, AYPF also considers many of these variables (see Appendix A).

QUESTIONS:

- Is there evidence that these different models of SPLOs are effective at increasing academic performance, closing the achievement gap, and increasing entry to and retention in postsecondary education, particularly for first-generation, low-income, or students of color and student with disabilities?
- Do financing mechanisms support equity and access by all students? Is there evidence that these programs are cost effective?
- Are college courses for high school students as rigorous and at the same level as regular college courses?
- What evidence exists to demonstrate that these programs meet their respective goals of serving a specific target population or solving a specific problem?
- Who should pay for high school students to take these courses and what are some of the financing structures? Should federal student aid dollars be used to support high school students?
- On what outcomes should these programs be measured: high school graduation or grades, attainment of college credit, entry to postsecondary education, and/or completion of degree?

Research Questions

AYPF set out to answer a number of questions that we hoped would result in improved practice and the identification of key policies necessary for the success of SPLOs. While the limited research in the field made it difficult to answer many of these questions, the research did shed light on emerging practices, raised new issues to consider, and helped frame policy considerations. The questions we sought to answer appear below and are addressed, to the extent possible, in the following subsections.

Upon reflection, our research questions were overly ambitious. In truth, few SPLOs have been evaluated, and even fewer have received third-party or independent evaluations of scientific rigor that can help us answer these questions. Of the programs that have been evaluated, the quality of the data has limited value for various reasons. Often, there is no or little data on student demographics, making it almost impossible to respond to the first question in any detail. Data are almost never comparable across programs or sites, with each program counting students slightly differently, making cross-site comparisons impossible. Lastly, most data do not include longitudinal information about the performance and outcomes of students, thereby making it extremely tenuous to make claims about program success beyond its ability to give students an opportunity to earn college credit. Also, most evaluations were not designed to respond to our questions, but to answer internal management or accountability concerns. Hence, the information does not fall neatly into our categories of questions listed above.

Instead of being able to answer each of our original questions then, we are able to answer only parts of the questions, or we have developed answers to questions we did not originally intend to explore. Given the empirical evidence available, we had little choice but to alter our search and follow the leads provided by the information we have. As a result, we refocused our work on several key program characteristics and issues that seemed to fit more closely with our data review. There is some general overlap between our original questions and the issues below, but the reader is cautioned not to expect full and complete answers to the questions noted above.

Our findings and lessons learned, reported later, focused on these following program characteristics and issues:

- Type of Student Served;
- Funding;
- Course Rigor, as defined by location of the program, teacher and faculty preparation, prerequisites for participation, and program length;
- Extra Supports, as defined by caring adult advisor, academic assistance and tutoring, college success classes, and safe environment;
- Formal Sanctioning, as defined by federal, state, and local policies that effect the creation and operation of SPLOs;
- Transferability of Credit; and
- Data.

Overall, the information described in the profiles in Part II and synthesized in Part III provides a more complete understanding of the types of SPLOs available, highlights the available student outcomes, describes some effective practices, and raises issues and questions for the field to consider as it grows.

Notes

1 AYPF uses the term college and college-going rates to be inclusive of all forms of postsecondary education, two- and four-year colleges and universities, technical schools, and proprietary schools.

2 AYPF uses the term dual enrollment to be inclusive of programs that offer courses intended to provide students both high school and college credit. Within the field, another widely used term is dual credit.

3 AYPF does not profile any SPLOs offering concurrent enrollment, but for more information on concurrent enrollment programs, visit The National Alliance of Concurrent Enrollment Partnerships, http://www.nacep.org.

4 For more information on federal and state fee subsidies, see http://www.collegeboard.com/student/testing/ap/cal_fed.html.

5 Please note one of the included profiles groups students with AP and IB credits together.

Research Notes

Search for Evaluations

The goal of this search was to identify scientifically rigorous and third-party evaluations to be included in the compendium. AYPF began its search in June 2004 by conducting an extensive literature review to identify research, evaluations, and studies on SPLOs. AYPF searched the Internet, contacted universities and research centers, and used its extensive network, including the Pathways to College Network, National High School Alliance, National Association of Secondary School Principals, American Association of Community Colleges, Education Commission of the States, National Governors Association, National Association for College Admissions Counseling, and the College Board, to identify programs.

In looking for SPLOs to include, AYPF considered all types of potential secondary (i.e. traditional high school, charter high schools, alternative education programs, and programs operating within high schools) and postsecondary education (i.e. two- and four-year colleges and universities, both public and private, and technical schools) partners. Within the included SPLOs is a range of different types of secondary schools and programs that involve a variety of postsecondary education partners. While most combinations of secondary-postsecondary collaboration have been included, AYPF was unable to find any SPLOs that involved proprietary schools. It is unclear if these schools offer these options to high school students or if researchers simply overlooked this category of postsecondary education institutions.

The data-gathering stage of this project was especially time-consuming, as it was difficult to identify programs with a strong evaluation component. Because there are so few programs with rigorous evaluations, we decided to also include programs that have engaged in comprehensive data collection. These data collection efforts were typically for program evaluation purposes tied to requirements from specific funding sources, especially private funds. Again, AYPF was not able to find many SPLOs with comprehensive data collection, as most do not have the capacity to collect and use data. Many of the included programs do not collect data beyond the basics required of any secondary school, such as student attendance, scores on standardized tests, and, occasionally, course grades. Others recognize their uniqueness at the intersection of secondary and postsecondary education and collect information relevant to defining their success, such as number of credits earned, type of credit earned, college-going rates, transferability of credits, course grades in subsequent courses, or job market outcomes. This information is often more difficult to collect, as it requires collaboration between multiple institutions or the ability to obtain this information from the student through devices such as surveys or interviews. However, longitudinal student outcomes are most valuable in understanding the role of SPLOs in improving college access and success.

After identifying 22 studies or evaluations, AYPF conducted a rigorous internal review of each evaluation, engaged in extended discussions with program directors and researchers, and collected additional data and information on the programs to supplement material in the evaluations. Every site was given the opportunity to review its profile to ensure it was accurately reflected during the time period described in the research. Sites reviewed their descriptions and added clarifications and corrections as needed. Following this, an outside researcher reviewed the evaluated programs in the compendium as a screen to ensure legitimacy and validity.

Issues with data collection

Data operate as a universal language, providing information to all constituencies for decisions around program operations, improvement, and growth. Policymakers use data to aid in their difficult decisions regarding funding and program creation and improvement. Data also provide accountability and act as a yardstick by which programs can be compared. Programs, themselves, should constantly be collecting and analyzing data to make improvements to their practice. For education programs, frequent data analysis provides a litmus test for classroom effectiveness.

As evidenced by our search, even the "good" research in this field is inadequate. Poor data are an issue not just for SPLOs, 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 enrollment and success in postsecondary education or job attainment and wages. Because the data, especially quantitative data, are so sparse, it is difficult to provide definitive answers on the benefits of SPLOs. We do note, however, that as more SPLO models are created and current models expanded, there is a greater focus on collecting data on longitudinal student outcomes. This coincides with the overall increased emphasis on accountability and data reporting in education and youth programs, which we applaud.

SPLOs also have different reporting requirements for different sources of funding. Many SPLOs that are based in public secondary schools have requirements to report disaggregated data under federal mandates from the No Child Left Behind Act (NCLB). This provides a more complete picture of the number of students in racial and ethnic subgroups, students with disabilities, English language learners, or those who qualify for free or reduced-price lunch. Still, there are difficulties in getting accurate counts on certain groups of students. For example, students must self-identify to qualify for free and reduced-price lunch subsidies, and many students do not feel comfortable sharing information about their family income, both of which limit the reliability of the data.

Institutions of higher education are usually able to provide some demographic information on their student bodies, however, they typically are not capable of providing information on students involved in their dual enrollment programs. At some institutions, these students have undergone the same admissions procedure as traditional students and are not marked in any special way in institutional databases. In addition, most colleges and universities do not have detailed information on the types of credits students bring with them upon matriculation. While there is some limited research that compares new students with prior credit to their peers with no prior credit, most of the research does not distinguish between the types of prior credit. We were fortunate in finding some research that does consider the types of prior credit that students presented and, in a limited scope, the location where students earned the credit.

Data collection on students who participate in SPLOs is also hindered by the reality that students are participants in two unique and separate systems, the K-12 public education system and the postsecondary education system. Typically, students will have records in both systems, but they tend not to be linked, and most states do not have the ability to track students through both systems. The best known exception is the State of Florida's P-20 data warehouse, where students can be tracked using a unique student identifier across systems.

It is important to note that many states are now considering similar student tracking systems.[1] State efforts to create single student identifiers will help solve this and many of the data issues raised here. But, in reality, these systems will take several years to create and perfect, and therefore it may be several more years before we have the data to unequivocally answer questions about the value-added benefits of SPLOs, particularly for various groups of students. As the field develops and more SPLOs are created, there is an opportunity to address these issues and to design and build high quality data collection and evaluation systems from the beginning.

Throughout the compendium, we note the severe limitations of the research on SPLOs. While this is particularly true for the programs and schools that we considered for this compendium, it is, indeed, an issue throughout the field of education. Based upon AYPF's years of experience in creating compendia, there are a number of recommendations for improving educational research:

- A national and comprehensive research agenda should be developed to (a) determine which strategies and policies have resulted in the most benefit, for whom, and at what cost, (b) provide guidance for evaluators on what type of research would be most useful to policymakers and practitioners, and (c) provide guidance to practitioners on how to initiate and use program evaluation.

- Funders, both public and private, should require and support high quality program evaluation as part of any grant and utilize and share findings to improve policy and practices.

- Disaggregation of data by race, ethnicity, English language proficiency, disability status, gender, and poverty level is critical for researchers, educators,

policymakers, families, and the public at large to create and improve programs serving students with special needs.

- Longitudinal data collection that follows students through grades K-12, postsecondary education, and the workplace, across states, is desperately needed.

Compendium Format

AYPF designed this compendium to serve dual purposes: to provide information to practitioners on best practices in the field, and to demonstrate to policymakers the value of SPLOs and the need for policies that help in their creation and sustainability.

The compendium is divided into sections based on program type as outlined in the Introduction. The introduction to each section includes a brief overview of the available literature and research on that type of SPLO. This gives the reader both an overview of main characteristics of the SPLO type and an overview of general findings about the success of the particular SPLO. Following each overview are the program and school profiles. Each profile contains:

- An overview of the program;
- Description of the population served;
- Key findings from the evaluation/data;
- Unique program components;
- AYPF's assessment of the factors contributing to the program's success;
- Information on how the evaluation was conducted/data was collected;
- Funding for both the evaluation and the program;
- Geographic area that the program/school serves; and
- Contact information for both the researcher and program.

Each profile is designed to give the reader an understanding of the program or school, to highlight its results, and to pinpoint the elements that appear to have led to its success.

Notes

[1] For more information on efforts to create longitudinal data systems in states, please see the Data Quality Campaign at http://www.dataqualitycampaign.org.

PART II

Program/School Profiles

Introduction to Dual Enrollment

Dual enrollment (DE) allows high school students, including dropouts in some cases, to enroll in postsecondary education courses to earn college credit prior to high school graduation. DE is the most widely used acceleration mechanism and appears in a variety of well-known forms, such dual enrollment, concurrent enrollment, and Advanced Placement. All but 10 states have legislation authorizing some form of dual enrollment, but, even without statewide policy, DE programs exist in all 50 states.

Dual enrollment programs differ according to the following characteristics:

- Faculty: high school or postsecondary employees
- Credit-granting postsecondary institution: public or private, two-year or four-year, academic or technical
- Location: high school classroom or college campus
- Tuition and fees: paid by student, school district, or postsecondary institution
- Availability of support services: transportation, tutoring, and counseling

Within this section, AYPF considers dual enrollment in three of its forms: Advanced Placement, institution-specific dual enrollment programs, and statewide dual enrollment programs.

Advanced Placement

The Advanced Placement (AP) Program provides high school students with an opportunity to engage in college-level work in their high school classrooms. Students can earn credit at postsecondary institutions based upon their scores on the standardized end-of-course examinations. Postsecondary credit varies by institution; students are typically awarded credit for scores of 4 or 5 on the AP examinations. Currently, the AP Program operates in 14,000 public and private schools in the United States. Coursework is offered in 19 different subject areas through 31 AP courses and 34 AP examinations.

Since its inception in 1955, the AP Program, which is administered by The College Board, has grown by leaps and bounds. In May 2003, over 1.5 million AP examinations were taken, twice the number in 1994. AP continues to grow as schools and school districts institute policies that allow more students access by subsidizing the cost of the exams and opening AP classes to all students. One-fourth of all public high school graduates from the class of 2004 had taken an AP course, one-fifth had taken an AP exam, and 13% earned a passing grade on that exam (Mollison, 2006, p. 35). AP represents a national standard of teaching and learning, guaranteed rigor, and is an indicator of a student's ability to successfully complete college work.

Recent research conducted in Texas looked at the connection between AP and college graduation, attempting to answer whether participation in AP by low-income and minority students improves their likelihood of graduating from college. Texas was an excellent state for this research due to a number of efforts throughout the state to increase access to AP. Researchers used records of 8th grade students in 1994 who graduated from high school in 1998, enrolled in a Texas public college or university, and had graduated by 2003, five years from their entry point. The long-term academic records of the students were used to control for academic preparation as well as their qualification for free and reduced-price lunch. Results showed that low-income students who had taken and passed at least one AP exam graduated from college at a higher percentage (46%) than students who took an AP course without taking the exam (21%) and students who had not participated in AP (7%). When controlling for students' observed characteristics, such as scores on 8th grade math tests, free or reduced-price lunch status, and characteristics of their schools, such as average test scores and percentage of economically disadvantaged students, researchers found similar results, although the percentage of low-income students who passed an AP exam dropped to 26%. More detailed analysis of this student cohort shows statistically significant relationships between passing an AP exam and college graduation for all subgroups, Hispanic, White, low-income, and non-low-income students, except

African American students. The lack of evidence for African American students is probably due to the small sample size within the cohort. Researchers also noted that enrolling more students in AP courses who are unable to pass or do not take the AP exams has a weaker and not statistically significant relationship to college graduation rates. Thus, this research highlights the fact that AP exam scores, not AP course taking, are the best predictor of postsecondary student outcomes (Dougherty, Mellor, and Jian, 2005).

Cliff Adelman's recent research on college completion rates states that "less than 20 credits by the end of the first calendar year of enrollment (no matter in what term one started, whether summer, fall, winter, or spring) is a serious drag on degree completion." Adelman (2006a) asserts that helping students get a head start on earning college credit while in high school is a positive move:

> It is all the more reason to begin the transition process in high school with expanded dual enrollment programs offering true postsecondary coursework so that students enter higher education with a *minimum* of 6 additive credits to help them cross that 20-credit line. Six is good, 9 is better, and 12 is a guarantee of momentum (p. *xx*).

AP is often considered, as in the evaluations included in this compendium, in conjunction with another form of dual enrollment. One such study is the data collection effort from the 1997 first-year class at University of Arizona. The study found that students with prior credit, earned either through AP or a dual enrollment program with Arizona community colleges, entered as first-year students at the University of Arizona with higher than average SAT scores and high school GPAs than their classmates without prior credit earned through either AP or dual enrollment. Students with prior credit also experienced a smaller decrease from their high school GPAs to their first-year University of Arizona GPAs. Using a regression analysis controlling for high school GPAs and SAT scores, researchers determined that students with prior credit earned higher first-year University of Arizona GPAs (University of Arizona, 1999).[1]

Institution-specific dual enrollment programs

Institution-specific dual enrollment programs are offered by an institution of higher education and typically only guarantee that students will receive credit at the host postsecondary institution or at a limited number of partner institutions. These programs are typically small, serving students in school districts near the host postsecondary institution. Institution-specific dual enrollment programs offer both courses in high school classrooms and opportunities for students to enroll in courses on their campuses.

As these programs are typically meant to serve as a recruiting tool for the host postsecondary institution, there are often questions of academic rigor as students are encouraged to take "fun" courses, such as fine arts and physical education, over core academic courses, such as English and math. A number of postsecondary institutions with programs like this have been investigating the effects of DE on students' subsequent success in higher education. Research at the City College of San Francisco (CCSF) considered 1998–2000 San Francisco United School District (SFUSD) graduates with and without prior credit from CCSF. The population studied at CCSF was relatively small, approximately 14% of all CCSF students during the time period. Within the sample population, 377 students had prior credit while 2,274 did not. The results showed that students with prior credit earned a statistically significantly higher GPA (2.33) than their peers without prior credit (2.10). Students with prior credit passed 58% of the classes as compared to their peers without prior credit who only passed 53%. Yet, some students with prior credit did require remedial English and/or math. Researchers assumed that these students received college credit for taking courses during high school, such as arts, physical education, or vocational training courses that do not require the same admissions standards as academic courses (Office of Research, Planning and Grants, City College of San Francisco, 2002).

Statewide dual enrollment programs

Statewide dual enrollment programs include those mandated by state legislation instructing public postsecondary institutions to offer opportunities for qualified high school students to enroll in courses through the postsecondary institution. In some states, these mandated DE programs are often funded entirely or partially by the state and students earn credit both at their home high school and at the postsecondary institution offering the course.

The research included within this compendium highlights the findings from three statewide DE

programs that allow students to participate at little or no cost. These statewide DE programs in Florida, Washington, and Georgia vary in terms of program characteristics by site within the state. For example, students in more rural areas might participate through online courses because attending classes at a postsecondary institution is not feasible. Within each description of the statewide program and its data, we present a profile of an innovative DE program within the state.

Notes

[1] The study population consisted of 2,351 first-time, first-year University of Arizona students, of whom 33% earned AP credit, 29% community college credit, 10% both kinds of credit, and 48% had no prior credit upon matriculation.

Advanced Placement and Advanced College Credit at Saint Louis University

Overview

This study compared students who entered Saint Louis University (SLU) with and without prior credit. All of the credit considered was either earned through the Advanced Placement (AP) program or 1818 Advanced College Credit Program (ACC), a program for students in the St. Louis area to take college courses offered through SLU in their home high school. SLU is a highly selective, Jesuit, four-year, private university. The ACC program is often used as a recruiting tool, allowing qualified[1] high school students to earn credit that is valid at SLU and some other select institutions as part of their credited high school coursework. It is important to note that this is one of the only studies within this compendium that followed the student subgroups through college graduation and considered the possibility that prior credit decreases time to degree.

Population

There were a total of 2,760 students in the study: 1,017 entered as first-year students in the fall of 1989, 917 in the fall of 1990, and 826 in the fall of 1991. Of these three cohorts, 644 entered with prior credit, averaging 11.62 ACC credits and 6.11 AP credits. The cohort's average ACT score was 23, and the average family contribution to tuition was about $9,000. The student population in the cohort, both with and without prior credit, was 46.2% male, 53.8% female, 11.4% "minority,"[2] and 54.8% from the greater St. Louis area.

Key Findings

- AP/ACC credits significantly influenced students' ability to persist after one year. Students with prior credit had an 85.6% persistence rate compared to a 69.6% rate for students with no prior credit.
- Students with prior credit earned more college credits at graduation: 136.1 compared to 133, significant at the $p<.01$ level, than students without any prior credit.
- Additionally, the overall college GPA of students with prior credit (3.35) was higher than the overall GPA of students without prior credit (3.12).
- Prior credit also affects students' ability to graduate. Students with prior credit had a graduation rate of 68.8% compared to 49.2% for those without.
- Prior credit does positively affect time to degree; students graduating after 3 years had significantly more prior credits than graduates after 4 years, who also had significantly more prior credits than graduates after 5 years. The linear regression analysis shows a 7.8% reduction in time to graduation between students with both AP and ACC credits (4.16 years) and those with no prior credit (4.51 years).

Program Components

Both AP and ACC programs allow high school students to simultaneously earn both high school and postsecondary credit. Some similarities between the programs include:

- Both AP and ACC credits are earned through coursework taught by *high school teachers for both high school and college credit*, usually at some financial cost to the students. With AP, students are expected to pay to sit for the examinations and the ACC program requires students to pay a reduced tuition rate.
- Both AP and ACC provide *professional development opportunities for high school faculty* offering these courses.
- In both programs, curricula are *aligned with postsecondary curricula in that subject area*.

As AP is a national program and ACC is a local program administered by one university, the programs differ in these regards:

- AP credit is awarded based upon performance on an end-of-course examination, while ACC credit is earned simply by receiving a passing grade.

- ACC credit is guaranteed at SLU and transferable to select public and private institutions, while many of the nation's colleges and universities grant credit for scores of 3 or better on the AP exams.

Contributing Factors

Rigorous coursework during high school

The classes for both the AP and ACC program are based upon college curricula, usually introductory classes within the subject area. This coursework prepares students academically for success in college classes.

Understanding expectations of college coursework

Coursework during high school that is considered college-level helps students understand what is expected of them in their college classes, both making the transition to postsecondary education smoother and allowing students to feel more confident taking advanced level courses as first-year students.

Study Methodology

This study was a cohort longitudinal study, examining students over time beginning with their enrollment at SLU through a six-year period during which participants either graduated or dropped out. Analysis was primarily a logistic regression between dependent variables of first-year persistence and graduation and independent variables including amount and type of prior credit, student demographics, and students' financial contribution. When time to graduation was considered as a dependent variable, a linear regression was used with the same independent variables. The researcher noted that since studies on persistence and graduation rates are strictly correlational, no causal links could be established.

Funding

Program Funding

AP courses are offered free of charge to high school students, but students usually have to pay to take the AP examinations. Some schools and school districts offer limited scholarships to cover the cost of the examinations for students who qualify for free or reduced-price lunch. ACC credits come at the price of $50 per credit hour paid by the student.

Evaluation Funding

This research was initially conducted as a self-funded dissertation. As the researcher then served as the Director of the Office of Enrollment and Academic Research at SLU, he used his findings to assist the university's enrollment management personnel. The findings later became the basis for the article published in the *Journal of College Student Retention.*

Geographic Area

This study's population included all students at SLU in St. Louis, Missouri. A portion had earned their prior credit either through AP credits available in many high schools or through high schools in the greater St. Louis area offering the ACC program.

Information from

Delicath, T. (1999). The influence of dual credit programs on college students' integration and goal attainment. *Journal of college student retention*, 14, 377–393.

ACC website:
http://www.slu.edu/colleges/AS/1818acc/

Contact Information

ACC Program Contact
E. Gayle Rogan
Program Director
1818 Advanced College Credit Program
Saint Louis University
3700 West Pine Mall, Fusz Hall #272
St. Louis, MO 63108
314-977-3142
1818admin@slu.edu

Evaluation Contact
Dr. Timothy A. Delicath
Research Consultant/Adjunct Professor
Saint Louis University
1140 Lancaster Drive
St. Charles, MO 63301
314-973-4953
delicath@charter.net

Notes

1 ACC admissions standards require a student to be either a high school junior or senior, have a 3.0 GPA, have a guidance counselor or principal recommendation, and have teacher approval for each course.

2 Minority is defined by the researcher as "African American, Native American, or Hispanic."

Dual Enrollment and Advanced Placement in the University of Missouri System

Overview

A study by Eimers and Mullen examines the differences in performance and retention between first-year Missouri residents entering the University of Missouri system with dual credit and/or Advanced Placement credit and those entering without any prior credit. Dual credit is defined as college-level courses taught by high school teachers in the high school, offered through private institutions, community colleges, and University of Missouri campuses in St. Louis and Kansas City. The researchers attempted to control for academic ability by using ACT scores and high school class ranks. The researchers also considered the institution from which the dual credit was received. This research raises questions about the role of prior credit in a student's future outcomes, such as grades in subsequent courses and time to degree; unfortunately, the researchers are unable to answer these questions because of the limitations of the data set.

Building on the research of Eimers and Mullen, Saupe, a staff member at the University of Missouri's Division of Enrollment Management, continued to collect and analyze data on the success and retention rates of students with prior credit versus their peers without. The Division of Enrollment Management used this analysis to reconsider its policies regarding dual enrollment, which subsequently have not changed. Saupe does expand the sample population to include transfer students and students who earned credit through the International Baccalaureate (IB) program, another examination program similar to Advanced Placement, allowing students to earn postsecondary credits based upon their score on end-of-course examinations.

Population

The population included Missouri residents who were full-time, first-time degree-seeking students at the four campuses of the University of Missouri system. Student data was not disaggregated by gender or ethnic/racial subgroups and other demographic criteria. The information on ACT scores and high school class rank demonstrates that high-achieving students participated in Advanced Placement and/or dual credit. Currently, the student demographics across the University of Missouri system are 79.8% White, 8.6%, Black 3.4% Asian, 2.2% Hispanic, less than 1% Native American, and 5.5% nonresident alien. The population from the Saupe research was slightly different; it included all entering students at the University of Missouri, Columbia campus. In Missouri, juniors and seniors are eligible for participation in dual enrollment based upon their ability to meet the postsecondary education institution's admissions criteria. Freshman and sophomores with superior academic ability, demonstrated by scoring 90th percentile or above on ACT or SAT tests and having a high school counselor and college academic department official agree that the student will benefit from a specific course and can learn at the collegiate level, are also eligible for participation in dual enrollment.

Key Findings

From Eimers and Mullen:[1]

- Holding entering academic ability constant (i.e. controlling for ACT scores, high school percentile rank, and completion of Missouri's high school core curriculum), students with prior credit have higher first-year GPAs and earn more credit hours (largely due to prior credit) than their classmates with no prior credit.

	1st year GPAs	Credit Hours Earned
AP credit only	3.28	43
Dual credit only	2.92	42
Both AP and dual credit	3.32	52
No prior credit	2.70	30

- Students with any form of prior credit, either AP, dual credit, or both, returned for a second year at higher rates than students with no prior credit.

Students with both AP and dual credit returned at a rate of 90% compared with students with AP credit only, who returned at a rate of 87%, and dual credit only, who returned at a rate of 89%. Students with no prior credit had a return rate of 76%.

- Students who earned credit from a two-year institution had higher ACT scores and high school class ranks, but tended to have lower first-year GPAs than students with dual credit from either public or private four-year institutions.

- Having dual credit from any source was significantly and positively related to the likelihood of returning the following fall for a second year.

From Saupe:

- First-time freshman entering with AP or IB exam credit have the highest academic ability (as assessed by ACT-Composite scores and core course GPAs) as compared to students with other forms of prior credit and students with no prior credit.

- First-time freshmen who earned credit for the first course in a two-course sequence through the AP or IB examinations earned higher grades in the second course than their classmates who took the first course on campus when controlling for academic ability.

- First-time freshmen who earned credit for the first course in a two course sequence through dual enrollment typically performed at least as well in the second course as entering freshman who took the first course on campus, whether or not academic ability was controlled.

Program Components

Both AP and dual credit courses are offered *by high school teachers on-site at the high school*. Students are able to take classes that provide them with both high school and postsecondary credit seamlessly, without having to leave their high school campus or to deal with scheduling conflicts at another institution.

Dual enrollment credit courses offered in the high schools, which encompass all the courses considered in this research, offer *rigorous curricula* that challenge students beyond the expectations of their typical high school courses. Students engage in college-level work and are tested using college-level assessments, often created by the high school teachers.

The high school teachers who offered AP, IB, or DE have *strong qualifications*, meaning they have either taken a training course through AP or IB or earned an adjunct faculty appointment from the postsecondary institution offering dual enrollment credit.

Contributing Factors

Understanding of the rigors of postsecondary education

AP and dual enrollment courses provide students an opportunity to experience the workload and expectations of college-level classes while still in high school. Upon matriculation, students are prepared to handle their courses because they have already had exposure to college curricula, assignments, and examinations.

Accessibility of courses

Although all students do not qualify to take AP, IB, or DE courses, courses are easily accessible for qualified students. Courses are offered within their high school and are seamlessly integrated into a student's traditional high school schedule.

Study Methodology

Both evaluations considered data on full-time, first-year students from admissions files as well as the university system-wide student database. Data were considered at face value and then analyzed using linear and logistic regressions to control for students' academic ability. Unfortunately, no student demographic information was collected.

Funding

Program Funding

Information on the University of Missouri, Saint Louis website states that fees for DE courses are $54 per credit hour for 2004–05, which represents the total cost to the University for offering courses in the high school, one-third of the cost of the course to a traditional undergraduate student. AP courses are typically offered at no cost, but students usually have to pay the examination fee.

Evaluation Funding

This research was conducted and funded by Insti-

tutional and Research Planning of the University of Missouri System and presented at 2003 American Institutes for Research (AIR) Fall Conference in Tampa, Florida. Since 1995, the Division of Enrollment Management has also compared performance and persistence between dually-enrolled students and those with no prior credit. These studies grew out of a need to understand the utility of dual credit and its value to the University of Missouri, Columbia.

Geographic Area

By law, all students in the State of Missouri are eligible for participation in DE assuming they meet the admissions requirements of the college or university offering the course in the high school. Participation in AP is determined by each high school and is often open to all interested and/or qualified students.

Information from

Eimers, M., & Mullen, R. (2003, May). *Dual credit and Advanced Placement: Do they help prepare students for success in college?* Paper presented at the Annual American Institutes for Research (AIR) Fall Conference, Tampa, FL.

Saupe, J. (2004, April). *Dual Credit at MU, Division of Enrollment Management*.

Contact Information

Research Contact
Mardy T. Eimers, PhD
Director, Institutional Research & Planning
University of Missouri System
eimersm@umsystem.edu

Notes

[1] Please note that the researchers used both linear and logistic regressions to compare the differences among the following subgroups: students with AP credit only, students with dual credit only, students with both AP and dual credit, and students with no prior credit.

Dual Enrollment with Community Colleges in the State of Florida

Overview

Florida has a strong history of supporting a variety of dual enrollment programs. Florida law encourages collaboration between K-12 and postsecondary systems, including requiring all community colleges and four-year state universities to offer dual enrollment classes to high school students. Legislation also sets aside funding to ensure that classes are available to students at limited or no cost. Additionally, Florida has engaged in substantial longitudinal research, particularly focused on dual enrollment courses offered at or through community colleges, to study issues of preparedness for subsequent courses, impact of instructor type on course grades, and credit transferability. Much of the credit offered through community colleges is for programs that allow qualified high school faculty to offer courses for both high school and community college credit in their classrooms. Research on the Florida programs has been instrumental in providing guidance on improving the statewide program, including improving the statewide course numbering system to ease the transfer of credits among postsecondary institutions.

Population

In 2004, over 35,000 students participated in dual enrollment at Florida community colleges. Approximately 60% of the participants were female, and 74% were White, 10% Hispanic, 9% Black, 3.5% Asian, and 3.5% not reported. For the majority of community college dual enrollment programs, student participants qualify by having an unweighted 3.0 GPA for academic credit and an unweighted 2.0 GPA for vocational courses, passing appropriate sections on college placement tests, and meeting any additional admissions criteria set by the individual postsecondary institution. While dual enrollment with Florida's community colleges is open to all high school students, typically juniors and seniors take advantage of the program.

Key Findings

- Dual enrollment students for all ethnic subgroups enrolled in higher numbers in the Florida Community College System (FCCS) than high school graduates within the same ethnic subgroup except for Asians. According to qualitative data, Asian students enrolled at a lower rate due to their higher attendance in out-of-state postsecondary institutions. In 2000–01, the total rate of enrollment in FCCS was 37.5% for students who had participated in dual enrollment in comparison to 35.2% for high school graduates who had not participated in dual enrollment.

- 77.04% of dual enrollment students were successful (earning a C or above) in the next subsequent course taken at a state university with 27.54% of these students earning an A or B.

- Students with dual enrollment credit did statistically significantly better, meaning they earned more As and Bs and less failing grades, than students without prior credit in subsequent courses in English, statistics, and humanities. Yet, in subsequent level courses in political science, biology, and social psychology, researchers were unable to demonstrate that students with prior credit did statistically significantly better than their peers.

- The type of dual enrollment teacher, either high school teacher or community college professor/instructor, did not make a difference in students receiving a passing grade in the course. Of the dual enrollment students studied, 77.16% earned a C or better in dual enrollment classes taught by a high school teacher and 76.98% earned a C or better in dual enrollment courses taught by another teacher, typically a community college faculty member.

- Of dual enrollment students studied, 3.31% chose to repeat a course. Unfortunately, the research does not discuss the reasons for course repetition, but does note that, in many cases, students already had received credit for the course through dual enrollment. This finding indicates that there needs to be better advising to ensure students do not repeat courses for which they have already earned credit.

- Recent research comparing dual enrollment students and similar students[1] without prior credit showed that these dual enrollment students graduated from community colleges at higher

rates and in shorter periods of time. For the high school graduating classes from 1994–1998, dual enrollment students graduated from FCCS at rates between 62% and 72% while students who had not participated in dual enrollment graduated at rates between 53% and 56%.

- Students with a mixture of credit including dual enrollment and AP had the highest first-year retention rates of 84.5%.

Program Components

The *online advising system*, Florida's Academic Counseling and Tracking for Students (FACTS), helps students answer questions related to education and career goals. The system serves as a clearinghouse for all the information students, parents, or counselors need related to "monitoring high school progress, learning about postsecondary opportunities in Florida, deciding career objectives, applying to college online, choosing the right major and evaluating progress toward a degree" (http://www.facts.org). FACTS also provides a variety of online tools to help with high school and postsecondary education planning. The creation of this resource was mandated by the Florida state legislature.

A *statewide course numbering system* allows for consistency with high school equivalency credits and easy transferability of courses among Florida's postsecondary institutions. Both the community colleges and state universities use this numbering system, ensuring that students who enter any state-supported postsecondary institution earn appropriate credits across the system. Additionally, to ease the transition of credits, both the Community College System and State University System use students' social security numbers as the primary student identifier.

Dual enrollment courses are available at *no cost* to Florida high school students who meet the eligibility criteria for participation. Students are not required to pay tuition, registration, or laboratory fees, and, in addition, books are provided for public school student participants.

Students are eligible to take courses *at any time, including before, during, or after school as well as during the summer.*

Contributing Factors

Support from the state legislature along with significant financial commitment

State legislation and funding has enabled every high school in Florida to offer some form of dual enrollment. Access to postsecondary education in high school opens the door to postsecondary education for students who previously did not think they would be able to succeed in higher education.

Variety of different dual enrollment programs

Dual enrollment programs with community colleges take on a number of different forms (see College Academy at Broward Community College, for example) to serve a range of student needs. While dual enrollment classes with community colleges are primarily offered in high school classrooms and taught by high school teachers, students can also enroll in dual enrollment programs housed on a community college campus, like College Academy, or elect to attend summer school classes at the community college at no additional cost.

Study Methodology

Much of the information collected comes from year-end reports based upon data in the Florida statewide student information system. A more rigorous evaluation conducted by the State Board of Community College and Board of Regents looked specifically at the issue of preparedness of dual enrollment students for subsequent classes. Although the results are somewhat mixed, as students do not necessarily perform better in the subsequent class, it is one of the few longitudinal evaluations in the field considering student success in dual enrollment classes taken during high school and their ability to succeed in subsequent classes in the same subject.

Funding

Program Funding

Participation in dual enrollment is free for all qualified students in Florida. A participating student's home school district does not lose ADA, but is responsible for covering the cost of books and fees. Additionally, the host postsecondary institutions are able to generate FTE for dually enrolled students, but must waive tuition. As both the secondary and postsecondary institutions continue to receive funding, this is often referred to as "double dipping," meaning the state is paying full price twice for a single student who is splitting his/her time between the secondary and postsecondary institution.

Evaluation Funding

The Florida legislature has requested evaluations of all acceleration mechanisms within the state. Also, the Division of Community Colleges and Workforce Education has been engaged in a number of evaluations to answer specific questions raised and to provide year-end data on dual enrollment participation with community colleges.

Another perspective is to argue that since two sectors are involved in providing credit that is valid at both levels, allowing both to report FTE is an appropriate way to fund programs that accelerate the movement of students.

Geographic Areas

All Florida students are eligible to participate in dual enrollment with a community college if they are qualified. Qualification is based upon meeting the statewide program standards plus any additional requirements of the host postsecondary institution.

Information from:

Florida Board of Education. (2003). *Study on acceleration mechanisms in Florida*. Tallahassee, FL: Florida Department of Education.

Windham, P. & Perkins, G. (2001). *Dual enrollment as an acceleration mechanism: Are students prepared for subsequent courses?*. Paper presented at the Annual AIR Research Conference, Long Beach, CA.

Office of Educational Services and Research, Florida Community College System. (2001). *Fast facts: Dual enrollment, Advanced Placement, and SAT scores* (FF-49). Tallahassee, FL: Florida Department of Education.

Office of the Chancellor, Florida Community Colleges and Workforce Education. (2004). *Dual enrollment students are more likely to enroll in postsecondary education* (FF-79). Tallahassee, FL: Florida Department of Education.

Office of the Chancellor, Florida Community Colleges and Workforce Education. (2004). *Impact of dual enrollment on high performing students* (DT-26). Tallahassee, FL: Florida Department of Education.

Contact Information

Dr. Patricia Windham
Associate Vice-Chancellor for Evaluation
Florida Department of Education
Suite 1344, Turlington Building
325 West Gaines Street
Tallahassee, FL 32399
850-245-9482
Pat.Windham@Fldoe.org

Notes

[1] These students had a high school GPA of 3.0 or higher and had not earned postsecondary credit through dual enrollment.

College Academy at Broward Community College

An example of a dual enrollment program at a community college

College Academy (CA) at Broward Community College was specifically designed to serve high-achieving students who prefer an alternative to the traditional high school. CA is a joint venture between the Broward County School Board and the trustees of Broward Community College (BCC), and both contribute to the program either financially or through in-kind donations of services and space. The goal of the program is to graduate students with a college-ready diploma as they concurrently work toward an associate's degree from BCC. CA supplements the thriving, 15-year-old dual enrollment program at BCC that serves approximately 1,500 students from the Broward County district yearly.

CA is located on the campus of BCC. Juniors and seniors are selected to attend based upon both their academic ability and their maturity in handling the increased freedoms and demands for personal time management. The school population in 2002-03 was 287 students who were 66.2% female, 33.8% male, 50% White, 22% Black, 22% Hispanic, 4.1% Asian, 1.2% multiracial, and 0.7% Native American. Students attend regular BCC classes in the mornings and CA classes in the afternoons; all BCC classes and almost all CA classes give students credit for high school and toward their associate's degree. CA faculty are available during the mornings for students to receive extra help or advisement.

Initial results from CA are promising and demonstrate that CA is achieving its goals. All of the first graduating class (Class of 2003) earned a high school diploma with 95.5% also earning an associate's degree from BCC. Of these students, 98.2% were accepted to colleges and universities with 93.6% being accepted to Florida colleges and universities. Almost all of the students (90.1%) earned a Bright Future Scholarship, a lottery-funded scholarship program based upon students' GPA and test scores. In this graduating class, 19 students earned Florida Academic Scholarships, covering 100% of their tuition cost at a Florida postsecondary institution, and 81 students received a Florida Medallion Scholarship, covering 75% of the tuition cost.

For more information on College Academy, please visit http://www.broward.k12.fl.us/collegeacademy/

The information for this profile came from *The College Academy @ Broward Community College, Evaluation Report 2002-2003* conducted by The Solutions and Services Group, Inc. (March 2004).

Washington State Running Start

Overview

Running Start was created in 1990 as part of the Learning by Choice Law that allows 11th- and 12th-grade students to take courses at Washington State's 34 technical and community colleges and a number of participating state universities. Students receive both high school and college credit for their classes. Running Start is offered in addition to the other dual enrollment/acceleration programs in place throughout the state such as Tech Prep, Advanced Placement, and College in High School, a collaboration that allows qualified high school teachers to offer college-level classes for dual credit in high school classrooms. The goal of the Learning by Choice legislation was to provide a variety of opportunities for high school students to experience and earn college credit with the hope of reducing the cost of postsecondary education for students and their families. Running Start was not intended to be a degree completion program, but rather an alternative for students who were becoming disengaged in high school to get a jump on postsecondary education. As Running Start is available both on campus and through online courses, it is the most readily available college learning opportunity in the state. Running Start has been hailed by state policymakers as a program that "can reduce the amount of time students spend in school, and reduce overall college cost for students and their families" (State Board for Community and Technical Colleges, 2004, p. 1). According to the 2003–04 Annual Progress Report, Running Start saved taxpayers, parents, and students more than an estimated $59 million[1] that year. The program and the legislation are models that have been replicated in other states including Oregon and Minnesota.

Population

Running Start continues to grow: in 2003–04 10% of the state's juniors and seniors participated in Running Start, totaling 15,610 students, an increase of 6% from the prior year. Approximately 59% of the students were female, 17% were students of color, and 2% were students with disabilities. Student participants must meet the admissions requirements set by the postsecondary institution from which they wish to earn credits, usually a certain score on a college placement test. Running Start does not fund any precollege work, but does encourage students to return to their high schools for further preparation and reapply if they are not accepted initially.

Key Findings

- In 2003–04, 11,085 Running Start students (71% of all Running Start students) continued their studies at the same community college where they had participated in Running Start after high school graduation. More recently, this trend has been changing, and upon high school graduation, more Running Start students are enrolling in state-supported four-year universities.
- In 2003–04, 788 students, approximately 5% of all Running Start participants yearly, completed an associate's degree at the same time they received their high school diploma.
- In 2003–04 one year after enrollment at the University of Washington, Running Start students as first-time entrants after high school graduation earned an average GPA of 3.14. These figures were similar for students enrolled in two-year colleges.
- Running Start students usually outperform a comparable college cohort (students who graduated from high school in the past three years without prior credit earned through Running Start). In 2002–03, Running Start students completed 87% of their total credits attempted, compared to 84% for the comparison cohort (students of comparable age who are attending college). In these courses, 86% of the Running Start students earned a C or better, compared to 83% of the comparison cohort.
- Academic transfer courses accounted for 90% of credits earned through Running Start; the remaining 10% were vocational with students declaring an intent to improve their workforce skills.
- Former workforce Running Start students had a higher job placement rate (83%) in 2002–03 than the total population of workforce students exiting colleges.

- According to data compiled in November 2004 by the Washington State Board for Community and Technical Colleges, Running Start reduces the net tuition cost for students and the cost to the state per bachelor's degree. Students with Running Start credit complete their bachelor's degree with an average of 33 fewer state-financed credits during their college years than their peers without prior credit.

- A smaller study conducted on Running Start participants at Western Washington University in 2002 found that Running Start helped students feel more prepared academically for their university experience and gave them exposure to a broader range of courses, which assisted in their choice of majors upon matriculation.

Program Components

Classes are located on a college campus, and courses are available online in cases where there is no access to a campus. Students have the opportunity to experience firsthand the college atmosphere and familiarize themselves with a college campus, thus making the transition to postsecondary education less daunting. Students also have the opportunity to interact with traditional college students and experience life as an undergraduate.

Students do not pay tuition for participation in courses offered through Running Start; *coursework is funded by the state*, making the program accessible for all. Students are responsible for the cost of their books and their own transportation to and from the college or university campus.

Flexibility in scheduling courses allows students to participate in Running Start in a manner that best serves their unique situations and needs. Students are able to take all of their courses at a postsecondary institution or split their time between high school courses and Running Start courses. In some cases, students double up, taking a full load of high school courses and attending elective Running Start courses afterschool. Additionally, 33% of Running Start students reported that they work part-time and 1% work full-time.

Running Start students *maintain a connection to their home high school*, which allows them to participate in athletics, extracurricular activities, and school-sponsored events such as dances. Running Start students are also eligible to participate in the clubs and activities available at the campus of the postsecondary institution they attend.

Contributing Factors

Education agencies coordinate to oversee all Running Start activities

Three state educational agencies, the Office of Superintendent of Public Instruction, State Board for Community and Technical Colleges, and the Higher Education Coordinating Board, have joint rule-making authority for the Running Start Program. Each agency has staff assigned to provide technical assistance to the participating secondary schools and colleges. The State Board for Community and Technical Colleges oversees the mandated yearly annual progress report.

Increased options at both secondary and postsecondary level

By allowing Running Start students to enroll in college-level coursework, high schools are able to offer more and more advanced courses. Due to the increased demand for courses based upon the enrollment of Running Start students, along with the additional revenue[2] that Running Start students generate, postsecondary institutions are able to offer additional sections of courses at a variety of times. For example, Clark College in Vancouver, WA, reported that due to the increased demand and revenue from Running Start students they were able to offer 70 additional courses.

More students have the opportunity to experience college

Running Start and the other acceleration mechanisms within the state have increased the number of students exposed to postsecondary education during high school. In turn, this has increased the number of high school graduates enrolling in postsecondary education. Students also benefited from having prior credit upon enrollment at a postsecondary institution, resulting in a lower need for remediation.

Study Methodology

The information presented comes from the Annual Progress Report for Running Start mandated by the Learning by Choice Law. The data are gathered and analyzed by the State Board for Community and Technical Colleges. The report provides an overview of the program; data about student participation

and academic performance; updates on savings to families, taxpayers, and the state through a formula which considers FTEs generated by the program and the assumed cost of postsecondary education for these students if they did not have the Running Start program; and general information on dual enrollment across the state and nation.

Funding

Program Funding

Funding for Running Start comes from the state funding to the school district ($3,922 for academic students and $4,644 for vocational students). Postsecondary institutions bill the high schools for the credit hours taken by Running Start students. The colleges and universities are reimbursed by the school district at $87 per academic credit per quarter and $104 per vocational credit per quarter (2003–04 amounts). From the amount received from the state, schools can retain 7% of their state funds for counseling and overhead cost, but at least 93% goes to the colleges based upon their enrolled pupils per credit. School districts fund students for up to 15 credit hours, but students are able to take up to 18 credit hours at no additional cost. Any credit hours beyond the allotted 18 are billed directly to the student. Running Start students are responsible for the cost of their books and for providing their own transportation.

Evaluation Funding

Yearly performance reports are mandated by the Learning by Choice law, and data collection and analysis is coordinated by the State Board for Technical and Community Colleges.

Geographic Areas

All juniors and seniors within the state of Washington who meet the admissions requirements are eligible for participation in Running Start. Students who do not live near a campus site can participate through online courses.

Information from

State Board for Community and Technical Colleges. (2004). *Running Start 2003–4 annual progress report*. Olympia, WA: Author.

Hanson, S.Z. (personal communication, August 18, 2005)

http://www.sbctc.ctc.edu/

Contact Information

Sally Zeiger Hanson
Assistant Director, Education Services
State Board for Community and Technical Colleges
PO Box 42495
319 7th Avenue
Olympia, WA 98504
360-704-4334
shanson@sbctc.ctc.edu

Notes

1 Savings estimates are calculated based upon the number of FTEs generated throughout the state by high school students through the Running Start program deducted from the assumed cost of postsecondary education if these students had attended college through the traditional model and not received any prior credit.

2 Colleges and universities are reimbursed by the secondary school district for enrolling Running Start students. Please see section on Program Funding for additional details.

Running Start at Clark College

Improving course selection for all students

Clark College, a public, two-year college located in Vancouver, Washington, near the border with Portland, Oregon, serves over 700 students during the fall and spring semesters through its Running Start Program. The Running Start program at Clark College has been in operation for 12 years and continues to receive praise from both local high schools and the college. The enrollment of Running Start students at Clark College classes has increased the number of needed sections of some academic courses as well as increased the college's overall state funding. This has enabled the college to offer more of these classes at additional times, a benefit to both Running Start and traditional Clark College students. According to data compiled by Clark's Running Start director, the most popular courses taken by Running Start students are ones that earn them credit for junior and senior English and social studies requirements such as English 101 and 102, American and British Literature, US History, Political Science 111 and 211, Economics 101 and 107, and Psychology 101.

In 2004-05, Running Start at Clark College served 860 students over four quarters (students who participate in classes during the summer term must pay their own tuition, although they receive dual credit at both the high school and college). These students were 89% White and 11% students of color, of whom 5% were Asian/Pacific Islander, 2.5% were Hispanic/Latino, 1.5% Other; the remainder of students were either multiracial, African American, or Native American. For students eligible for free or reduced price lunch, Running Start at Clark College offers a book grant to cover the cost of textbooks. During the 2004-05 academic year, 42 to 53 students per quarter qualified for book grants totaling $15,662. Clark College has approved an increase in funding to the book grant program so that Running Start can reach out to more low-income students.

As Running Start at Clark College continues to grow and the number of participants increases each quarter, so does the funding that Clark College receives from the enrollment of Running Start students. Additionally, Running Start students who take classes during the summer quarter, when they are required to pay their own tuition, reached a record 80 students. In June and August 2005, 55 Running Start students graduated with both a high school diploma and an associate's degree from Clark; five of them with highest honors (3.90 GPA or better) and 26 with honors (3.40 to 3.89 GPA). Of the 2005 Running Start high school graduates, 34% enrolled at Clark by Fall 2005.

Similar to the statewide data, Running Start students at Clark outperformed traditional Clark College students by earning higher cumulative GPAs (3.11 vs. 2.74). These cumulative GPAs represent new students in either the fall or summer quarters of 2004 who were still enrolled in the Spring 2005 quarter, and who had earned at least 12 credits. Additionally, during this same period, more Running Start students earned grades of A or A minus compared to non-Running Start students (35% compared to 27%) and fewer Running Start students earned F grades (2% compared to 3%). A number of Running Start students also earned individual honors, including a perfect 4.0 GPA, a National Merit Scholarship, and state-sponsored scholarships.

For more information on Running Start at Clark College, please visit
http://www.clark.edu/student_services/services/running_start.php

Georgia Technical College Dual Enrollment

Overview

The Joint Council for Youth Workforce Preparation, a partnership between the Georgia Department of Education and Department of Technical and Adult Education (DTAE), was formed to provide technical and occupational dual enrollment offerings for Georgia's high school students. These courses, usually offered on the campuses of high schools, were created to ease the transition from high school to technical college and from school to work. Through the shared resources of these two state departments, Georgia has increased the number of high school students participating in dual enrollment with technical colleges.

To determine if this collaboration was easing and potentially increasing high school students' transitions into technical colleges, an evaluation was commissioned. Conducted by the Occupational Research Group at the University of Georgia, this evaluation asked whether credit-based transition programs facilitate college-going and success for students who participate in them. The study focuses specifically on dual enrollment of high school students in technical colleges, their transition into technical colleges, policies and processes used in administering the programs, benefits and challenges, and how dual enrollment affects the students, high schools, and colleges who participate. The authors analyzed available longitudinal student-level data, specifically transitions into technical colleges. In addition, researchers investigated the administrative, operational, collaborative, and other relationships between participating partner institutions through survey responses from administrators at the secondary and postsecondary levels and instructors of dual enrollment courses. Conclusions from this work show that dual enrollment courses with technical colleges are improving students' access to postsecondary education at these schools, and more students are successfully attending postsecondary institutions as a result of participating in dual enrollment (particularly those from the technology/career tech diploma and from low-income groups).

Recent changes, implemented in the 2004–05 academic year that limit state funding for dual enrollment, have affected the partnerships with technical colleges. As a result, there has been a decrease in the number of students participating. Students who previously financed these dual enrollment courses through HOPE dollars, the state's lottery-funded grant and scholarship program for higher education, are now limited by the number of credit hours eligible for HOPE funding. Under the former funding arrangement, it was possible for four-year, college-bound students to take advantage of the dual enrollment program with technical colleges to enroll in an interesting elective or gain skills for technical part-time jobs (such as nursing home aide). Now, due to the cap in courses eligible through HOPE monies, it appears that students (or their parents) do not want college credit earned in high school to count against the total credits that are paid through HOPE funding sources.

Population

In the quantitative analysis of this evaluation, researchers analyzed demographics of 17,442 students who participated in dual enrollment courses with a technical college while in high school and continued to track 1,939 of these students who enrolled in a technical college upon high school graduation. Requirements for participation in dual enrollment are that a student must be deemed "program ready," at least 16 years old, a resident of Georgia for at least one year, and able to meet criteria of admissions into technical college through a placement test such as ASSET or the SAT.

The students who earned dual credit with a technical college in 2002, 2003, and/or 2004 represent approximately 2% of all high school students across the state with actual numbers and proportions increasing each year. The researchers found more males than females participated in dual enrollment and that the student demographics approximately mirror the make-up of the general Georgia high school student body, although White students are slightly overrepresented and African American and Hispanic students are slightly underrepresented. One-third of dual enrollment students qualified for free or reduced-price lunch, and researchers saw an increase in the percentages of low-income students over the three-year period of the study.

Key Findings

- The number of students who participated in a dual enrollment program with a technical college increased from 3,783 students in 2000, to 5,034 in 2002, to 8,544 in 2003, and to 9,735 in 2004.

- Students who participated in dual enrollment with a technical college during the three-year time period of the study (2002–2004) enrolled in technical college at a rate of 11% after high school. The average transition rate for high school graduates enrolling in Georgia technical colleges was 8% over the five years prior to this study (1997–2001).

- High school dual enrollment students were especially attracted to courses classified as industrial (34%), business (26%), health (16%), and computer information systems (12%) technologies. Students who matriculated to technical colleges did so in industrial technologies (25%), health (22%), personal/public service (22%), business (15%), and computer information systems (11%).

- Upon high school graduation, 40% of dual enrollment students earned a technology/career preparatory diploma, 29% earned a dual seal (college preparatory and technology/career preparatory), 24% earned a college preparatory diploma, 6% were awarded a certificate of performance, and less than 2% were awarded a special education diploma. Those who transitioned into a technical college were more likely to have graduated with a technology/career preparatory high school (56%) or dual seal diploma (another 23%) than those who graduated with only a college preparatory diploma (14%).[1]

- Transitioning students were more likely to be White (66%) and female (56%); qualified for free or reduced-price lunch while in high school (33%); and had taken dual enrollment courses in either 12th- (87%) or 11th-grade (11%) while in high school. The least likely groups of dual enrollment students to continue at the technical college were Black males and those who took dual courses beginning in the 9th or 10th grade.

- Of the 11% of students who did enroll in technical college after participating in dual enrollment with a technical college in high school, 95% had earned As, Bs, or Cs in their technical college coursework during high school; 84% earned As, Bs, or Cs on their coursework as students at the technical college.

- One in four (27%) high school dual enrollment students had to take at least one remedial course upon enrollment in a technical college. This rate is higher than the general population of students entering technical colleges, where one in five (22%) had to take at least one remedial course, but lower than the 42% of freshmen in public two-year Southern colleges who need at least one remedial course in reading, writing, or math.

- 28% of students who were dually enrolled with a technical college during high school completed at least one technical certificate of credit, with the majority earning two or more certificates.

- Nearly 75% of high school administrators who collected data on student completion said that dual enrollment contributed to high school completion for more students, the principal reason for offering dual enrollment. And, according to survey research, 75% of high school administrators and 60% of dual enrollment instructors said there was evidence that dual enrollment students were succeeding academically and thus prepared for postsecondary education.

- Although credit transferability among technical colleges in the DTAE system is not difficult, it can be more challenging outside the system as it is dependent on courses and policies of the receiving school. Students were not necessarily guaranteed transfer credit if they enrolled in a two- or four-year institution of the University System of Georgia or a private college.[2]

Program Components

All dual enrollment courses at technical colleges *result in high school credit and postsecondary credits and/or credentials*. Courses offered through the economic development division of a technical college usually resulted in high school credit and employment credentials, but did not necessarily transfer into a postsecondary occupational or academic program.[3] On the other hand, classes offered through a techni-

cal college's academic division were more closely aligned with existing credit diplomas and degree programs.

Courses are available at little or no cost to students and at no cost to high schools through the HOPE grant,[4] which covers the cost of technical college tuition, fees, and books up to $100 per quarter. High schools continue to receive full ADA funding for dually-enrolled students. This philosophy of "do no harm," means that the state pays twice for the education of the same students, once at the high school and again at the technical college. Researchers noted that administrators at both the high schools and the technical colleges believed that the programs were being funded adequately. More recently, Georgia has significantly changed its HOPE funding structure by capping the total number of credits paid from HOPE funds. The cap includes those credits earned while dually-enrolled in high school. This capping, as noted earlier, has decreased the number of students participating in dual enrollment programs, particularly with technical colleges.

Dual enrollment instructors bring *an extensive amount of professional and industry experience to the classroom*. Hired through the Georgia DTAE dual enrollment instructors are not required to meet the minimum certificate requirements for a Georgia high school teacher. Dual enrollment instructors typically have taught regular courses at the technical college prior to be being assigned to the dual enrollment courses. Although dual enrollment instructors have no formal training as high school educators, they appear quite effective in engaging high school dual enrollment students in technical, college-level coursework.

Contributing Factors

Student-cited benefits: exposure to college, increased options, and narrowing of career choices

When asked the benefits of dual enrollment courses, exposure to college, increased options, and narrowing of career choices were the three most common answers. As dual enrollment courses with technical college are career-focused, students described how the coursework had expanded their knowledge about potential career and postsecondary options.

Opportunity to leave campus and/or train on state-of-the-art equipment

In some cases, students left their home high school to attend classes on a campus of the technical college. Alternatively, high schools were able to provide facilities where technical college instructors could bring their equipment into the high school for use during classes. Either option made dual enrollment classes significantly different than traditional high school classes. Additionally, the curriculum required students to use machinery or test their skills in real world simulations or internships.

Students are treated like adults and given adult responsibilities

Dual enrollment classes are significantly different from high school courses, as they require students to take more responsibility for their coursework. As part of their coursework, students used equipment and machinery at jobsites. For example, some classes required students to learn to drive a forklift, participating in the same training and safety courses required for anyone learning to drive such a vehicle.

Administrator and instructor-cited benefits

Technical college administrators, counselors, and faculty were more likely to view the purposes and benefits of dual enrollment as motivating more students to pursue postsecondary education, increasing access to postsecondary education for more students who otherwise might not pursue it, giving students a head start on college programs, and allowing high school students to take a class considered "relevant" and "of special interest" that the high school may not offer.

Study Methodology

Phase I consisted of case studies of three sites that were collaborations between high schools and technical colleges; a brief description of one site, Central Education Center, is included here. Information was gathered through on-site visits that included interviews, focus groups, and collection of written materials. Phase II is an analysis of student-level data from the Department of Education and DTAE databases in order to understand and describe the characteristics of dual enrollment students, both during high school and subsequent enrollment at a technical college. Phase III was an administration of surveys to dual enrollment administrators at technical colleges, administrators/counselors at high schools participating in dual enrollment with a technical college, and a

sample of dual enrollment instructors throughout the state. Researchers hope to continue this evaluation, if they are able to gain access to the appropriate data, to consider characteristics of students through career academies, to track students dually-enrolled with a technical college during high school who went onto to continue their postsecondary education at a college or university governed by the University System of Georgia, to update the information on students who had subsequently enrolled in technical colleges (i.e., after 2004), and to examine Bureau of Labor employee data for dually-enrolled students who are now in Georgia's workforce.

Funding

Program Funding

The Dual Enrollment-HOPE grant program, which is supported by the state lottery program, funds dual enrollment courses offered at technical colleges that are required for a technical certificate or diploma program. The Dual Enrollment-HOPE program is intended to offer new opportunities for secondary students and is based upon an agreement between the secondary school system and postsecondary institutions. State dollars cover the cost of tuition, HOPE-approved mandatory fees,[5] and a book allowance. High schools maintain the full ADA funding per student. It is important to note that core academic classes were funded through a separate statewide agreement called Postsecondary Options (PSO), now called the ACCEL program, which is also funded by the state lottery.

Evaluation Funding

Commissioned and funded by the Georgia DTAE and conducted by the Occupational Research Group at the University of Georgia, this is one of the only third-party evaluations included in this compendium. Additionally, the researchers use both quantitative and qualitative methods to provide a comprehensive understanding of dual enrollment programs between high school and technical colleges as well as how students fared in their transition to postsecondary education.

Geographic Areas

Georgia students can participate in dual enrollment with a technical college, assuming they have access through a campus, satellite location, or through Georgia Virtual Technical College.

Information from

Harnish, D., Lynch, R., Moran, G., and Vreeland, D. (2004). *Georgia secondary-postsecondary education transitions study, phase one report: Dual enrollment in Georgia*. Athens, GA: Occupational Research Group, College of Education, University of Georgia.

Lynch, R., Harnish, D., Fletcher, G., Thornton, G., Thompson, J., and Moran, G. (forthcoming). *Dual enrollment in technical colleges and high school*. Athens, GA: Occupational Research Group, College of Education, University of Georgia.

Contact Information

Richard L. Lynch
Occupational Research Group
College of Education, University of Georgia
850 College Station Road
Athens, GA 30602-4812
706-542-4688
rlynch@uga.edu

Notes

1 Georgia high school diplomas are marked with a seal to indicate the academic program that a student completed. There are two primary programs, college preparatory and technology/career-preparatory, and each has specific course and credit requirements. Students may fulfill the requirements for both diplomas to earn a dual seal diploma. In addition, diplomas are awarded for special education and a certificate of performance (usually for those who have not passed state-mandated graduation tests).

2 Georgia has two state-level agencies that administer higher education. The Georgia Department of Technical and Adult Education administers 34 technical colleges and branch campuses that offer various associate degree, diploma, certificate, and industry training programs in a wide variety of occupationally-related programs. The University System of Georgia (USG) offers students higher education options at 35 colleges and universities throughout the state, including 12 two-year colleges, four-year colleges, state and regional universities, and research universities. Most programs offered at the USG's two-year colleges are intended for students to transfer to a BA program at a four-year institution, although there are some exceptions.

3 The economic division of technical colleges provides training programs that meet business and industry needs. These programs include coursework that result in industry-accepted certifications, such as Certified Customer Service Specialist. Students choose these courses because industry certification allows them to earn more money in a part-time job.

4 For information on the HOPE program, Georgia's lottery-funded scholarship program, see section entitled Funding.

5 These are costs to the institutions, such as program or lab fees for dually-enrolled students; dollars amounts have been approved by the HOPE program.

Central Education Center

An example of a technical college-school partnership

Central Educational Center (CEC) is a charter school in Coweta County, Georgia, whose operating partners include local business and industry, the county's three public high schools, and West Central Technical College. CEC's mission is "to ensure a viable 21st Century workforce" by breaking down barriers between academics and career/technical education (CTE), between high school and college, and between education and the workplace. Students in Coweta County's high schools voluntarily enroll for part of the academic day at CEC, where they take a seamless blend of academic and CTE classes. At age 16, CEC students, or "team members," have the option of dual enrollment with West Central Technical College, simultaneously earning high school credit while also working toward college certificates or associate's degrees. Students also have the option of participating in work-based learning through internships.

Dual enrollment at CEC usually leads to a technical certificate: the class of 2001 earned 95 technical certificates, and the class of 2002 had a 38% increase, earning 157 technical certificates. Recent results from a survey of CEC alumni show that 80% of the graduates in the class of 2001 at CEC were planning on continuing with additional postsecondary education, 32% were entering the workforce, either full-time or part-time dependent upon their status as a student, and 13% were planning to enlist in the military. Since the opening of CEC, Coweta County has experienced an increase in standardized test scores, higher high school completion rates, lower dropout rates, and increased economic growth.

As a charter school, CEC is one of the more unusual technical college dual enrollment partnerships. CEC operates as a charter school that enrolls students from three district high schools for a portion of the school day. Students participate in career and technical classes at CEC and continue to take core academic subjects at their home high school. CEC operates on a block schedule with 80-minute classes, allowing faculty to both introduce a new concept and have students test their knowledge in real-world simulations. The CEC classrooms have state-of-the-art facilities, similar to those available at a technical college, providing students with an opportunity to use tools and machinery they will be using on the job. The innovative curriculum structure at CEC, called Accomplished Based Curriculum Development (ABCD), mirrors the performance-based methodology used in most workplaces aims to prepare students for their future roles as society members, family members, workers, and citizens.

CEC has recently begun a replication project through a grant from the Georgia Department of Education and the Bill & Melinda Gates Foundation. Three new Georgia "CECs" are scheduled to open in Whitfield, Walton, and Douglas counties. CEC has been honored with Georgia's economic development award (T.E.R.R.I.F.I.C.) in 2002 and was named a National Model High School in 2004.

For more information visit, http://www.cowetaschools.org/gacec/ or contact Russ Moore, CEO, russ.moore@cowetaschools.net.

Introduction to Tech Prep

Tech Prep is a planned sequence of study in a technical field that begins as early as 9th grade and extends through at least two years of postsecondary education or an apprenticeship program. Tech Prep programs culminate in students receiving a postsecondary credential, such as an associate's degree or technical certificate, thus allowing them to continue their postsecondary education or to enter the workforce as a qualified technician. Many of the Tech Prep classes offered during a participant's junior and senior years qualify for dual enrollment credit through articulation agreements. These agreements stipulate that certain technical/Tech Prep courses taken during high school will translate into college credit. This articulated credit is awarded by the postsecondary partner after the student has enrolled at a participating college or university.

The US Department of Education estimates that 7,400 high schools (47%) offer one or more Tech Prep course of study. Nearly every community and technical college is part of a Tech Prep consortium and many four-year universities also participate. Tech Prep is specifically geared toward serving the "middle majority," students who represent the middle 50% of their class, but who often do not qualify for other SPLOs like Advanced Placement or state-sponsored dual enrollment.

Tech Prep is federally-funded under the Carl D. Perkins Vocational and Technical Education Act. The legislation mandates seven essential elements for Tech Prep implementation:

- an articulation agreement between secondary and postsecondary consortium participants;
- a 2+2 , 3+2, or a 4+2[1] design with a common core of proficiency in math, science, communication, and technology;
- a specifically developed Tech Prep curriculum;
- joint in-service training of secondary and postsecondary teachers to implement the Tech Prep curriculum effectively;
- training of counselors to recruit students and to ensure program completion and appropriate employment;
- equal access of special populations to the full range of Tech Prep programs;
- preparatory services such as recruitment, career and personal counseling, and occupational assessment.

Tech Prep is a vehicle for integrating academic and vocational content through a "hands-on" program that combines academic and vocational experiences, develops skills for the workplace, provides career direction and focus, and makes a connection between what is taught and the real world.

Although national research findings on the effectiveness of Tech Prep programs are inconclusive, there have been a number of evaluations (including those in this compendium) that have found evidence of improved student GPAs, lowered dropout rates, reduced absences, increased high school completion, and improved postsecondary enrollment. However, these evaluations found limited or no evidence that Tech Prep improved students' scores on standardized academic achievement tests, and findings were mixed on whether Tech Prep improved students' postsecondary achievement or labor market outcomes. The last national evaluation of Tech Prep, conducted in 1997, found that Tech Prep programs were not always implemented as envisioned in the legislation, perhaps lessening their impact on student outcomes (Hershey, A., et al., 1998).

Other Tech Prep research finds positive outcomes, but was limited in terms of student population (only high school students enrolled in Tech Prep) and outcomes (only related to success during high school). For example, research from the State of Texas compares Tech Prep students with two other subgroups: non-Tech Prep career and technical education students and general education students. Researchers found that Tech Prep students had higher attendance rates, lower dropout rates, and higher graduation rates with more Tech Prep students also completing the college preparatory curriculum. In al-

most all cases, these outcomes held true when the researchers disaggregated the data by subgroups based upon ethnicity and special population categorization, defined by the researchers as "at-risk, economically disadvantaged, bilingual/ESL, special education, and all other students" (Brown, 2000, p. 8). While promising, the research did not consider outcomes at the postsecondary education level, which is a key part of any Tech Prep program.

Another study identified barriers to Tech Prep's effectiveness. In 2004, the Center for Occupation Research and Development (CORD) conducted a survey of Tech Prep participants from high schools and communities across Tennessee. The study found that poor articulation is a major stumbling block for Tech Prep on two levels: high school courses are not academically rigorous[2] enough for students to be earning postsecondary credit, and Tech Prep students are unaware they are earning postsecondary credit through their Tech Prep courses. Both of these issues indicated a clear disconnect between the Tech Prep partners at the secondary and postsecondary levels. Some of the findings from the study include:

- Ninety percent of all surveyed secondary faculty and administrators see Tech Prep courses as rigorous enough to prepare students for community college programs, while only half (50%) of postsecondary respondents have confidence in this statement.
- Less than one-fourth (22%) of secondary personnel believe that an unacceptable ("too high") number of students need remediation when they get to college, while almost three-fourths (74%) of postsecondary personnel have this belief.
- Respondents often noted in the free response sections that Tech Prep students can be successful, but they tend to need several remedial and developmental courses, particularly in English and math, before they can begin college level work.
- Secondary and postsecondary faculty agree that secondary students who take articulated courses are more prepared for college than those students who have no prior college-level course experience.
- The respondents believe that more students would benefit from having more college-level courses available in their high schools. Unfortunately, the responses on many of the other statements indicate that very little collaboration to create additional articulated courses has taken place.
- The top reason for a student retaking an articulated course is that there has been insufficient communication with the student to let him/her know credit had been earned. It is evident that students need more information about how to take advantage of articulated credits (CORD, 2004).

The evaluations included in this section highlight the strongest research conducted to date on Tech Prep programs.

Notes

1 This refers to the number of years of secondary and postsecondary education included in the Tech Prep sequence. For example, 2+2 means a student will spend two years in high school (junior and senior year) and two years in postsecondary education or an apprenticeship.

2 Specifically, the syllabi of Tech Prep courses offered in high schools do not reflect the actual coursework of the corresponding community college classes.

Promising Outcomes for Tech Prep Participants in Eight Local Consortia

Overview

This research commissioned by the US Department of Education, Office of Vocational and Adult Education studies the relationship between Tech Prep implementation and student outcomes at eight consortia chosen because of their proven record of strong Tech Prep programs.

One limitation to this research is that the mechanisms for monitoring articulated credit among college entrants had not been fully developed; each consortium was at a different stage of sophistication in terms of tracking students and courses taken. The information collected does not specifically address whether students received postsecondary credit for their Tech Prep credit, yet it does discuss some post-high school outcomes for subgroups of Tech Prep participants versus nonparticipants. Although this research is longitudinal and well-executed, the researchers noted a number of reasons why students reported they did not use the postsecondary credit earned through participation in Tech Prep (e.g. students were unaware of accumulated college credit; students knew about credit, but instructors at both/either secondary or college level had encouraged students to retake the class at college; or students made decisions to retake the class, although an advisor had encouraged articulated credit).

Population

Across the consortia, Tech Prep students were racially/ethnically similar to the comparison group from the general student population; the gender ratio was also similar and representative. Three of the consortium sites reported a larger percentage of students with family incomes under $30,000 and parents with less than a college education, perhaps indicating a larger percentage of lower socioeconomic status and first-generation college-bound students in the Tech Prep program. Tech Prep enrolled about 15% of high school students in the selected consortia during the 1996–97 academic year, but with the growth of Tech Prep, there is an assumption that the number increased during the period of the evaluation.

The site specific results are from the follow-up study between Summer 1998 and Winter 1999, which included a detailed analysis of available student transcripts from secondary and postsecondary institutions, when available, and student surveys. These include 4,600 students across all eight consortia from the 1995, 1996, and 1997 graduating classes with equal numbers of Tech Prep and non-Tech Prep students.

Key Findings

- Across the consortia, 65% of Tech Prep participants enrolled in some form of postsecondary education within three years of high school graduation while postsecondary attendance exceeded 75% at five sites.
- At all but one site, a slightly higher percentage of Tech Prep participants enrolled in two-year colleges than their non-Tech Prep peers.
- Four-year college attendance varied by site. One site reported higher attendance for Tech Prep students compared to non-Tech Prep students; two sites were similar, and five sites reported lower attendance rates.
- Tech Prep participants were more likely to be working, usually at full-time jobs, than their non-Tech Prep peers after high school graduation, whether or not they had enrolled in postsecondary education.
- Within each consortium, preliminary results showed promising outcomes linked to wage increases over time for Tech Prep participants and to the acquisition of more highly skilled and technical jobs.
- Unfortunately, the time frame prevented researchers from looking at the impact of college completion and credentials on employment but, ideally, these are outcomes that the researchers would like to consider in future analysis.

Consortium Specific Findings

East Central Illinois Education-To-Careers Partnership

- Both Tech Prep and non-Tech Prep students had similar transition rates to college (approximately 70%).

- Students attending two-year college, specifically Danville Area Community College, the community college within the consortium, were only allowed six hours of articulated credit.

- After high school, most Tech Prep students were employed full-time (while also attending college), while only about 50% of non-Tech Prep students had the same employment outcome.

Metro Tech Prep Consortium[1]

- Among Tech Prep participants, 38% were in the top quartile of their high school class and another 50-plus% were in the middle two quartiles.

- Nearly all students in both groups enrolled in postsecondary education; only 6% of Tech Prep and 11% of non-Tech Prep students did not enroll in any form of postsecondary education.

- Over 50% of the Tech Prep students and 46% of the non-Tech Prep students reported going to a four-year college only, while about 30% of each subgroup indicated that they attended a two-year college.

- A majority of both subgroups were working, but over one-third of both subgroups were employed in part-time, low wage, low-skill jobs (longitudinal employment outcomes not yet determined).

Hillsborough Tech Prep Consortium

- Of both Tech Prep and non-Tech Prep students, 70% attended some form of postsecondary education within one to three years of high school graduation, usually two-year colleges, but there were also many four-year college attendees.

- More Tech Prep students transitioned directly to working full-time (30%, compared to 15% for non-Tech Prep students) after high school graduation with no enrollment at a postsecondary institution.

Golden Crescent School-To-Career/Tech Prep Partnership

- As most of the students continued their studies at Victoria College, the community college within the consortium, more than half of all students had articulated credits, but a higher percentage of Tech Prep students had articulated credits.

- Of both subgroups, 17% attended four-year colleges only, while 20% of both subgroups attended both two- and four-year colleges.

- Less than 20% of either group completed high school and transitioned directly to full-time employment.

Miami Valley Tech Prep Consortium

- Approximately 90% of students matriculated to some form of postsecondary education, with nearly 75% of the Tech Prep group going to Sinclair Community College (SCC),[2] the partner school in the consortium.

- Comparatively, only one-third of the non-Tech Prep students enrolled at SCC, and over 40% attended a four-year college.

- Less than 10% of students from both groups went directly to work without attending any form of postsecondary education and tended to have low-wage, low-skill jobs.

Mt. Hood Regional Educational Consortium

- Almost half the Tech Prep and non-Tech Prep students had articulated credit at Mt. Hood Community College, the community college within the consortium. The Tech Prep students had significantly more credits.

- More Tech Prep students went directly to work without any additional postsecondary education than their non-Tech Prep peers. Almost a quarter of each subgroup chose full-time employment with no additional postsecondary education.

- Tech Prep students maintained employment at their primary job longer than their non-Tech Prep

peers, which translated into higher wages over time.

Guilford Tech Prep Consortium

- Tech Prep students appeared to be working in jobs that required specialized skills like those learned in their Tech Prep courses.
- Students predominately enrolled in postsecondary education at both two- and four-year colleges, with less than 17% in all subgroups not attending any form of postsecondary education.
- Of students who attended four-year colleges, 48% were Tech Prep students and 55% were non-Tech Prep students. Additionally, 5% of these students attended a two-year college prior to enrollment at a four-year institution.

San Mateo Tech Prep Consortium

- Of both Tech Prep and non-Tech Prep students, 94% transitioned into postsecondary education within one to three years of high school graduation. The Tech Prep subgroup's attendance rate was slightly higher than their non-Tech Prep peers.
- Approximately half the students in both subgroups attended two-year colleges.
- Post-high school wages for both subgroups were widely distributed across the earnings spectrum. All jobs were considered entry level/unskilled positions.

Program Components

Block scheduling was adopted within most of the high schools within each consortium to ensure sufficient time for joint planning, integrated academics, career and technical instruction, and work-based learning experiences, internships, or apprenticeships for both teachers and students.

There are *seven essential elements necessary for Tech Prep implementation*: articulation agreements, 2+2 curriculum, curriculum development, training for teachers, training for counselors, preparatory services, and equal access for all learners. The researchers noted the specifics of each of these seven elements for each consortium site. All seven elements were observable, in some form, at each site.

Contributing Factors

Involvement of business and industry

Partnerships with business and industry provided internship and apprenticeships for student participants as well as teacher training, including on-the-job professional development opportunities. This real-world experience for teachers helped them apply academic concepts to on-the-job situations for their students.

Scholarships for Tech Prep participants

Local college foundations and business funds (and the state in the case of Florida) were able to offer college scholarships for Tech Prep students, making the transition into postsecondary education easier and more affordable. Additionally, the scholarships added to the reputation of Tech Prep as an academically-oriented, college-prep program. Students often attributed the incentive of the scholarship to their willingness to stick with the Tech Prep curriculum.

Relationships between secondary and postsecondary institutions

At all of the sites, the consortium office was located at the partner postsecondary institution. Although this gave Tech Prep administrators little leverage at the secondary level over budget and personnel, it did allow the administrators to oversee the programs of all secondary schools within the consortium. Additionally, it created a visible contact for both the secondary school teachers and students.

Study Methodology

This four-year longitudinal study considered high school graduates from the 1994–95, 1995–96, 1996–97, and 1997–98 academic years. The researchers used a variety of methods, including field visits, interviews of key stakeholders, classroom observations, and document review and analysis. The researchers also conducted a causal-comparative study, referred to as the follow-up study, of students' educational and employment outcomes to support the qualitative work on the selected sites. Researchers collected 98% of participants' high school transcripts and 40% of the community college transcripts. They also administered a follow-up survey on student attitudes toward high school, transition to college plans and actual experiences, and employment during and after high school. Response rates varied among the sites between 38–62% with 47% overall. Some of the sites had a very small sample population.

Funding

Program Funding

Tech Prep is federally-funded through the Perkins Act and also supported through state funding.

Evaluation Funding

Beginning in January 1998, a grant from the Office of Vocational and Adult Education, US Department of Education supported this research.

Information from

Bragg, D. (2001). *Promising outcomes from Tech Prep participants in eight local consortia: A summary of initial results*. St. Paul, MN: National Research Center for Career and Technical Education.

Contact Information

Debra Bragg
Professor
Educational Organization & Leadership
University of Illinois, Champaign
140B Education Building
1310 S. 6th St. MC 708
Champaign, IL 61820
217-244-8974
dbragg@uiuc.edu

Notes

1 Researchers indicated that this is a pseudonym for a large metropolitan Tech Prep consortium that serves 15 urban high schools and works primarily through a technical college offering both two- and four-year degrees.

2 A more detailed study of the Tech Prep students at Sinclair Community College is also included in this compendium.

Sinclair Community College

Overview

Sinclair Community College is home to the Miami Valley Tech Prep Consortium composed of 64 high schools and career centers in eight southwestern Ohio career-technical education planning districts. The Consortium aims to create seamless career pathways beginning in the student's junior year of high school through, at minimum, an associate's degree. Eleven pathways are available to Tech Prep students, and from these high school programs students can matriculate to an associate's degree program at Sinclair Community College (SCC), taking advantage of the prior credit earned through their participation in Tech Prep.

This research compares students who participated in a Tech Prep program and who first enrolled at SCC between Fall 1997 and Spring 2001 with their peers who came to SCC without Tech Prep credit during the same time frame. Comparisons were made in terms of college performance and retention rates using results from entry placement tests (such as COMPASS), grades in first-level college English and math courses, first year GPAs, first quarter to second quarter retention, and first-year to second-year retention. Unfortunately, there is no information about the amount and type of articulated credit Tech Prep students received, only the assumption that Tech Prep students had some articulated credit.

Population

All the Tech Prep students studied were part of the Miami Valley Tech Prep Consortium. The Tech Prep subgroup included 291 Tech Prep students who fit the researchers' age and division requirements: being under 20 years of age, a recent high school graduate, and majoring in an area of Tech Prep study. Within this subgroup, 36.1% were female, 8.2% minority, 51.2% declared Engineering and Industrial Technologies majors, 26.1% Allied Health Technologies majors, and 22.7% Business Technologies majors. The comparison group, students with no prior Tech Prep credit, consisted of 2,074 students with demographics similar to the Tech Prep subgroup. The researchers were careful to note that these subgroups were not representative of the general population at SCC, as the general student population includes a significant number of older students who are returning for additional training and education, and the percentage of Tech Prep students at SCC is relatively small in comparison to the entire student body. Researchers also identified a small age difference between the two subgroups, noting that the Tech Prep subgroup was seven months younger. The reasons for this age difference could be attributed to the ability of the Tech Prep students to gain credits in high school or that Tech Prep students, due to their articulated credits and knowledge of SCC through their Tech Prep participation, were more likely to enroll directly after high school graduation. Further research considered students according to the career-area Tech Prep programs through which they had entered (i.e. Business and Engineering and Health Occupations, in comparison to non-Tech Prep students with the same career majors).

Key Findings

- Tech Prep students scored significantly higher than their non-Tech Prep peers on all portions of the COMPASS test (Numeric section: 60.74 vs. 52.48; Algebra section: 41.66 vs. 39.15; Writing section: 69.68 vs. 58.51; and Reading section: 81.95 vs. 77.18).[1]

- Students needed to receive a passing score on the Numeric section in order to sit for the Algebra section; more Tech Prep students qualified to take the Algebra portion of the test than their non-Tech Prep peers (93% vs. 72%, statistically significant at the $p<.001$ level).

- Due to low scores on the COMPASS test, 37% of the Tech Prep students required remedial math vs. 54% of the comparison group. The difference is statistically significant at the $p<.001$ level.

- While 74.5% of the comparison group required remedial English, only 45% of the Tech Prep group required some form of remediation in either reading or writing.

- Tech Prep students earned credit, meaning they earned an A, B, C, or D, in the first-level college math course at a higher rate than their non-Tech Prep peers (81% compared to 66%, significant at the $p<.001$ level). When Ds are omitted, the difference is still significant (71.2% vs. 54.4%).

- The average overall GPA for Tech Prep students was 2.46, while their non-Tech Prep peers earned a 1.87 average GPA.

- Although there was negligible difference in first-quarter to second-quarter retention rates between the two subgroups, Tech Prep students returned for a second year at 60.7% compared to the comparison group, which returned at a rate of 48.4% (a difference significant at the p<.001 level).

For Business or Engineering Students

- In Math 101, Tech Prep students earned higher grades than their non-Tech Prep peers. Of the Tech Prep students, 55% received an A, B, or C vs. 35% of the non-Tech Prep students.

- In English 111, Tech Prep students succeeded at a higher rate with 75% receiving an A, B, or C while 63% of non-Tech Prep students received the same.

For Allied Health Students

- Allied Health students, based on their scores on the COMPASS test, were significantly less likely to allow students to test out of remedial math in comparison to other Tech Prep students.

- Allied Health students were less likely to be retained both first quarter to second quarter and first year to second year than their peers in other Tech Prep programs.

- In Allied Health 103, approximately 75% of the Tech Prep students earned an A, B, or C compared to a 68.6% success rate of their non-Tech Prep peers.

- In Health Information Management 121, there was no significant difference between the two subgroups, with the pass rate for Tech Prep and non-Tech Prep students being 73% and 77%, respectively.

- In Math 106, there was another large gap between the pass rates of Tech Prep versus non-Tech Prep students. Tech Prep students' success rate was 86% compared to 60% for their non-Tech Prep peers.

- Biology 107 had the most significant difference between the two subgroups: 80% of the Tech Prep students received an A, B, or C while only 53.8% of the non-Tech Prep students received the same.

Program Components

Tech Prep is a *seamless program of study* from Grade 11, or earlier in some cases, through an associate's degree. Participation in Tech Prep allows students after high school to directly transition into their chosen career field, continue at SCC or another community college to complete an associate's degree, or use the credits earned through Tech Prep to transition into a bachelor's program in a related field. Tech Prep opens doors, particularly to postsecondary education, for students who previously might not have thought of going to college. With Tech Prep, these students enter postsecondary education with some credit earned in high school.

Tech Prep programs stress mathematics, science, communication, and technology through *applied learning and hands-on experiences*. Courses are a balance of academics with technical skills and knowledge interwoven with opportunities for students to test their new knowledge in real world experiences, thus, allowing Tech Prep students an engaging and relevant school experience.

Contributing Factors

Exposure to the college atmosphere at Sinclair Community College

Tech Prep students who matriculate to SCC already have experienced the expectations of SCC faculty. Students are more prepared for the coursework because they have had an opportunity to take SCC classes while in high school.

Scholarship at Sinclair Community College for Tech Prep students

The Sinclair Community College Foundation and Board of Trustees created a merit-based scholarship for Tech Prep students continuing their studies at SCC within one semester of high school graduation. The scholarship is an incentive for students to complete the Tech Prep program of study and enroll at SCC with additional assistance beyond the financial aid for which they are eligible.

Study Methodology

Researchers conducted comparison group studies of Tech Prep students and racial/ethnic and gender equivalent groups of students with no prior credits through Tech Prep. Researchers noted that these comparison groups are representative of the Tech Prep students, but not of the general student population at SCC. Performance measures included results from entry placement tests (COMPASS: reading, writing, and mathematical skills), grades in first-level college English and math courses, first-year GPAs, first-quarter to second-quarter retention, and first-year to second-year retention.

Funding

Program Funding

Tech Prep is federally-funded through the Perkins Act and also supported through state funding.

Evaluation Funding

No information was available, but the evaluation was conducted by the Office of Institutional Research & Planning, Sinclair Community College.

Information from

Krile, D. & Parmer, P. (2002). *Tech Prep: Pathways to success? The performance of Tech Prep and non-Tech Prep students at a Midwestern community college*. Paper presented at Annual AIR Forum, Toronto, Canada.

Office of Institutional Research & Planning. (2001). *Performance of Tech Prep and non-Tech Prep students in selected courses*. Dayton, OH: Author.

Contact Information

Program Contact
Ron Kindell, Director
Miami Valley Tech Prep Consortium
Sinclair Community College
444 West Third Street, Room 12-201
Dayton, OH 45402
937-512-2406
937-512-2194 fax
ronald.kindell@sinclair.edu

Evaluation Contact
Penelope Parmer
Office of Institutional Planning & Research
Sinclair Community College
444 West Third Street
Dayton, OH 45402-1460
937-512-2854 x2001
Penelope.parmer@sinclair.edu

Notes

1 The scores were statistically significantly different, thus insignificant, at the p<.001 level, except for the Numeric section, which was statistically significant at the p<.05 level.

Southern Idaho Tech Prep

Overview

In Idaho, approximately 95% of all high school students take at least one course listed under the career and technical category, and approximately 39% take a sequence of two or more such courses. Students usually take these sequenced classes through a Tech Prep program. To date, there has been no statewide research on Idaho's Tech Prep program. This research is an initial step, comparing the academic achievement of Tech Prep students to similar non-Tech Prep students attending Idaho State University (ISU) College of Technology. The study design is based upon research conducted at Sinclair Community College (also included in this compendium). The research considered additional factors, such as high school GPA, gender, and size of high school attended.

Population

Although ISU's College of Technology is large, enrolling over 1,500 students yearly with approximately 37% coming from Tech Prep programs, the study had specific requirements that significantly decreased the sample population due to its efforts to replicate the research conducted at Sinclair Community College. Only recent high school graduates (within two years) who entered either Business and Engineering (BE) or Health Occupations (HO) programs from 1999 to 2003 and who took at least one of the courses examined in the study were considered. Students without a COMPASS score were excluded from the sample population. Considering all these factors, the final sample included 89 Business and Engineering students and 30 Health Occupations students for a total sample population of 119. Within the Business and Engineering group, 20 (22.5%) qualified as Tech Prep students and 69 (77.5%) were non-Tech Prep students. For the Health Occupations sample, 13 (43.3%) were Tech Prep and 17 (56.7%) were non-Tech Prep students. In terms of gender and high school size, 70 (58.8 %) of the students were female, 49 (41.2%) of the students were male, with 50 (42.0%) coming from large high schools, 42 (30.3%) from midsized schools, 27 (22.7%) from small schools, and six (5.0%) undetermined.

Key Findings[1]

- A significantly higher percentage of Tech Prep students qualified to begin college in nonremedial, for-credit English and math classes. For example, ISU requires a COMPASS writing score of 68 or above for placement into nonremedial English courses. Business and Engineering Tech Prep students scored well above this level with an average of 77.25. The Health Occupation Tech Prep students scored an average of 72.17. The respective non-Tech Prep mean scores were 71.86 and 71.50. The higher Tech Prep mean scores indicate that a lower percentage of Tech Prep students were required to take remedial English courses.

- After adjusting for gender and school size, there was not a statistically significant difference in high school GPA between the Tech Prep and non-Tech Prep students enrolled at ISU College of Technology.

For Business and Engineering Students

- The Tech Prep group had a statistically significant ($p<0.05$) higher college GPA than the non-Tech Prep group, 3.12 compared to 2.78.

- While scores for Tech Prep students were higher on each of the three COMPASS sections, the differences were not statistically significant. Tech Prep students' mean score on the Writing section was 77.25 compared to 71.86 for non-Tech Prep students. For the Numeric section, the mean scores were 64.56 vs. 57.49 and for the Algebra section, offered only to students who have passed the Numeric section, the Tech Prep students' mean was 53.38 compared to 42.10 for their non-Tech Prep peers.

For Health Occupation Students

- Although the difference in COMPASS scores was generally higher for Tech Prep students versus their non-Tech Prep peers, the difference on the Writing and Numeric section was not statistically significant, but it was significant for the Algebra section, 55.25 vs. 29.33.

Program Components

During their junior and senior years, students interested in attending ISU College of Technology are encouraged to take the COMPASS test, a prerequisite for admissions. In areas on the COMPASS test that students do not pass, they can receive *specific*

academic coaching. This extra support doubled the number of Tech Prep students who received eligible scores on the COMPASS test from 25% to over 46%. Eligible COMPASS scores are one of the criteria that students must meet to receive articulated credit.

As with all Tech Prep programs, students are enrolled in a *continuous course of study in a career area* that begins during the junior year and continues through two years of postsecondary education at a technical college, thus allowing Tech Prep students to enter ISU College of Technology with technical credits from their high school Tech Prep courses.

Contributing Factors

Clear online instructions for earning articulated credit

The ISU Tech Prep website is clear about which classes students can earn articulated credits in. Additionally, ISU is clear on what requirements a student must meet to earn articulated credit and how to ensure that articulated credit is noted on a student's transcript. As previously noted, information on articulated credit for students is often a stumbling block in Tech Prep programs. ISU Tech Prep is taking a step in the right direction, making information on articulation clearly accessible to all students via the college's website.

Committed Tech Prep coordinator

The ISU Tech Prep coordinator has been with the program for many years. He has been instrumental in ensuring that Tech Prep is available to all students in the region and also has served as a recruiter for ISU's College of Technology. He is knowledgeable about the articulation agreements and is available to advise and assist with the application and articulated credit processes.

Study Methodology

The methodology replicated and expanded on the Sinclair Community College study that compared college placement test scores, college GPA, and success rates in first-year college mathematics and English courses for Tech Prep and non-Tech Prep students.

Factors considered in this research included students' course grades, COMPASS test scores, college GPA, gender, high school GPA, and performance based on the size of high school attended. The researcher is careful to note the limitations of this work due to the small sample population. The population was limited due to some Tech Prep students using ACT scores rather than COMPASS scores for admissions/articulation requirements, Tech Prep students failing to identify themselves as Tech Prep upon matriculation to ISU, and the failure of Tech Prep students to enroll in the considered courses.

Funding

Program Funding

Tech Prep is federally-funded through the Perkins Act and also supported through state funding.

Evaluation Funding

This research was the doctoral dissertation of a PhD candidate at ISU, and was indirectly funded by the same university.

Information from

Ball, J.F. (2005). *Tech Prep: A study of high school career and technical students' preparation for college*. Unpublished doctoral dissertation, Idaho State University.

Contacts

John Frederick "Fred" Ball, Jr.
Program Director
College of Technology, Tech Prep Program
Idaho State University
Campus Box 8380
Pocatello, ID 83209
208-282-3276
balljohn@isu.edu

Notes

[1] The Tech Prep comparison group was typically very small (under 10 students), making it difficult to calculate statistical significance, although the researchers attempted to do so when possible.

Evaluation of Tech Prep in New York State

Overview

This is a three-part study of the 30 Tech Prep consortia in the state of New York. The first part includes a survey and interviews with key stakeholders of students, faculty (at the secondary and postsecondary levels), counselors, and administrators. The second part is a matched pairs study that compared Tech Prep students with their non-Tech Prep peers on measures such as high school GPAs, high school completion, postsecondary enrollment, retention, and GPAs. The third piece is a compilation of best practices across the consortia. Only the results from the survey and interviews and the matched pairs study will be considered for this profile. There are some differences between each of the consortium sites in terms of course offerings, career clusters, and workplace requirements, but generally Tech Prep programs were similar across the state, allowing for comparison among student groups. Tech Prep is supported and monitored at the state level by the New York State Department of Education's Office of Curriculum & Instructional Support.

Population

Over 12,000 students enrolled in Tech Prep throughout state. At the time of the study, these Tech Prep students were 64% White, 19% Black, 12% Hispanic, 4% Asian/Pacific Islander, 1% Native American, 53% female, 7% English language learners, 6% with special needs, and 37% economically or educationally disadvantaged. These students were enrolled in Tech Prep clusters at a rate of 34% in business-office-marketing, 27% in engineering technology, 12% in mechanical-industrial trades, 10% in human-health services; the remaining students did not identify a Tech Prep cluster.

Key Findings

From the Surveys

- "Tech Prep appears to be especially beneficial to students who initially had no plans to continue their education beyond high school."
- Teachers enjoy teaching Tech Prep courses because of the professional development opportunities for work-based learning, such as teacher externships.
- The number of Tech Prep students who attended community/technical colleges or four-year colleges and universities steadily increased from 1993 to 1996 as did the number of Tech Prep high school graduates who went directly into jobs in career fields related to their Tech Prep coursework.
- Administrators, both inside and outside the educational system, "believe Tech Prep is beneficial, contributes to the academic, career, and social growth of students while providing a benefit to the staff, the school, and the community."

From the Pairs Study

- After controlling for 9th and 10th grade academic scores, the analysis revealed that Tech Prep participation was positively correlated with high school and college performance.
- In 11th and 12th grades, Tech Prep students earned higher GPAs than non-Tech Prep peers.
- Tech Prep students were much less likely to be absent from school during the 11th and 12th grades, equivalent to 8 days total (23.3 vs. 41.3, $p<0.00$).
- The pass rate on the Mathematics I and Science Regents exams were higher for Tech Prep students, but not statistically significant. Tech Prep students did score lower on other Regent exams (Mathematics II and Social Studies) and the SATs, but not statistically significantly lower.
- Tech Prep students were more likely to graduate from high school in four years (96.6%) than their non-Tech Prep peers (89.6%).
- Overall, Tech Prep students graduated with a Regents diploma at the same rate as their non-Tech Prep peers, except in urban areas where more Tech Prep students earned the Regents diploma.
- Among students who earned a local diploma,[1] Tech Prep students did better than their non-Tech Prep peers in the first and second years in college.
- Of students with a local diploma, a slightly higher percentage of Tech Prep students (70%) remained in or graduated from college than their non-Tech Prep peers (65%).

- Among the students with a Regents diploma, Tech Prep students' first year GPAs were lower than their non-Tech Prep peers, but at the end of the second year of college, Tech Prep students had higher GPAs than their non-Tech Prep peers.

Program Components

Tech Prep is a *hands-on/applied program* that aims to prepare students for postsecondary education and careers. Students have the opportunity to test their knowledge in work-based situations, contextualizing their classroom learning.

Tech Prep acts as a *bridge between academic and vocational coursework* linking the last two years of high school with a minimum of two years of postsecondary education. The career clusters serve as pathways for students to advanced credentials at the postsecondary level or directly into technical careers. Tech Prep makes the required core academic coursework relevant to students' interests and to career options.

Contributing Factors

This evaluation considered all New York State Tech Prep consortia. As each partnership is different and unique, researchers were not able to isolate contributing factors. However, it is evident that the hard work of the teachers and administrators, both at the secondary and postsecondary level, makes these Tech Prep partnerships successful.

Study Methodology

Data was gathered during the first five years of Tech Prep in New York beginning in Fall 1996. There were multiple components to this study that drew on comprehensive input from major stakeholders, including students, faculty, counselors, and administrators.

Part One: Survey

Researchers conducted a paper and pencil survey from which they received 717 responses from professionals and 987 responses from then-current Tech Prep students. These were supplemented with findings from interviews and focus groups of 132 Tech Prep professionals, 79 students, and 15 local decision makers from outside the educational system.

Part Two: Matched Pairs Study

In the matched pairs study, researchers selected one high school and one college that received graduates from the high school and the same Tech Prep consortium. This includes six rural pairs, six urban pairs, and three suburban pairs, and 1,050 Tech Prep participants and 804 nonparticipants who were 58% male, 42% female, 49% White, and 50% minority. Students were matched by demographic data and by one academic indicator. Yet, the two comparison groups had significant differences: the Tech Prep group was 60% male and 53% minority compared to 55% and 47% for the non-Tech Prep group. Unfortunately, the sample population for the college comparison portion was even smaller than the group used in the secondary outcome comparison. The college comparison group consisted of 330 students: 208 had participated in Tech Prep and 122 had not. Analysis of transcripts and test scores was done through multiple regressions.

Funding

Program Funding

Tech Prep is federally-funded through the Perkins Act and also supported through state funding.

Evaluation Funding

The evaluation was supported by a Perkins Act Grant from the New York State Education Department, Bureau of Postsecondary Grants Administration.

Information from

Brodsky, S., Newman, D., Arroyo, C., & Fabozzi, J. (1997). *Evaluation of Tech-Prep in New York State* (Project No. 8080-97-0082). Albany, NY: New York State Education Department.

Contacts

Program Contact
Bernie McInerney
Tech Prep Coordinator
New York State Education Department
Career and Technical Education Team
Room 315 EB
Albany, NY 12234
518-474-4157
518-402-5114 fax
Bmcinern@mail.nysed.gov
http://www.emsc.nysed.gov/cis/

Evaluation Contact
Dianna Newman, PhD
Associate Professor and Director
University at Albany
SUNY Evaluation Consortium
Indian Quad B7
Albany, NY 12222
518-442-5018
518-442-3266 fax
dnewman@uamail.albany.edu

Notes

1 Students have the option of sitting for the Regents exams and earning a Regents diploma granted by the state or fulfilling the high school graduation requirements (without passing the Regents exams) and earning a diploma granted by the local high school.

A Comparison of Selected Outcomes of Secondary Tech Prep Participants and Nonparticipants in Texas

Overview

Texas has been working since 1991 with secondary and postsecondary institutions to implement the Tech Prep program. This research considers cohorts of 10th- through 12th-grade students from 1994–95 to 1998–99 in three subgroups: Tech Prep participants, career and technology program (CT) participants who are not enrolled in Tech Prep, and traditional students. Within these subgroups, data have been disaggregated by selected ethnic and special populations. This research only considers secondary outcomes such as attendance and dropout and graduation rates. Although Tech Prep students can receive postsecondary credit and transition into a postsecondary degree or certificate program within their chosen career pathway, this research has no information on credits earned or their postsecondary occupations.

Population

In total, 3.4 million student records were considered, of which 247,778 were Tech Prep students (including duplicates due to the multiyear cohort design). During the study, the number of participants in all career and technical education programs came close to doubling from over 100,000 to almost 200,000. Tech Prep tripled, from 21,144 to 63,817. The following percentages represent the average ethnic breakdown across the five 10th- through 12th-grade cohorts: 51.4% White, 32% Hispanic, 13.5% African-American, and 3.1% combined Asian/Pacific Islander or Native American. The notable exception among the subgroups (Tech Prep, CT non-Tech Prep, and traditional students) was the lower percentages[1] of African-American and Asian/Pacific Islander or Native American students within the group of Tech Prep students. Students were also considered by disaggregated subgroups: White, Hispanic, African American, at-risk,[2] and economically-disadvantaged.

Key Findings[3]

- Tech Prep participants had slightly higher annual high school attendance rates, about 1% higher over the five years considered. This also held true across the disaggregated subgroups: White, Hispanic, African American, at-risk, and economically disadvantaged.
- Tech Prep students had lower dropout rates (by approximately one percentage point) than either of the non-Tech Prep groups, and, again, this also held true across the disaggregated subgroups.
- During their senior year, Tech Prep students, again, had slightly higher graduation rates (by as much as 5%) than their non-Tech Prep peers. When considered by disaggregated subgroups, only African American Tech Prep students did not have a higher graduation rate than African American non-Tech Prep students, both CT and traditional students.
- The high school graduation rates of Tech Prep students, CT students, and all other students increased over the five years of the study.
- During the five years of the study, the percentage of Tech Prep students completing the college prep curriculum along with the Tech Prep program also increased.

Program Components

When created, Tech Prep consortia were *integrated into the existing framework of partnerships* already working to help students identify potential career opportunities. Tech Prep built off preexisting career and technical education to provide another career/technical option to high school students throughout the state. By 1999, Texas had approved 657 Tech Prep programs including 726 associate's degrees, 847 postsecondary certificate exit points, and 591 enhanced skill certificate awards in 23 technical subject areas. Because 39% of Texas' K-12 districts are rural and 51% have 10th- through 12th-grade enrollments of 1,000 students or less, it was difficult to provide a significant variety of Tech Prep programs in some of these schools.

A cooperative agreement between the Texas Education Agency and Texas Higher Education Coordinating Board sets forth *guidelines for local communities that want to establish a state-approved Tech Prep program*. These guidelines require joint school district and college tech prep program applications

and a four-year secondary curriculum that leads to, at a minimum, a two-year associate's degree within fields that meet the needs of the local labor market.

Contributing Factors

Academically rigorous

As of September 1999, Texas House Bill 2401 mandated that any new Tech Prep program be based on the recommended high school graduation plan. This is a college-prep curriculum of 24 credits, including additional higher-level courses in math, science, English/language arts, and a study of a language other than English. Findings from the research indicate that more Tech Prep students are graduating having completed both the Tech Prep and college prep curricula.

Statewide student identifier

To facilitate the implementation of Tech Prep, Texas added a Tech Prep student identification code to the statewide public education information management system, which includes all students in public secondary education throughout the state. Along with this identifier, Texas also adopted a standard definition of a secondary Tech Prep student: "a student in Grades 9–12 who follows an approved Tech Prep high school plan of study leading to postsecondary education and training and is enrolled in courses appropriate to that plan."

Methodology

This research began in 1997 as a state-level evaluation of Tech Prep programs and their high school outcomes. The researchers used the statewide student database, which clearly indicated students' status in terms of CT and Tech Prep and considered cohorts of students during their participation in a Tech Prep or CT program along with students who did not participate in any type of formal career education program. These cohorts of students were 10th- through 12th-grade students considered yearly from 1994–95 to 1998–99. Although Texas has a sophisticated statewide database for tracking students, the researcher commented that mechanisms for collecting data beyond secondary outcomes were not well developed at either the state or the local level, due to limited guidance from the implementating legislation.

Information From

Brown, C. (2000). A comparison of selected outcomes of secondary Tech Prep participants and non-participants. *Texas Journal of Vocational Education Research*, 25.

Funding

Program Funding

Tech Prep is federally-funded through the Perkins Act and also supported through state funding.

Evaluation Funding

Using funds from Title III, Part E of the Perkins Act Amendments of 1990 and 1998, the Texas Higher Education Coordinating Board asked the Region 5 Education Service Center to conduct this research.

Contacts

No contacts are available for this research.

Notes

1 The researcher did not provide numerical percentages, but used this descriptor.

2 This term was not defined in greater detail by the researcher.

3 Information about statistical significance was not included.

Introduction to Middle and Early College High Schools

Middle and early college high schools are unique configurations of high school grades and postsecondary education. Typically, these schools are located on community college campuses, which allow students to begin working toward an associate's degree while they complete the necessary coursework for a high school diploma, and they often, include a 13th year to allow students to complete their associate's degree. Both middle and early college high schools primarily serve underachieving students who are better served in a nontraditional high school setting. Many of these schools also focus on preparing students for the workplace and encourage students to use their postsecondary classes to gain a technical expertise.

Middle College High Schools

The first middle college high school was founded in 1974 by Janet Lieberman at LaGuardia Community College. This program was designed to create a learning environment on a college campus to provide disengaged high school students a fresh start in high school and an opportunity to participate in college-level classes with the hope that students will matriculate upon high school graduation. Middle college high schools do not necessarily require a 13th year, as early college high schools do. To date, there are approximately 30 middle college high schools in the United States, and they share the following characteristics:

- Formal collaboration between the high school and the college that is demonstrated by location on a college campus; inclusion of the high school in the organizational structure of the college; integration of high school teachers and students into the college; sharing of educational resources; and coordination of college and high school schedules and calendars;
- Authorization for the college to grant a high school diploma;
- Small school size, but large enough to sustain its own unique classes and programs;
- Heterogeneous grouping of students;
- Implementation of collaborative, project-centered, interdisciplinary curricula;
- Expanded teacher role in school governance;
- Expectation that teachers provide counseling within a structured system of support for students;
- Ongoing embedded professional development;
- Student outcomes measured by multiple assessments including performance- based assessments;
- Empowerment of students through formal leadership roles in school governance, in guidance programs such as peer counseling, and in academic support services such as peer tutoring;
- Career education or community service as part of graduation requirement (http://www.laguardia.edu/mcnc/aboutus.htm).

Through the Middle College National Consortium, a support network for middle college high school, schools, both new and established, receive technical assistance and support as they implement educational reforms and engage in professional activities designed to help under-performing students meet high academic standards. Member schools participate in a Critical Friends Review every five years, and member principals and teachers are engaged in continuous support and technical assistance through Polilogue, the Consortium's online community.

In 2002, the Consortium launched its Early College High School Initiative Funded by the Bill & Melinda Gates Foundation, the Carnegie Corporation of New York, the W.K. Kellogg Foundation, and the Ford Foundation. The Consortium's early college project redesigns existing middle college high schools into early college high schools and also supports the creation of new early college high schools.

Early College High Schools

Early college high schools are small schools from which all students graduate in either four or five years with an associate's degree or enough college credits to enter a four-year, baccalaureate program as a college junior. Their main difference from middle college high school is their focus on ensuring that all students receive both a high school diploma and associate's degree or equivalent transferable credits at graduation. Early college high schools more clearly distinguish high school courses from college courses, and early college high school students do not begin college-level coursework until their junior or senior year.

The ECHSI is targeted at increasing the number of first-generation, low-income, English language learners, and students of color attaining an associate's degree or two years of college credit and the opportunity to attain a bachelor's degree. Early college high schools share the characteristics of effective small schools, such as personalized learning environments, a common and coherent focus, a maximum enrollment of 400 students, and an emphasis on adult-student relationships. According to the ECHSI, the benefits of these schools are:

- Higher education is more accessible, affordable, and attractive as the physical space between high school and college is removed;
- Less time is wasted during a student's junior and senior years as they are able to begin to earn credits toward a postsecondary degree;
- Appropriate guidance and support are provided as students transition from secondary to postsecondary education, a critical transition period where students often do not receive these services; and
- ECHS are breeding grounds for innovation, creating new and better ways to serve the intellectual and developmental needs of young people by unifying and reconceptualizing academic work from ninth grade through the second year of college (http://www.earlycolleges.org/Overview.html).

The following section includes summaries of a number of middle and early college high schools that have participated in either a third-party evaluation or have been engaged in rigorous data collection and evaluation with assistance from their host postsecondary education institution.

Academy of the Canyons at College of the Canyons

Overview

Academy of the Canyons (AOC) is a middle college high school (MCHS) that has been operating at the College of the Canyons (COC) in Santa Clarita, California since 2000. AOC operates in collaboration with the William S. Hart Union School District and received accreditation by the Western Association of Schools and Colleges Accrediting Commission for Schools. AOC draws from the lessons learned from the first middle college high school at LaGuardia Community College and builds upon the success of California's efforts at serving low-achieving, disengaged young people through the middle college model. Currently, AOC is one of the 15 MCHSs operated through the California Community College system. AOC serves high school juniors and seniors who "have at least average academic ability, demonstrate they are independent enough to leave the comprehensive high school campus, and have the ability and desire to work hard"(Institutional Development & Technology, 2005. p. 1). AOC students have both high school and college class options and receive dual credit for their college coursework. Students attending the AOC are enrolled in four high school classes, with concurrent enrollment in COC, at a minimum of 6 units per semester. Additionally, AOC students are able to take advantage of the resources that College of the Canyons has available, such as libraries, computing services, counseling, and career centers. AOC students graduate with a high school diploma from the school district and some college credit toward an associate's or bachelor's degree.

Population

The AOC student population is 75% White, 9% Hispanic, 7% Pacific Islander, 6% African American, and 3% Asian. In 2003, AOC served 134 students in Grades 11 and 12, and in 2004, the student population increased by 57% to 211 juniors and seniors. The typical profile of an AOC student is one who shows a discrepancy between standardized test scores and grades; has adequate social adjustment, but is often disconnected from the high school environment due to lack of commitment to clubs or athletics; and is creative, artistic, and/or individualistic. Interested students participate in an admissions process requiring teacher recommendations, college placement tests, and student and parent interviews.

Key Findings

College of the Canyons' Office of Institutional Development and Technology has gathered and analyzed student data from the initial years of AOC and tracked AOC's graduates. Although this is not a formal evaluation, the data are well-organized and include longitudinal information.

- In Fall 2004, AOC students had a 76% success rate (receiving a grade of a C or better) in college-level classes, which was 12% higher than traditional COC students at 64% and 8% higher than concurrently-enrolled high school students who were not AOC students at 68%. From Fall 2000 through Spring 2005 semester, AOC students' success rate has been consistently higher than concurrently enrolled high school students and traditional COC students.

- In Fall 2004, the retention rate in COC classes for AOC students was 95% compared to 90% for high school students concurrently-enrolled at COC (not AOC) and 89% for traditional COC students.

- In Spring 2004, 89% of AOC juniors scored at or above the national average (50th percentile) on the reading portion of the California Achievement Test (CAT/6) compared to 57% of juniors from the traditional high schools in the district and 74% of juniors throughout the State of California.

- In Spring 2004, 85% of AOC juniors scored at or above the national average (50th percentile) on the language portion of the California Achievement Test (CAT/6) compared to 56% of juniors from the traditional high schools in the district and 47% of juniors throughout the State of California.

- In Spring 2004, 69% of AOC juniors scored at or above the national average (50th percentile) on the math portion of the California Achievement Test (CAT/6) compared to 58% of juniors from the traditional high schools in the district and 46% of juniors throughout the State of California.

- During the Fall 2004 semester, 76% of AOC students completed four or more credits that are transferable to either of the state university systems. This percentage represents an increase over previous semesters.

- College course-taking patterns of AOC students reflect their diverse interests. For example, in the Fall 2004 semester, AOC students took a total of 658 classes from 46 different departments including 104 enrollments in math courses, 84 enrollments in personal development courses, and 59 enrollments in general studies courses. Fall 2004 enrollment in COC courses reflects a 107% increase from Fall 2003 enrollment of 319 classes.

- Of the 2004 AOC graduates, 84% are enrolled in postsecondary education; of those graduates who continued their education, 57% continued at COC and 23% enrolled in another two- or four-year institution. These figures are similar for the AOC graduating classes of 2000, 2001, 2002, and 2003.

- Since its creation in 2000, graduates from AOC have done progressively better on standardized tests, successfully completed more college-level classes, and decreased their need for remedial classes.

Program Components

All AOC students are *enrolled in a class called Advisement throughout their two years*. This class "supports students academically and socially in the college setting" by requiring them to meet with their advisor, a high school teacher at AOC, on a weekly basis to discuss issues, concerns, and problems. As part of the course requirement, students must spend at least five hours accessing COC's support services and research facilities. Students receive a pass/fail grade and high school elective credit for the class.

All students take COC's *Personal Development 101/Counseling 111 during their first semester* as part of their Advisement class. This course is taught by a COC faculty member and is intended to provide students with a solid foundation as they begin postsecondary-level coursework at COC. This class helps students with career exploration, study skills, and time management. As an overview of the postsecondary offerings, both academic and vocational, this course helps students as they design an education plan for AOC and beyond.

Per semester, students must *enroll in a full course load*: four high school courses along with six college units, equivalent to two college classes. AOC students must earn the same number of credits as students in the traditional high schools in the district in order to receive a high school diploma. These credits can be a mix of high school-level courses and college-level courses so long as the students meet the district's requirements for core academic courses. For example, AOC does not offer math courses; therefore, students must enroll in math classes at COC. Students who enroll in remedial-level classes at COC receive high school credit for those classes, but no postsecondary credit.

AOC has an *extensive student recognition program* that rewards students for reaching academic goals and for engaging in community service. Quarterly, students are recognized for their academic achievements in both high school and college classes. In addition, students with the most community service hours receive scholarships for their COC textbooks.

Contributing Factors

Smaller Student Body

AOC has approximately 200 students in Grades 11 and 12, which is significantly smaller than the traditional high school. This allows students to get to know one another and hold each other accountable, both personally and academically. Teachers with smaller class sizes also have more time to interact and get to know their students and reach out to parents.

Safe Learning Environment

A mature professional environment is created by having AOC students interact with the students and faculty of the community college. Similar to the community college, students, along with teachers and parents, are empowered to work together to create a positive, safe environment that promotes learning and personal growth.

Integrated Curriculum

High school-level social studies and English classes are team-taught by grade level through a coordinated curriculum. Interdisciplinary instruction fosters development of critical thinking skills and also allows teachers to work collaboratively to build curriculum units. More importantly, these classes ask students to integrate knowledge from inside and outside the classroom, preparing them for their college-level coursework.

Individualized Learning

The block schedule, the required Advisement class, and the size of the school contribute to the teachers' ability to provide more one-on-one instruction and advising to their students. Because students are able to take advantage of most of the course offerings at COC, they are able to personalize their schedules to their academic abilities and interests.

Study Methodology

An evaluation was conducted by the Institutional Development and Technology (IDT) Office of the College of the Canyons with assistance from the principal of AOC. The main purpose of the evaluation was to consider a number of factors including student retention and success rates, college course enrollment by department, and number of earned units transferable to the California State University System. This evaluation was aimed both to bolster the reputation of AOC and to demonstrate the value of a middle college high school on the college campus. The IDT evaluation has produced reports for Fall 2000 through Spring 2002, Fall 2002, Spring 2004, and Fall 2004. This profile was supplemented with materials from the AOC website, school accountability report cards published by the district, and a phone interview with the principal.

Funding

Program Funding

AOC is considered an alternative high school within the Hart district and receives the same ADA funding as a traditional high school. All the high school teachers at AOC are salaried employees of the Hart school district. An agreement between the Hart district and the local community college district allows AOC to be housed on the campus of COC free of charge if the school district provides portable classrooms to the community colleges, when necessary. Additionally, COC has a grant from the Bill & Melinda Gates Foundation, of which AOC is a co-applicant. The grant money funds the salary of AOC's principal and additional cost to the community college for operating AOC. According to California policy, college tuition of $26 per unit is waived for all high school students.

Evaluation Funding

College of the Canyons is committed to using evaluations to make data-driven decisions and has institutionalized the yearly evaluation of AOC. Funding for this yearly evaluation comes from a grant administered by the California Community College Chancellor's Office in which there is a set-aside for evaluation. This set-aside is $2,000 plus staff benefits for 9 months.

Geographic Areas

Students from any of the four high schools, the continuation high school, or the regional occupational programs within the William S. Hart Union High School District are eligible to apply to AOC. The William S. Hart Union High School District covers an area in and around Santa Clarita in northern Los Angeles County.

Information from

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2002–03 School Accountability Report Card

Academy of the Canyons school website: http://www.hartdistrict.org/aoc/

Contact Information

Program Contact
Jill Zubov Shenberger
Principal
Academy of the Canyons
26455 Rockwell Canyon Road
Santa Clarita, CA 91355
661-362-3056
661-255-2954 fax
jzs@hartdistrict.org; aoc@hartdistrict.org

Evaluation Contact
Daylene Meuschke
College of the Canyons
Office of Institutional Development & Technology
26455 Rockwell Canyon
Santa Clarita, CA 91355
661-259-7800 x5329
daylene.meuschke@canyons.edu

Contra Costa Middle College High School

Overview

Contra Costa Middle College High School (CCMCHS) was one of the first established middle college high schools in the state of California and continues to serve as a model for new school creation.[1] Initially developed in 1989 through a partnership with the California Community College Chancellor's office, CCMCHS, located on the campus of Contra Costa College, a two-year college, is now fully integrated as a high school option in the West Contra Costa Unified School District. CCMCHS has adopted district goals and state standards along with college preparatory minimum requirements; CCMCHS works to ensure a smooth transition between secondary and postsecondary education or careers for its students. As an alternative school for the 2005–06 school year, CCMCHS served 268 students in Grades 9–12 who potentially may fall behind in a traditional high school according to the principal's enrollment numbers. CCMCHS has been operating for over 15 years and since its inception has been engaged in evaluation to improve its program to better serve its target population.

Population

CCMCHS was originally designated and remains a school for 'at-risk" students.[2] Students represent the diversity within the district. CCMCHS has currently 41% Hispanic, 24% African American, 17.5% Asian, and 10% White students; the remaining students are Pacific Islanders or multiracial. Thirty percent of the students are eligible for free or reduced-price lunch, although the principal believes the actual percentage is higher, as many students do not feel comfortable identifying themselves as eligible. According to data gathered by Springboard Schools, 24% of the students' parents or guardians did not complete high school, compared to 18% statewide. CCMCHS currently does not have any students with special needs, but has the capacity to serve these students.

Key Findings[3]

- In 2001–02, CCMCHS had the highest scores on the California Standards Tests for English and Algebra I of all the high schools in West Contra Costa Unified School District. CCMCHS has continued to distinguish itself by achieving higher average scores than the district and state on these tests.

- In 2001–02 on the California Standards Tests, higher percentages of CCMCHS students scored in the advanced, proficient, and basic ranges in English and Algebra I, and lower percentages scored in the below and far-below-basic levels than the averages for all school districts in Contra Costa County.

- In 2001–02, the "average" student national percentile ranking on Stanford 9 Achievement Tests in reading and math for CCMCHS students in Grades 9–11 (57, 57, 47) was higher than the state (35, 33, 38), Contra Costa County (45, 41, 45), and West Contra Costa School District (28, 22, 25) averages.

- In 2003–04, 50 out of 53 graduates completed the required curriculum for enrollment in the state university systems.

- Yearly, between 10% and 15% of CCMCHS graduates also receive an associate's degree from Contra Costa Community College with their high school diploma.

- For three years, CCMCHS has ranked 10 out of 10 on California's Academic Performance Index (API) for the state and among similar schools. API measures academic performance and growth by summarizing results from various indicators including statewide tests.

- For the past three years, CCMCHS has continued to narrow the achievement gap between its student subpopulations on standardized tests. In 2001–02, the range of test scores by racial/ethnic subgroup was 50 points and in 2003–04, the range of test scores by racial/ethnic subgroup was less than 10 points.

- In 2004, the average number of chemistry and physics enrollments per 100 CCMCHS students was 102, whereas the state average was 34. For advanced math courses, the number was also similar, with an average of 125 courses per 100 at

CCMCHS compared to only 55 for the rest of the state. The measure accounts for each course, such as lab and lecture, which a student is enrolled in, so the number can exceed 100.

- In 2004, 81% of eligible CCMCHS students took the SAT, which is significantly higher than the state average of 37%.

Program Components

CCMCHS relies on *Advancement Via Individual Determination (AVID) as a core component*. Each year, students are required to take an AVID class that focuses on note-taking, study skills, time management, and other tools students need to succeed in college-level work. Similar to AVID's philosophy, CCMCHS creates an environment to support students perceived by teachers as not living up to their potential to succeed in both secondary and postsecondary education. AVID criteria also are used in the application process; applicants must demonstrate a desire to be at the school, the ability to make mature, independent choices, and a willingness to work hard to become ready for careers and college.

All CCMCHS students participate in an *internship* for two semesters as a graduation requirement. The purpose of the internship is to provide students with a *contextualized learning opportunity* relating their coursework to real-world experiences. Students have a range of job sites to choose from, including community college offices, and the local elementary school and hospital.

CCMCHS required classes *follow the "A-G" requirements* used by both the University of California (UC) and California State University (CSU) systems. These requirements are a sequence of high school courses required for admissions into the UC and CSU systems and reflect the minimum level of academic preparation a student needs to succeed in college-level coursework. These requirements include 15 year-long courses in history, English, math, sciences, foreign language, visual and performing arts, and college-preparatory electives. In 2004, 94% of the students eligible for graduation had completed the A-G requirements.

CCMCHS students are *required to take two college courses per semester.* These courses are designated for their grade level, but are taught by a college professor and often cotaught with a high school teacher. The general college population is not eligible for enrollment in these classes, as they are intended to help CCMCHS students experience college-level coursework and expectations in a safe and familiar environment. All these CCMCHS-designated courses permit students to earn credit toward either an associate's degree or transfer them to a four-year institution. CCMCHS students with the appropriate prerequisites and demonstrated maturity are also eligible to enroll in any course at Contra Costa College.

Contributing Factors

Collaboration from stakeholders

CCMCHS have worked to build support both within the internal community of students, parents, and teachers and the external community of college and school district administrators. Although faculty at Contra Costa College were initially resistant to the creation of CCMCHS, they subsequently have been extremely supportive of the program, because CCMCHS students often help complete class rosters for undersubscribed classes. Additionally, CCMCHS has moved to the center of campus from its original space on the fringes, and this has increased its visibility and respectability. Contra Costa College believes CCMCHS is integral to its own success and has representatives from CCMCHS serve on all college-wide boards and school advisory committees.

Clear benefits to school district and partnering college

CCMCHS has advocated since its inception for programs within the community to serve a population previously ignored by the traditional high schools. By reaching out to students who might have been high school dropouts, CCMCHS is able to keep these students enrolled. A by-product of this process is the maintenance of funding levels for the district. Additionally, Contra Costa Community College is funded by the state to cover the costs of high school students who are dually enrolled. Since many CCMCHS graduates continue their education at Contra Costa Community College, CCMCHS is an effective recruiting tool.

Clear understanding of needs of target population

In its initial years, CCMCHS had not clearly defined the type of student it served and often took referrals of students who were academically weak or had significant behavior issues. Subsequently, the CC-

MCHS faculty and staff more clearly articulated a definition of the type of student they wanted to serve along with the supports they were able to provide. This allowed CCMCHS to develop a comprehensive program that addresses the academic, emotional, and social needs of each and every student in the school. CCMCHS has excelled at creating individualized learning programs based upon a student's academic or career interests. For example, students interested in engineering can join a Robotics Team, a regional occupation class taught after school by a CCMCHS faculty member.

Caring faculty

Teachers are able to connect with students on an individual level due to the small school population. They are also passionate about and experienced in working with an at-risk student population. The CCMCHS faculty have an average of 24 years teaching experience. In addition to team-teaching a number of CCMCHS classes with community college faculty, the CCMCHS teachers also are involved in monitoring the progress of their students enrolled in community college classes. They are available for additional tutoring sessions and often work with the professor and the student to ensure the CCMCHS students will be able to succeed in the college course. CCMCHS's counselor has a smaller caseload than counselors at traditional high schools, making her more accessible to students. Additionally, students can also take advantage of the advising services at the community college.

Professional community for faculty

CCMCHS faculty are given an extended preparation time of one and a half hours per week to collaborate with their colleagues. Additionally, faculty have prep time meetings within their departments. Working together, CCMCHS faculty are able to discuss and strategize how best to serve the needs of their students. Faculty collaboration is not limited to CCMCHS faculty; they also regularly meet with the college professors who teach CCMCHS students to discuss assignments and progress. This provides an opportunity for CCMCHS faculty to more clearly understand the expectations of college-level courses.

Study Methodology

This was part of a larger case study of high schools located on college campuses. The case study of each site included a one-day orientation visit, and a two-day visit that was comprised of interviews, student focus groups, and a collection of documents from both the program and the college.

Funding

Program Funding

CCMCHS receives funding from the local district for the salaries of the high school course teachers and also for textbooks for college-level courses. CCMCHS is eligible for district funding, because students are enrolled in high school courses for at least four hours each day. College coursework is funded through the California Community College System's concurrent enrollment agreement, which funds each student enrolled and attending a course, an incentive for enrolling high school students in classes at community colleges.

CCMCHS also has received a three-year Early College Grant through the Middle College National Consortium for a total of $120,000. The grant is funded by the Bill & Melinda Gates Foundation. The purpose of the grant is to fund a program that offers students the support necessary to complete an associate's degree or enough units to transfer to a four-year institution of higher learning by the completion of the 5th year, immediately following high school graduation. This grant is also used for teacher training and professional development for high school teachers.

Evaluation Funding

The evaluation was funded by the Institute of Education Sciences, US Department of Education and jointly conducted by Appalachia Educational Laboratory (formerly AEL, now Edvantia) and CNA Education.

Geographic Area

CCMCHS serves students within the West Contra Costa Unified School District that meet the admissions requirements for the program. Currently, the program is unable to accept students who need significant structural and/or behavioral support.

Information from

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CCMSHS website: http://www.contracosta.cc.ca.us/mchs/

Contact Information

Program Contact
Gary Carlone
Principal
Contra Costa Middle College High School
2600 Mission Bell Drive
San Pablo, CA 94806
510-235-7800 x4412
gcarlone27@yahoo.com

Evaluation Contacts
Christopher Corallo, Ed. D. (previously at AEL and responsible for evaluation)
Director of Staff Development
Henrico County Public Schools
3820 Nine Mile Road
Richmond, VA 23223
804-652-3675
ccorallo@henrico.k12.va.us

Ida Oberman
Director of Research and Development
Springboard Schools
181 Fremont Street, 2nd floor
San Francisco, CA 94105
415-348-5500
415-348-1340 fax
ioberman@springboardschools.org

Notes

1 The creators of Delta Middle College, another program reviewed in this compendium, worked closely with the administrators at CCMCHS to design and implement their program at San Joaquin Delta College in Stockton, California, a neighboring town.

2 This broad term describes students who, according to program materials, are "at-risk of falling behind in a traditional high school, but have the potential to succeed in an environment such as CCMCHS."

3 The data from *Case studies of high schools on college campuses: An alternative to the traditional high school program* has the following note from the researchers: "While student achievement scores for both Delta and Contra Costa are impressive in comparison to local and state scores, no adjustments have been made for variance in student academic strength among settings. To fully understand the strength of these programs, structures need to be established to collect data on high school program retention and graduation rates, standardized measures of academic achievement, and postsecondary program entrance and retention rates."

Middle College High School at San Joaquin Delta College

Overview

Using Contra Costa Middle College High School as a model, San Joaquin Delta College in neighboring Stockton, California, created the Middle College High School at San Joaquin Delta College (MCHS), which opened its doors in Fall 2000. MCHS serves students in Grades 9–12 who may be the first members of their family to attend college and have had difficultly affiliating within a large high school.[1] MCHS is focused on preparing students to attend four-year colleges and universities and recently converted to the early college high school model, which allows students, if they choose, to spend an additional year at the community college to earn either an associate's degree or additional credit transferable to a four-year institution. As part of the Lodi Unified School District, MCHS provides a unique educational experience aimed at providing motivation and support for lifelong personal, academic, and social growth.

Population

Students come from middle school programs within the Lodi Unified School District are carefully selected through the admissions process that closely mirrors the selection indicators for the AVID program.[2] The MCHS admissions process also screens for students who will succeed academically and behaviorally with the additional freedoms afforded to MCHS students. Key indicators include 2.5–3.5 middle school GPA or 2.0 or higher high school GPA, average or above average standardized test scores, and a desire and commitment to make education a priority. MCHS also makes a commitment to reach out to students of color and students who will be first generation four-year college attendees. These students are 39% White, 22% Hispanic, 16% Asian, 11.5% African American, 9% Filipino, and 2% Native American, which is representative of the ethnic/racial breakdown within the MCHS home district, the Lodi Unified School District. Approximately 27% are considered economically disadvantaged (qualified for free or reduced-priced lunch). MCHS's enrollment in Grades 9–12 is 233 students.

Key Findings[3]

- In School Year 2001–02, MCHS students' Stanford 9 Achievement Test scores were generally higher in reading and math than the state, county, and local school district averages. The following table compares MCHS scores in reading and math on the Stanford 9 test to the state, county, and district averages.
- Since School Year 2001–02, higher percentages of MCHS students have consistently scored in the

	MCHS average for grades:			State average for all students' grades:			San Joaquin County average for all students' grades: (includes all school districts from which MCHS can draw students)			Lodi Unified School District average for all students' grades:		
Grade level	9	10	11	9	10	11	9	10	11	9	10	11
National percentile ranking for "average" student score, reading section Stanford 9	48	65	65	35	33	38	7	9	8	33	30	32
National percentile ranking for "average" student score, math section Stanford 9	64	67	56	54	48	50	Not available	Not available	Not available	57	47	49

advanced, proficient, or basic levels in the English subsection of the California State Assessment than their peers in the Lodi Unified School District.

- On average, students graduate with 30 credit hours that are transferable to four-year institutions including both state university systems. A small number of students, approximately three to five, graduate each year with both a high school diploma and an associate's degree.

Program Components

To integrate incoming students into the elevated academic expectations at MCHS, students participate in the *Academic Success Center (ASC), a proactive, early intervention program*. ASC is structured, supervised study hall time where ASC teaching assistants work one-on-one with students to complete homework, organize notebooks, or fine-tune note-taking and study skills. The class is a requirement for freshman and first-time MCHS students and mandatory for any student struggling academically. It also provides students with a structured transition from their traditional school environment to the MCHS environment, which affords them more freedom.

MCHS works hard to create a *college-focused learning environment* that demonstrates to students that they have the ability to succeed at the postsecondary level. Coursework offered through MCHS prepares students for the coursework they can enroll in at the community college. Community college courses earn students credit both toward their high school diploma and toward an associate's degree, technical certificate, or advanced standing at a postsecondary institution.

MCHS best serves its students by *lowering the student-to-teacher ratios* in the high school-level classes to an average of 25 students per class. This allows teachers the opportunity to get to know their students, as well as to provide additional academic support and advising during class time. Most importantly, it creates a classroom where no student is overlooked.

MCHS students are *required to take at least one college course per semester*, which is facilitated by the daily schedule. MCHS's high school classes are offered in the afternoons, so students have the mornings available to enroll in college-level courses. Students enroll in community college courses in fine arts, foreign language, electives, and physical education. This provides an opportunity for the MCHS students to experience the college classroom and workload without the same intense academic pressure.

Contributing Factors

Location on a college campus

Both students and faculty noted in their focus group discussions with researchers that the location of the program on the community college campus is integral to its success. The college setting provides a serious academic atmosphere along with facilities and amenities not often available at the traditional high school: larger libraries, technology, and advising directly from the college. One of the community college counselors has 30% of her caseload set aside to work with new MCHS students to create long-term academic plans.

Continued collaboration through principal's leadership

The founding MCHS principal came from the Lodi Unified School District where he had been instrumental in the creation of one of the large comprehensive high schools praised for its student-centered approach. Additionally, he spent an entire year, prior to the opening of MCHS, cultivating relationships at the community college and designing the program along with some of the newly hired teachers. A new principal continues to solicit advice and guidance from her faculty and the faculty at the community college as well as the administration of both the college and school district to ensure most decisions are built around consensus.

Qualified faculty with continued professional development opportunities

MCHS has seven full-time teachers for math, English, science, and social studies along with a program secretary that serves as support staff for both the principal and the teachers. Most of the faculty are veteran teachers from the school district who are passionate about working with this population. Teachers are able to take advantage of professional development opportunities at the community college as well as use supplemental funds for professional development available through a grant from the California Community College Chancellor's Office.

Study Methodology

This was part of a larger case study of high schools located on college campuses. The case study of each site includes a one-day orientation visit, a two-day visit that includes other interviews, student focus groups, and a collection of documents from both the program and the college.

Funding

Program Funding

MCHS receives funding from the local district based on the same formula used for traditional high schools; students must be enrolled in high school courses at least four hours per day in order for MCHS to count them in student enrollment toward ADA. College coursework is funded through the California Community College System based upon the number of students enrolled and attending a course, an incentive for enrolling as many high school students as possible in classes at community colleges. MCHS also receives additional grants totaling $125,000 to provide textbooks and support faculty professional development, and program planning activities from the California Community College Chancellor's Office. Additionally, the Lodi Unified School District provides transportation at no cost to MCHS or the students, which allows them to connect with the regular school buses at the high schools.

Evaluation Funding

The evaluation was funded by the Institute of Education Sciences, US Department of Education and jointly conducted by Appalachia Educational Laboratory (formerly AEL, now Edvantia) and CNA Education.

Geographic Area

Students within the Lodi Unified School District are eligible to apply for admissions to the program. MCHS does a significant amount of recruiting at the local middle schools in partnership with its partner school district.

Information from

Cavalluzzo, L., Jordan, W., & Corallo, C. (2002). *Case studies of high schools on college campuses: An alternative to the traditional high school program*. Charleston, WV: AEL.

Delta MCHS website: http://middlecollege.lodiusd.net

Contact Information

Program Contact
Sherry Balian
Principal
Middle College High School at San Joaquin Delta College
5151 Pacific Avenue
Stockton, CA 95207-6370
209-954-5790
209-954-5875 fax
sbalian@deltacollege.edu

Evaluation Contact
Christopher Corallo, Ed. D. (previously at AEL and responsible for evaluation)
Director of Staff Development
Henrico County Public Schools
3820 Nine Mile Road
Richmond, VA 23223
804-652-3675
ccorallo@henrico.k12.va.us

Notes

1 For example, students who would not feel comfortable participating in afterschool clubs or sports.

2 AVID is an academic program to prepare students in the academic middle for four-year college eligibility and enrollment by focusing on study skills, critical thinking, and questioning abilities. AVID is profiled in the college access section of this compendium.

3 The data from *Case studies of high schools on college campuses: An alternative to the traditional high school program* has the following note from the researchers: "While student achievement scores for both Delta and Contra Costa are impressive in comparison to local and state scores, no adjustments have been made for variance in student academic strength among settings. To fully understand the strength of these programs, structures need to be established to collect data on high school program retention and graduation rates, standardized measures of academic achievement, and postsecondary program entrance and retention rates."

Mott Middle College

Overview

Mott Middle College (MMC) in Flint, Michigan, opened its doors in 1991 as a multischool district program to serve students at risk of dropping out of high school. MMC is based upon a version of the LaGuardia Middle College model modified specifically to serve the needs of the Flint community. The program attracts students from a diverse array of social, economic, racial, and cultural backgrounds who are unhappy or unsuccessful in their traditional district high school. Initially funded through a multiyear planning grant from the Charles Stewart Mott Foundation, MMC has established itself as an alternative district school for students who are often considered failures in traditional schools. MMC has been replicated at community colleges in Nashville, Tennessee[1] and Pittsburgh, Pennsylvania.

Population

MMC serves at-risk students, described in the program's materials as "struggling students who, though capable of academic excellence, have tuned out academics or are poised to drop out." Originally, MMC began in 10th grade, but has since expanded to serve students in Grades 9–12, although students are not accepted in Grade 12, as the school takes the position that students need to participate for at least two years in order to benefit from the program. The 372-member student population is drawn from the 21 school districts within Genesee County and a number of adjacent county districts with approximately 50% of the students coming from Flint City schools, the host district. Additionally, students from districts in the adjacent counties are eligible to attend MMC.

Key Findings

- The graduation rate at MMC is between 90–95% each year, and the overall dropout rate averaged through 2003 was 4.9%.[2] Genesee Intermediate School District's overall dropout rate over the past seven years has been approximately 4%, largely due to MMC retaining many potential dropouts.

- MMC's dropout rate is significantly lower than most of the district's large comprehensive high schools, which are typically 6.5%.

- The percentage of graduates from 1991 through 2003 going on to higher education was 84.4%.

- For some graduating classes, 96–100% of graduates went on to pursue postsecondary credentials, yet MMC reported that many of these students dropped out as they were not prepared for academic success without MMC's support system. MMC has added a fifth year to its program, which allows students to continue with the program's supports while they complete credits toward their associate's degree.

- Per the middle college design, MMC allows qualified students to begin to earn postsecondary credits. A few students each year earn up to one year of transferable credit, while a significant number of students earned from 3–12 credits. As MMC redesigns itself as an early college high school, more students are earning more credits. For example, in the 2005 school year, 109 students took 285 classes, a significant increase from before when an average of 30 students took 60 classes.

- The class of 2002 had 30 graduates who scored at levels 1, 2, or 3 in four or more areas of the MEAP[3] tests, and 17 seniors qualified for the $2,500 Michigan Merit Award for receiving a level 1, 2, or 3 score in all five areas.

Program Components

The main criterion for admittance into the program is a *genuine interest in participating in MMC*. Throughout the years, MMC has learned that only students willing to accept responsibility for their own learning and who understand that this is their last best chance will thrive in this setting. Thus, MMC specifically targets students, usually fragile, at-risk, academic underachievers who seek a change from the norm, whom they believe will succeed in their program. Issues such as low attendance rates and GPAs or disciplinary or family problems do not preclude students from being accepted to MMC as long as the program staff feels, through their assessment in the interviews, that both the parents and student are invested in this opportunity.

MMC students often have emotional problems and need help overcoming challenges, including balancing school and family life. MMC's *guidance approach* is based upon creating a relationship of

mutual trust among all members of the MMC community and teaching students how to be autonomous individuals. The weekly "Activity" period supplements this concept of mutual trust, as it allows students to see teachers in a different light: outside of the classroom. During this time, students and teachers share activities and knowledge through informal activities such as chess or a jam session.

Innovative curriculum and courses, such as American Social History Project, a course team-taught by a high school teacher and community college professor, integrates English and social studies, emphasizing the human and social aspects of American history. These courses both contextualize ideas and concepts for students who have struggled with feeling disengaged in school and provide early exposure to the expectations of college professors. Students also participate in volunteer work, job shadowing, or internships linked to their career interest and, when feasible, their college-level coursework.

As students are assessed in a variety of ways, they are required to keep a *portfolio of their best work, certificates of recognition, and other documents of their academic and nonacademic achievements*. The portfolio helps students see their personal growth and improvement both inside and outside the classroom and provides comparison points for teachers in their evaluation of students. As part of their portfolio, students are required to make a presentation to the entire faculty and membership of the senior class, during which they receive feedback on how to improve the portfolio's contents. One requirement of the portfolio is a personal essay answering the questions: Who am I?, Where am I going?, and How am I going to get there?

The *small size of the school* allows faculty and staff to know their students individually, as class size is typically 22 students or fewer. The small size also allows the students to get to know each other. This family-type atmosphere provides a *safe and comfortable environment for students* whose prior school experiences often made them feel unwelcome. Twice weekly, students and faculty meet in focus groups of approximately 20 students to work through any issues that may arise and to discuss ideas for school improvements.

With additional funding from the Bill & Melinda Gates Foundation, MMC created *Excel, a 13th year of high school*, which allows students to earn a minimum of three college credits through an associate's degree from Mott Community College. More importantly, this year serves as a bridge year between secondary and postsecondary education, a transition that many MMC students had previously struggled to make, because they lost the guidance and counseling supports available through the program.

Contributing Factors

Location on a college campus

The openness of the community college campus provides a more welcoming, adult environment than traditional high schools, where there are often locked doors, chains, and alarms that prevent students from leaving campus. Because the campus also serves traditional community college students, there is a climate that emphasizes academics and critical thinking about the future. Additionally, the community college provides the infrastructure, such as libraries and a technology center, along with additional services, such as academic and career advisors. MMC has five dedicated classrooms near their central office space but also has activities located across the community college campus.

Strong Leaders and Teachers

The founding principal has been the leader of the school since its inception and has been instrumental in maintaining outside support through changes in leadership at the school district and community college. On campus, the principal is supported by two site supervisors who manage the day-to-day operations and teach a reduced load. Most of the teachers at MMC are veteran teachers who are dedicated to working with at-risk students. Teachers form personal bonds with students as several graduated from MMC themselves.

Web of support

MMC is a collaborative effort between three educational entities: Flint City School District, Genesee Intermediate School District, and Mott Community College. Each partner contributes to the success of MMC, and each has its own unique responsibilities. As MMC's host district, Flint City School District acts as MMC's fiscal agent and assists in the calculation of ADA. Genesee Intermediate School District serves as the convener of all the local school districts from which MMC primarily draws students. It is re-

sponsible for hiring staff, allocating and monitoring the budget, handling student discipline issues, and providing access to technology. Mott Community College, the host postsecondary education institution, allows eligible MMC students to enroll in some community college classes.

Study Methodology

The AEL/CNA evaluation was part of a larger case study of high schools located on college campuses. The case study of each site during a two-day visit included interviews, student focus groups, and a collection of documents from both the program and the college. With funding from the Mott Foundation, MMC, working with an outside consultant, conducted an investigation of the factors that explain the impact of MMC on high-risk students. To access this impact, the researcher used three methodologies, organizational analysis, and qualitative and quantitative data gathering and analysis.

Funding

Program Funding

MMC was established in 1989 through a planning grant from the Mott Foundation to address dropout reconnection and has continued to receive support from the Mott Foundation. MMC has also received funding through the Early College High School Initiative of the Gates Foundation to redesign its program to include a 13th year of high school with support from the National Middle College Consortium. In addition, MMC is one of 11 Tech Prep demonstration program sites to receive an $803,000 over five years from the federal government.

Per dual enrollment legislation in Michigan, MMC students are dually enrolled using MMC's ADA dollars redirected to Mott Community College. MMC covers the cost of the course, fees, and books for its students. Presently, eligibility to participate in dual enrollment is based upon an admissions standard tied to results on the MEAP High School Test.

Evaluation Funding

The evaluation was funded by the Institute of Education Sciences, US Department of Education and jointly conducted by Appalachia Educational Laboratory (formerly AEL, now Edvantia) and CNA Education An internal evaluation was funded by the Mott Foundation.

Geographic Area

Eligible students come from any of the 21 local school districts within Genesee ISD and from school districts in adjacent counties, so that MMC serves 28–30 school districts in any given year. Flint, Michigan, is the major city located in the area.

Information from

Cavalluzzo, L., Jordan, W., & Corallo, C. (2002). *Case studies of high schools on college campuses: An alternative to the traditional high school program*. Charleston, WV: Appalachia Educational Laboratory.

Bilby, S.B. (2004, December). Alternative path to success. *Mott Mosaic*, 3, 2-9.

Mott Middle College website: http://mmc.geneseeisd.org/

Contact Information

Program Contact
Chery Wagonlander, EdD
Principal
Mott Middle College High School
Mott Memorial Building, Room 1123
1401 E. Court Street
Flint, Michigan 48503
810-232-8530
cwagonla@genesseisd.org

Evaluation Contact
Christopher Corallo, Ed. D. (previously at AEL and responsible for evaluation)
Director of Staff Development
Henrico County Public Schools
3820 Nine Mile Road
Richmond, VA 23223
804-652-3675
ccorallo@henrico.k12.va.us

Notes

1 Williamson County Middle College High School is also included in this compendium

2 This number represents the overall dropout rate, while the reported yearly dropout rate is 7%. MMC reports students as dropouts even if they know they are attending alternative education programs to earn GEDs, as these programs do not always request an official transcript for enrollment.

3 MEAP stands for Michigan Educational Assessment Program, a series of five tests developed to measure what Michigan educators believe all students should know and be able to achieve in five content areas: mathematics, reading, science, social studies, and writing. MEAP is scored on a scale of one to five, with one being the highest score and three indicating proficiency.

Williamson County Middle College High School at Nashville State Technical Community College[1]

Overview

Williamson County Middle College High School (WCMCHS) in Nashville, Tennessee, serves students in Grades 10-12 who are potential high school dropouts by reengaging them in their learning. WCMCHS, according to its website, calls itself a school that serves "the needs of nontraditional students in a nontraditional setting" and is a replication project supported by Mott Middle College (also included in this compendium). A collaborative effort between the school district and the community college since 1998, WCMCHS has successfully graduated 376 students as of May 2005. In an effort to expand its career focus areas, WCMCHS won a grant from the US Department of Education to develop an Information Technology (IT) Academy for high school students jointly with Nashville State Technical Community College.[2] This new program includes a curriculum that has coursework in computer programming and networking that allows students to earn high school and college credit simultaneously. Students can earn 25% to 33% of the credits necessary for an associate's degree through the dual credit option.

Population

WCMCHS defines its students as either at risk of dropping out or feeling unsuccessful in a large comprehensive high school. The student population is 54% male, 46% female, 86% White, 6% African American, 4% Hispanic, 1% Asian, 1% Native American, and 1% biracial. The staff reports that 60% of the students come from single parent or nontraditional homes. Although 90% of the students earned As and Bs exclusively in middle school, often in gifted programs, approximately 50% attended three or more high schools before coming to WCMCHS. The traditional public high school is not the only source for applicants to WCMCHS; 38% of students have previously been home schooled, 55% of the students attended private schools, and 31% were students at an alternative school. Many students come to WCMCHS behind in credits. Over the past five years, between 42% to 67% of WCMCHS students had not completed the recommended core curriculum before taking the ACT, a district requirement for all juniors. Students with an Individualized Education Plan represent 14% of the student population and are fully integrated into the program, requiring less than 4 hours per week of consultation. Additionally, most of the juniors and seniors hold part-time or full-time jobs permitted by the scheduling flexibility.

Key Findings

- In 2004-05, WCMCHS' retention rate was 95%. WCMCHS's dropout rate has decreased over 50% since the first year. In 2003-04, the dropout rate was 3.5%.
- As WCMCHS provides many students with a jump on postsecondary credits, 75% of the graduates immediately continue pursuing their postsecondary education.
- Upon enrollment at WCMCHS, students show improved attendance. Previously, the average days absent per year were 25 days.
- Scores on the Tennessee Comprehensive Assessment Program Achievement Test (TCAP) Writing Assessment, a state mandated graduation requirement also taken during a student's junior year, have consistently increased for WCMCHS students. In 2004, 100% of the WCMCHS juniors scored 3 or higher on the test and 89% scored a 4 or better out of a possible 6.
- On both Gateway Biology and Gateway English II, state tests required for graduation, almost all the WCMCHS students consistently passed with less than 5% falling into a below proficient category.
- WCMCHS only permits academically qualified students to enroll in college classes, and currently over 50% of the students are taking courses with a postsecondary institution, including the former partner, Nashville State Technical Institute, the current partner, Columbia State Community College, and one student taking coursework at a local private university.

Program Components

WCMCHS's rigorous admissions process only accepts at-risk students who have the will and desire to apply themselves to their education and seek a new beginning. The admissions process includes a review of transcripts and standardized test scores, counselor referral, parent questionnaire, student essay, and separate parent and student interviews. The admissions committee carefully considers all factors, but places *significant consideration on a student's motivation and desire to be a part of the program*.

Students participate throughout their enrollment at WCMCHS in a mandatory *Focus Group class* that meets every day. The sessions cover a range of subjects including anger and stress management, self-esteem development, and conflict resolution. The class time is also an opportunity for students to share ideas and work through problems with their peers and teacher facilitator/advisor. The Focus Group class has been instrumental in fostering a peer support network at WCMCHS.

The average class size for the high school classes at WCMCHS is 16. *Small classes with interactive instruction* are the core of the academic program. Teachers work collaboratively to tie coursework into the major project or theme of the school year and include a number of student projects and field trips applicable across the curriculum.

At WCMCHS, there is an *emphasis on developing personal characteristics for success in school and career* including self-directed learning, effective communication, creative thinking, and cooperation. By emphasizing these skills along with academic knowledge, WCMCHS aims to best equip its students for future challenges in both school and the world of work. The *location of WCMCHS on a college campus* reinforces the importance of these characteristics, as students have an opportunity to see and often experience firsthand what it will take for success in college-level classes.

WCMCHS offers *flexibility within its quasi-block schedule* to allow students to double-up on core academic high school-level courses, such as English or math, to build their skills. Doubling up also allows students who come to WCMCHS behind in credits to earn the necessary credits to graduate on time. This schedule also provides time for qualified juniors and seniors to dually enroll in college-level academic or technical classes.

Contributing Factors

Student-Teacher Relationships

Due to small class size and the flexibility and creativity permitted by the school program, teachers are able to establish relationships with their students that go beyond assisting them in the classroom. For example, teachers often assist students in solving personal problems that interfere with learning. Emerging from these relationships is mutual trust and respect that both teachers and students cited as an essential element that makes WCMCHS different than the traditional high schools.

Appropriately paced student assignments and coursework

Teachers work to build student confidence in core subject areas before introducing college preparatory material. By personalizing the curriculum, teachers meet students at their level and work with students one-on-one to catch up to grade level. This also allows students to progress at their own pace with teachers monitoring their progress.

Interdisciplinary high school curriculum

Teachers work collaboratively to create thematic units that combine coursework in many of the high school classes. For example, as students read the novel *The Life of Pi* in English, the other subject area faculty created companion projects such as an ecological study of the oceans, the setting of the novel. High school coursework is often coordinated with the dual enrollment classes that students are taking, such as the coursework within the IT Academy.

Study Methodology

This was part of a larger case study of high schools located on college campuses. The case study of each site included a one-day orientation visit, a two-day visit that included other interviews, student focus groups, and a collection of documents from both the program and the college. Additional information was gathered from the Report from the School Profile and Collaborative Process Committee, a tool used by the school for self-reflection and school improvement.

Funding

Program Funding

In 2001–02, WCMCHS per pupil expenditure was $4,657, which was significantly lower than the district average of $6,323 for high school students.

These figures represent the dollars schools receive from the school district.

Evaluation Funding

The evaluation was funded by the Institute of Education Sciences, US Department of Education and jointly conducted by Appalachia Educational Laboratory (formerly AEL, now Edvantia) and CNA Education

Geographic Area

WCMCHS accepts students from the Williamson County school district.

Information from

Cavalluzzo, L., Jordan, W., & Corallo, C. (2002). Case studies of high schools on college campuses: An alternative to the traditional high school program. Charleston, WV: AEL.

Report from the school profile and collaborative process committee. (2004, December). Franklin, TN: Williamson County Middle College High School

WCMCHS website: http://www.wcs.edu/mch/Conversation with principal

Contact Information

Program Contact
Harold Ford
Principal
Williamson County Middle College High School
1320 West Main Street
Franklin, TN 37064
615-472-4670/4672
HaroldF@wcs.edu

Evaluation Contact
Christopher Corallo, EdD (previously at AEL and responsible for evaluation)
Director of Staff Development
Henrico County Public Schools
3820 Nine Mile Road
Richmond, VA 23223
804-652-3675
ccorallo@henrico.k12.va.us

Notes

1 As of January 2005, WCMCHS has relocated and partnered with another postsecondary institution, Columbia State Community College. This change was brought about because the former postsecondary partner wanted to change the relationship in a way that would not benefit the school. Their new location is on a separate campus, similar to a traditional high school, which will be accessible to the postsecondary partner by a trolley.

2 In 2002, Nashville State Technical Community College changed its name from Nashville State Technical Institute. The institution continues to offer two-year degrees: AA and AS in technical areas and some academic areas.

Olive-Harvey Middle College High School

Overview

Established in 1986 as a retrieval[1] school, Olive-Harvey Middle College High School (OHMCHS) serves students who have been officially dismissed or withdrawn from a Chicago public high school by providing them a nontraditional experience through which students may earn a high school diploma and some postsecondary credits. Located on the campus of Olive-Harvey Community College, OHMCHS provides students access to the same facilities and services available to traditional community college students along with additional counseling and support provided by the program faculty and staff. OHMCHS grants high school diplomas to students who earn 24 high school credits (including those received previously), pass the GED test to prove mastery, pass a test on the US Constitution, and complete a drivers' education course. Students must spend at least two years at OHMCHS taking their required high school coursework. Many of the classes are cross-listed and co-taught by an OHMCHS faculty member and community college instructor, allowing students to earn both high school and postsecondary credit. OHMCHS has earned accreditation from the North Central Association Commission on Accreditation and School Improvement.

Population

The student population at OHMCHS during the 1997–98 school year (study cohort of 65 students) was 55% male, 45% female, 88% African American, 8% White, 5% Latino, and all ages 16–18. Students reported leaving school for a variety of reasons, including being forced out due to low grades or attendance, fearing for their personal safety, having responsibilities for childcare, and feeling disengaged or underserved. Approximately 88% of the students had completed their freshman or sophomore years, and the remaining students had earned junior status, yet few students had a GPA above 2.0. As part of the admissions process, students take the Test for Adult Basic Education (TABE). Results from this test show a wide range of abilities of OHMCHS students ranging from 5th grade through 12th grade abilities in reading and math. The majority of OHMCHS students in this sample population scored between the 8th and 12th grades in ability on the reading subsection of the TABE and between the 6th and 8th grade in ability on the math subsection of the TABE.[2]

Key Findings

- Attendance patterns significantly improved once students began attending OHMCHS. Only 35% of the students reported attending school 80% of the time prior to enrollment at OHMCHS. Upon enrollment at OHMCHS, 100% of the students attended at least 80% of the time.
- OHMCHS students improved their GPAs upon enrollment in the program. Students who reported below a 2.0 at their previous school were earning GPAs between 2.5 and 3.5.
- For the 1997–98 school year, 65% graduated with a high school diploma, 14% transferred to another school in the Chicago area, 29% earned a GED, and 11% dropped out, which includes students who moved out of the area.
- Of the 30 high school diploma graduates who were followed six months after graduation, 77% had or were currently attending college, 7% were learning a trade/profession, 10% entered the workforce, and 7% were serving in the armed services.
- Of the students who earned a GED, 53% had enrolled at a postsecondary institution as of January 2001.
- While enrolled at OHMCHS, 40% of the students earned some credit from Olive-Harvey Community College. The number of credits earned ranged from 1 to 15.

Program Components

The small *size of the school*, approximately 100 students, allows students to know each other and have meaningful relationships with the faculty. Many students comment on the "family atmosphere" that exists at OHMCHS. Both high school teachers and professors at the community college serve as mentors to OHMCHS students through formal and informal connections.

During their first semester in the program, students must take a course called Personal Development that focuses on vocabulary development and writing blended with socialization, ethics, and behavior. Upon anticipation of graduation, students must take a course entitled Senior Exit focused on the college admissions process including applications, financial aid forms, and visits to historically black colleges and universities. These *college success courses* both introduce and prepare students for the rigors of college life at Olive-Harvey Community College and beyond.

Students have *required coursework in career education, music, and art, and must also complete a community-based internship*. OHMCHS is focused on developing the entire student and demonstrating they have an array of options upon graduation, including college and careers.

Students are treated as *serious scholars* with high expectations; many students feel as though OHMCHS has given them a second chance and that failure is not an option. The faculty also expect that students will succeed; they are available both during and after school to counsel and tutor students. OHMCHS emphasizes that all students are college material, and the dual enrollment option allows these students to experience and succeed at college-level coursework.

Contributing Factors

Peer Support Network

OHMCHS students create a support system for each other as many have similar struggles with traditional education and often face the same challenges outside of school. Previously, school had been a place where students found they received little or no encouragement from their peers to succeed academically. At OHMCHS, students depend on each other for motivation and support.

Caring and Supportive Staff

Faculty commitment to their students extends beyond the classroom including helping students overcome many of the obstacles, both academic and emotional, that had prevented them from succeeding in school. In academic year 2005–06, six OHMCHS graduates returned to teach after receiving the appropriate credentials. According to the principal, these teachers are personally invested in helping the students as they understand their experiences and have similar backgrounds.

Location on a College Campus

By having OHMCHS on the campus of Olive-Harvey Community College, students are given the opportunity to experience college life firsthand. Students are encouraged to seek out all the campus has to offer including facilities and student groups. More importantly, the location fosters a college-focused environment where the transition from high school to college is the driving goal of academic coursework and the advising program.

Study Methodology

The Academy for Educational Development (AED) conducted a three-year longitudinal case study of two middle college high school sites that had been in operation for a significant period of time.[3] Both quantitative and qualitative methods were used, and data were collected through student records, admissions applications, and surveys. Some students and faculty participated in interviews during yearly site visits conducted by the researchers. Primarily, the data came from on-site liaisons who worked with the AED researchers to collect the desired information. At OHMCHS, researchers followed a cohort of 65 students enrolled in the 1997–98 school year through June 2000, at which time none of the students from the initial cohort remained enrolled in the program.

Funding

Program Funding

According to the current principal, OHMCHS is considered a charter school and receives $5,700 per pupil from Chicago Public Schools. In addition, they receive additional support from the Department of Children and Family Services and the Illinois State Board of Education. Eighteen of the current OHMCHS students are considered wards of the state for which the school receives additional funds to support supplemental services and activities.

Evaluation Funding

As part of its work with the Middle College High School Consortium, the DeWitt Wallace-Readers Digest Fund, now the Wallace Foundation, hired AED to conduct an evaluation looking at the types of students served by MCHS along with their experiences and outcomes.

Geographic Area

Olive-Harvey Community College is located on Chicago's Southside. Students from all Chicago Public Schools that have either been dismissed or withdrawn are eligible to apply.

Information from

Academy of Educational Development. (2001) *Middle college high school consortium three-year longitudinal study: Final report*. New York, NY: Author.

Contact Information

Program Contact
Lillian Evins-Adkins
Principal
Olive Harvey Middle College High School
10001 S. Woodlawn
Chicago, IL 60616
773-291-6517
levins@ccc.edu

Notes

1 A retrieval school is a designation of the district. Its purpose is to "recruit capable, at-risk students who have failed to achieve in other settings."

2 A minimum score of 8th grade proficiency is required for admissions. Some exceptions are made for students who demonstrate their motivation and dedication through the written application and interview process. The TABE scores also are used for placement into community college classes.

3 The other site included in the AED evaluation is Shelby Middle College High School, recently renamed Middle College High School at Southwest Tennessee (MCHS@SWT), which is also included in this compendium.

Shelby Middle College High School

Overview

Shelby Middle College High School (SMCHS), recently renamed Middle College High School at Southwest Tennessee (MCHS@SWT), is a middle college high school designed as an Expeditionary Learning Academy,[1] specifically designed to provide an environment that supports and challenges high-ability, underachieving, at-risk young people from the Memphis City School District. Classes are designed around thematic units that involve students in long-term learning expeditions inside and outside of the classroom, requiring students to take responsibility for their own learning.

During the time of the study, which was completed in 2001, SMCHS only served 10th- through 12th-grade students; the current school (MCHS@SWT) predominantly accepts students in 9th grade as it has been transformed into an early college high school through the Early College High School Initiative. The information included in this profile reflects the program and structure of SMCHS, not the current program.

Population

The 113 students in the cohort (students enrolled in 1997–98 academic year) were 96% African American and 4% White. Approximately 68% of the students were female, including a number of pregnant women who came to live in a supervised group home in Memphis. About 67% of the students were eligible for free lunch and another 7% eligible for reduced-price lunch. The cohort group had been required to participate in 9th grade in a Memphis City high school, although many of the students included in the cohort did not enroll in the program until after the 10th or 11th grade at a traditional high school. Memphis City Schools require students to pass the Tennessee Competency Test (TCAP) as part of the high school graduation requirements.[2] Within the cohort, 50% of the students had passed the math subtest and 62% passed the language arts subtest when they entered SMCHS.

Key Findings

Although these findings are promising, there are two important caveats. First, this student population was transient, meaning that they moved between schools, usually within the district, more so than the traditional population, making the number of students represented in the findings quite small. Second, as indicated in the introduction, the program described in this evaluation (SMCHS) is quite different from the current program (MCHS@SWT), but the school is continuing to produce strong results.

- Upon enrollment at SMCHS, attendance improved; a majority of students attended school between 91% and 100% of the time.
- Of the students in the cohort, 49% graduated with a high school diploma and 4% with a certificate,[3] 25% transferred to another school, and 18% withdrew or dropped out, although it was noted that some of these students did go on to earn a GED.
- As of January 2001, 54% of the cohort graduates had or were currently attending college, one was learning a trade, two had enlisted in the armed services, and the remaining 24 graduates were working or their whereabouts were unknown.
- During their time at SMCHS, 23% of the students earned postsecondary credit, ranging from one to 12 credits, from Shelby State Community College.
- Over time, students showed significant academic improvement. The number of students with GPAs of 2.0 or below decreased from 63% at the time of entry to 44% after one year and to 17% after three years in the program. Similarly, the number of students with GPAs above 3.0 increased from 12% at the time of entry to 17% after one year and to 21% after three years in the program.

Program Components

SMCHS's *experiential learning curriculum* focuses on thematic units of instruction. Teachers link coursework in the high school-level classes around a subject area of interest. Students complete a comprehensive final project that involves applying their knowledge outside the classroom.

Students receive *individualized schedules* that allow them to supplement their high school coursework with classes at the community college for dual credit. These classes are often ones not offered by

SMCHS, such as foreign language or vocational and technical classes that expose students to career options.

Students who need additional time to complete the assigned coursework can take advantage of an *extended school day* with hours either after school, during Saturday Academy, or during the summer session. This time is used both for remediation and enrichment to ensure students can complete the necessary coursework and assignments.

Contributing Factors

Throughout their enrollment at SMCHS, the researchers frequently requested that students complete surveys. The following are the three most frequent responses from students on why SMCHS has helped them succeed.

Small Class Size

High school classes offered at SMCHS had no more than 20 students. This allows teachers to work individually with students, which students often mentioned as a benefit of attending SMCHS compared to their prior schools. Small classes are critical in project-based learning, as students are able to progress at their own pace while being monitored and supported by the instructor.

Location on a College Campus

Students reported that the location on the college campus made them feel as though they were being taken more seriously, since they were given more freedom than traditional high school students. It also allowed students the opportunity to earn some postsecondary credit through dual enrollment classes. Additionally, SMCHS students can take advantage of the facilities and services offered by the community college, including the libraries and counseling services.

Individualized Attention

In the surveys, students noted the family-like atmosphere at SMCHS and said that teachers cared about them and their success, and that classmates supported them and made them feel safe. Through the extension of the school day and the advising programs, teachers are able to get to know the students as individuals and personalize the curricula and support them outside the classroom.

Study Methodology

AED conducted a three-year longitudinal case study of two middle college high school sites that had been in operation for a significant period of time.[4] Both quantitative and qualitative methods were used, and data were collected including student records, admissions applications, and surveys. Some students and faculty participated in interviews during yearly site visits conducted by the researchers. Primarily, the data came from on-site liaisons who worked with the AED researchers to collect the desired information.

Funding

Program Funding

We were unable to find any information about funding for SMCHS during the time considered in this evaluation.

Evaluation Funding

As part of its work with the Middle College High School Consortium, the DeWitt Wallace-Readers Digest Fund, now the Wallace Foundation, hired AED to conduct an evaluation looking at the types of students served by MCHS along with their experiences and their outcomes.

Geographic Area

Students within the Memphis City School District are eligible to attend the program as it is considered a Memphis City School.

Information from

Academy of Educational Development. (2001). *Middle college high school consortium three-year longitudinal study: Final report*. New York, NY: Author.

MCHS@SWT website: http://www.memphis-schools.k12.tn.us/schools/middlecollege.hs/MCHS.htm

Contacts

No contacts are available for this research.

Notes

1 A school design and teaching strategy developed by the New American Schools Expeditionary Learning Outward Bound Program.

2 These tests are administered annually beginning in the 9th grade, and students are eligible to retake these tests yearly in subject areas in which they previously did not reach the level of proficiency.

3 Certificates are awarded to students who complete all the high school graduation requirements, yet did not pass an exit exam such as ACT, SAT, or WorkKeys.

4 The other site included in the AED evaluation is Olive-Harvey Middle College High School, which is also included in this compendium.

High School Dual Enrollment Program at Santa Fe Community College[1]

Overview

In 1974, Santa Fe Community College (SFCC) in Gainesville, Florida, was designated the district's Vocational-Technical Center. To avoid transporting students from local high schools to the community college, a program that mirrored a high school was created on SFCC's campus. Over the past 31 years, this program has grown into the High School Dual Enrollment Program at Santa Fe Community College (HSDEP). Initially, it had become an alternative to the district's large comprehensive high school, particularly for students who were dissatisfied or might be at-risk of dropping out of high school. Currently, HSDEP serves 500 juniors and seniors in its three tracks:

- College of Technology and Applied Science—approximately 30 career preparation options ranging from automotive service to computer information systems to licensed practical nursing
- College of Fine Arts—programs in dance, theatre, visual arts, and music
- College Academic—general education requirements which lead to an associate's degree and credits that are transferable to the Florida State University System.

Each track allows students to earn college credit toward either a technical certificate or an associate's degree as they complete their high school graduation requirements. HSDEP students receive the same privileges and access as traditional SFCC students, yet maintain the ability to participate in sports and functions at their home high school, like prom and graduation, if they choose. In addition, all grades and credits earned at the college are transferred back to the home high school from which the student graduates.

Population

Researchers considered three cohorts—the classes of 1989, 1995, and 2000—and reviewed information from students' enrollment applications, pre-enrollment high school transcripts, attendance records, and discipline records, when available. Researchers collected limited demographic information on these students, beside the number of students in each cohort. In 1989, there were 166 students enrolled in the fall semester, in 1995, there were 203, and in 2000, there were 276.

The approximately 500 current HSDEP students are primarily from the Alachua County School District and include those previously enrolled in private, parochial, or home schools. A small number of students from adjacent school districts are also eligible to attend. There has been a shift in who attends the dual enrollment program; current students are more mature or focused on a career or a four-year degree than previous students, who often struggled in more traditional high schools.

According to an interview with a school administrator, previously, particularly in the program's early years, 65% of the student participants were "at-risk" students. Now, only 10–15% of enrolled students have issues that might affect their ability to be successful in school. Much of this shift in the student population is related to the growth of both the program and community college, specifically the addition of two more academically rigorous tracks (College Academic and College of Fine Arts). But it is also evident from enrolled student applications that HSDEP continues to accept students who are considered at risk of dropping out of high school based on low GPAs and high absentee rates, but who have the potential to be successful based on college placement test scores.

Key Findings

The program administrator has been at Santa Fe Community College since the early years of HSDEP and has kept paper student transcripts, but she has been unable to analyze the data. These findings are from a small data sample (available transcripts from the classes of 1989, 1995, and 2000) that the researchers considered for their case study.

- The graduation rate of students receiving a high school diploma through HSDEP has increased over time. In 1989, the graduation rate was 57%, in 1995 it was 64%, and in 2000 it was 68% with the possibility of an additional increase, because some data were still pending.[2] Of those students entering in Fall 2003, 80% graduated from the

program, 9% returned to their home high school, 5% withdrew to get a GED, 2% moved out of the district, 1% were removed from the program, and 3% withdrew for other reasons.

- HSDEP appears to be an effective method for students to earn college credit while still in high school. For each cohort considered (1989, 1995, 2000), the percentage of college courses taken that qualified for transfer credit at the state university system (71% for 1989 cohort, 78% for 1995 cohort, and 86% for the 2000 cohort) substantially exceeded the rates for non-HSDEP students who earned credit through AP exams in the district's traditional high school (55%) in 2000.

- Over time, the number of college courses students successfully completed increased as the academic profile of the typical entrant improved. In 1989, 69% of the HSDEP students took at least one college course with the average number of credits earned being 2.7. In 2000, 93% of HSDEP took college courses and on average completed eight college courses or 24 credits.

- The number of transferable college courses taken and successfully completed with a grade of C or better rose from 71% in 1989 to 86% in 2000.

- According to the director, 70–80% of the HSDEP graduates return to Santa Fe Community College for additional coursework within one year of high school graduation.

Program Components

High school classes run from 8 a.m. to 2 p.m., but no student is enrolled in only high school classes. *All students have some postsecondary coursework*, and one-third of the students are in all college classes. Additionally, there usually are no more than 5 HSDEP students per every 25 seats in a SFCC college courses. This ratio helps maintain the college atmosphere. It ensures that the HSDEP experience in college-level classes reflects the experience of traditional SFCC students.

HSDEP's administrative structure of one principal and no assistant principals or deans allows the program to free up funds to hire *additional counselors*. The 160:1 student-to-counselor ratio at HSDEP is significantly lower than at comprehensive high schools. The guidance counselors are critical to program success, as they assume many of the responsibilities for day-to-day operation of the program, including creating student schedules, monitoring student progress, working with parents, and working with high school and college instructors on campus to best serve the needs of HSDEP students. HSDEP counselors are seasoned veterans, many with 20 or more years of experience.

With lighter student loads, counselors are available to meet more regularly with students. As each student has an *individualized schedule*, counselors become increasingly important in ensuring students meet high school graduation requirements and are able to carry their postsecondary credit forward with them to other institutions.

Students have the option of participating in extracurricular activities, excluding interscholastic sports, at the community college or remaining involved in all activities including sports at their home high school. The student's ability to *choose to affiliate either at SFCC or at their home high school* shapes the program around the student's needs. For some students, HSDEP is very appealing academically, as it is more rigorous and challenging than the home high school, but it does not force them to completely lose touch with their high school friends and activities. For others, HSDEP provides the opportunity to break away from their home high school and, in a way, reinvent themselves in the SFCC community.

Contributing Factors

Location on a community college campus

As with most programs of this type, the location is often cited as a critical element to program success, because it provides easy access to postsecondary classes; improved facilities in comparison to traditional high schools; academic assistance labs in reading, writing, and math; and most importantly, creates a college-focused environment. HSDEP students cited the additional freedom they received compared to their traditional high school and said they saw more purpose in their coursework. The students also said that the coursework was more meaningful, and there were fewer worksheets and more in-depth discussions.

Positive Role Models

The community college students are positive peer role models since the HSDEP students are enrolled in classes alongside traditional students. Modeling classroom behavior, the community college students set the example for the HSDEP students who are often experiencing college classrooms for the first time. High school faculty at HSDEP were pleased to see that students often brought back to their classrooms the behaviors learned from their college-level courses. For example, students began arriving early to their high school courses to discuss the material with fellow students. The HSDEP teachers also felt as though students were more engaged in discussions during class time and often incorporated knowledge from their college-level courses.

High school faculty benefit from relationships with college faculty

In their interviews with researchers, the HSDEP faculty discussed how they have enjoyed being associated with the community college faculty. The benefits they cited from these relationships included introductions to innovative teaching strategies and increased access to resources. Adding to the feeling of collegiality, HSDEP teachers receive the same salary, workload, and professional development as the community college faculty. The main difference between the two faculties is that the HSDEP faculty primarily teach the required classes for 11th and 12th grade that students need to be eligible to graduate if they do not have the scores to take the courses at the college level. For example, students who do not qualify for college-level math can take high school math courses such as Algebra II.

Support from school district

HSDEP has benefited from district leaders who have been and remain supportive of the program. Many school district leaders commented that HSDEP provides an appropriate alternative for capable students who are unsuccessful and/or unhappy in the district's large comprehensive high schools. Additionally, HSDEP has provided additional seats for the district, which has reached capacity in its own facilities, without requiring new school construction.

Study Methodology

This was part of a larger study of high schools located on college campuses. The case study of each site included a one-day orientation visit, a two-day visit that was comprised of student focus groups and collection and analysis of documents from both the program and the college. For the Santa Fe Community College site, researchers spent two additional extended visits collecting data from the paper records of student transcripts to compare three cohort groups, enrolled new students from 1989, 1995, and 2000. The information collected provided information about the classes and grades for HSDEP students during their time in the program, but did not provide information about their postgraduation enrollment and success.

Funding

Program Funding

During its initial years, HSDEP was primarily funded by SFCC, which received some funding from the district for serving as the vocational-technical center. As HSDEP grew to include the College of Fine Arts and College Academic tracks, the administration considered seeking charter school status to acquire additional money to support the program. The growth of HSDEP, along with a change in state funding that decreased the FTE for high school students dually-enrolled at community colleges, made it difficult for SFCC to handle the financial burden of offering both high school classes in addition to its college courses. The host K-12 district did not want to lose HSDEP, an excellent alternative for students, so they agreed to continue the partnership and fund enrolled students at 95% FTE, thus removing the majority of the financial responsibility from SFCC. To date, HSDEP still receives funding from the host K-12 district, and SFCC also considers HSDEP students from out-of-district and private schools as part-time students in their FTE funding count.

Evaluation Funding

The evaluation was funded by the Institute of Education Sciences, US Department of Education and jointly conducted by Appalachia Educational Laboratory (formerly AEL, now Edvantia) and CNA Education.

Geographic Area

All students from Alachua and Bradford counties are eligible for enrollment as either full-time or part-time students. In addition, students from other counties with articulation agreements with SFCC are eligible

for enrollment. There is also a possibility for out-of-district students to enroll with certain permissions from their home district.

Information from

Cavalluzzo, L., Jordan, W., & Corallo, C. (2002). *Case studies of high schools on college campuses: An alternative to the traditional high school program*. Charleston, WV: AEL

Dual Enrollment Program at Santa Fe Community College website: http://admin.sfcc.edu/~hsde/

Conversations with Program Director

Contact Information

Program Contact
Linda Lanza-Kaduce
Director
High School Dual Enrollment Program
Santa Fe Community College
3000 NW 83rd Street
Gainesville, FL 32606
352-395-5490
linda.lanza-kaduce@sfcc.edu

Evaluation Contact
Christopher Corallo, EdD (previously at AEL and responsible for evaluation)
Director of Staff Development
Henrico County Public Schools
3820 Nine Mile Road
Richmond, VA 23223
804-652-3675
ccorallo@henrico.k12.va.us

Notes

1 While HSDEP is neither a middle nor an early college high school, but rather a high school located on a college campus, it has similar characteristics and seemed most appropriate within this section.

2 The low graduation rates can be attributed to the following factors: students who were asked to leave for nonattendance or unacceptable behavior, students who chose to return to their home high school, students who left to get their GED, and other reasons, such as moving out of the district, that were not related to the appropriateness of the program for that student.

Introduction to Programs Serving Disadvantaged Youth

As demonstrated by the programs included in the previous sections of this compendium, Secondary-Postsecondary Learning Options are primarily intended for in-school youth with the motivation and drive to succeed in challenging coursework. SPLOs predominantly serve high-achieving students with the exception being Tech Prep, which serves the middle majority. However, it appears that more and more SPLOs are focusing on disadvantaged youth. Early college high schools have been designed, for instance, to serve lower-achieving students. There are a limited number of other SPLOs that specifically target disadvantaged students, including low-achievers and out-of-school youth. Although their structures are different, each program's central mission is to demonstrate to these students that they can succeed in postsecondary education with adequate and appropriate supports.

In two of the programs included in this section (Portland Community College's Gateway to College and Diploma Plus), dual enrollment is used as one strategy to reconnect out-of-school youth with formal education. In another (Early College Program at York Community College), dual enrollment is used as a motivator for low- to mid-range students. With all three of the above-mentioned programs, dual enrollment is also used to expose these students to the range of their postsecondary options for continued education and job training. The final program (CUNY College Now), although not specifically targeted at disadvantaged youth, aims to address the inadequacy of the New York City (NYC) public high schools in preparing students for the rigors of postsecondary education. The program offers a variety of levels and types of college classes to serve all NYC high school students regardless of their abilities.

The findings of the programs that serve disadvantaged youth have indicators of success that are often lower than traditional programs, thus appearing unimpressive at first glance. It is important to note that this population most likely would have had an even lower success rate without these programs. In the words of one practitioner, "We serve 100% dropouts…and we graduate 60% of them." The challenges of serving students who have been removed from traditional education for some period of time are significant and often affect a student's ability to complete the program. For example, student participants must first have the motivation and drive to commit to a program. In some cases, this requires sacrificing income from jobs, which they are unwilling or unable to do.

The programs included within this section of the compendium demonstrate that blended secondary and postsecondary programs for disadvantaged youth are an effective strategy, one that we believe should be more widely considered. Many of the components that make these programs successful with a disadvantaged student population are based on the core principles of youth development. These include caring adults who serve as teacher, guide, and role model; a network of peer support; a high quality curriculum; and a competency-based approach to learning.[1]

Notes

[1] For these and additional components, see "Alternatives for At-Risk and Out-of-School Youth" by Sandra Kerka, Ohio Learning Work Connection, 2003.

Diploma Plus

Overview

Diploma Plus (DP) offers a rigorous, engaging, and supportive alternative educational pathway for young people who are not served well by traditional high schools and who are at risk of dropping out or may already have done so. The program has three distinct phases: the Foundation Level, the Presentation Level, and the Plus Phase. In the Foundation and Presentation Levels, sites deliver curricula in core subject areas that are mapped to explicit competencies. The Plus Phase transitions students into the world beyond high school, emphasizing postsecondary experiences, which include an internship and college course work, while providing strong supports to students as they complete high school.

Diploma Plus serves students who have had difficulty in traditional schools or have already dropped out, and one of their central aims is to increase the number and quality of educational alternatives for vulnerable youth. As of 2005–06, there are a total of 15 DP sites in Massachusetts, Rhode Island, Connecticut, and New York, serving close to 2,000 students. It is anticipated that several new DP schools will open by 2007–08, including several in California. It is important to note that the DP model is designed to be applicable to different settings. Current sites include small district-run schools, charter schools, alternative education programs, and community college transition programs.

From its inception in 1996 until 2005, DP engaged in third-party evaluations to assess and improve its policies and practice, as one of the model's biggest challenges is balancing the high standards for achievement with the extensive academic catch-up in which many entering students must engage. The information included in this profile primarily draws upon the latest evaluation, completed in 2005 by Brigham Nahas Research Associates. Findings from this evaluation have informed many of decisions about Diploma Plus's recent expansion.

Population

Diploma Plus serves young people who face personal, educational, and economic challenges that make success in a traditional high school setting difficult. The particular student population varies among sites, but DP participants primarily are students who have fallen behind and are overage for the grade in which they are currently enrolled. In addition, certain sites primarily enroll students who have dropped out of school, immigrant students who are English language learners, entering 9th-grade students with significant risk factors, and 12th-grade students who have yet to pass the state's high school exit exams and are at risk of not graduating. Most DP students come from families with little or no history of postsecondary education. DP students' academic ability ranges from below the 6th grade through the 11th and 12th grades. The total population of students served through DP is ethnically and racially diverse. As of 2004–05, DP students were 43% African American, 36% Latino, 11% White, 8% other, and 2% Asian/Pacific Islander. They are 53% female and 47% male, 87% free or reduced-price lunch qualifiers, and 17% English language learners.

The student population included in the research conducted by Brigham Nahas Research Associates included 1,180 students across eight sites who were enrolled in programs between 2002 and 2004: 39% in a small school serving English language learners, 29% in three community-based programs, 19% in another small school, and 14% in three transitional senior-year programs located on a community college campus. All of these students participated in the program for at least two months. Within this group, there were approximately equal percentages of males and females. Students self-reported their race/ethnicity as 29% other, –25% Latino, 25% African American, 17% White, and 5% Asian/Pacific Islander. For 60% of the students, a language other than English was spoken at home.

Key Findings

Research on students enrolled in the program from September 2002 to September 2004 produced the following key findings:

- Students were attracted to DP because of the opportunity to take college-level courses. According to survey data, 84% of students indicated that the opportunity to take a college class was important in their decision to participate in the program.

- As indicated in an end-of-the year graduate transition survey conducted of 197 students who hoped to graduate in June 2004, a high percentage of DP graduates (78%) reported plans to enter postsecondary education immediately after gradua-

tion, while another 18% reported their intent to continue education after taking some time off. Of those planning to continue their education, 56% planned on attending school full-time, 27% part-time, and the remaining students were unsure, as some students indicated they had plans to join the military, responsibilities to care for children or family members, or expectations to engage in community service.

- In 2004, 32% of the graduating students reported they had a job and approximately half had a full-time job. Forty-five percent of the graduates reported they were looking for a job, including those currently employed looking for a new job.

- In surveys during 2003–04, almost 90% of DP students said that the program was helping them plan and preparing them well for life after high school. In earlier surveys, 95% said the program made them feel better prepared for the future, 81% felt their aspirations had improved, and 87% were more interested in attending college.

- From Fall 2002 to Spring 2004, 226 Plus Phase students took college courses; 61% took a developmental-level/remedial course, and 39% enrolled in credit-bearing courses.

- Of students taking college classes while in the Plus Phase of the program between 2002 and 2004, 81% passed at least one course. Most (71%) earned a "C" or better in at least one course.

- In surveys conducted in 2003–04, students reported:

  - Being more engaged in the DP program than they were in their previous school;

  - Performing better in DP than their previous school (due in large part to the caring, committed adults who support them);

  - A safer, more supportive and respectful culture and structure at their DP school; and

  - Much more diligent completion of schoolwork while in DP (in comparison to their previous schools).

- Students reported that postsecondary education was "often" or "very often" discussed, with 82% reporting discussions on applying to colleges and other schools, 79% on going to two-year colleges, 74% on finding the right career path, 71% on paying for college or other schools, and 70% on going to four-year colleges. Fewer students reported that their programs provided information about attending training programs or trade schools (47%) or going into the military (15%).

- Of the students enrolled across the DP network between September 2002 and September 2004, 62% completed the program. Within this group, 33% graduated having completed all of the Plus Phase components, 26% graduated without completing all the components of the Plus Phase, and 3% completed all the program requirements, but did not pass the MCAS, the required state test for high school graduation.

- Results from a small follow-up study of graduates from one of the transitional senior year programs showed that six months after graduation, 15 out of 17 participants had passed the MCAS and earned a high school diploma. The two students who had not passed were appealing the decision. In terms of postprogram plans, most (87%) of those who completed the program and passed the MCAS went to college. One student was working and in a vocational education program, and another was neither working nor in college.[1]

Additional Findings by Site Type

These findings also are based upon the research conducted by Brigham Nahas Research Associates on students enrolled between September 2002 and September 2004. DP has used these results to improve their program and practice.

- Of the students in the three transitional school year programs, 83% graduated with a diploma, meaning that they passed the MCAS, the state-mandated test required for graduation. An additional 9% completed the program, but did not earn a high school diploma because they did not pass the MCAS, and another 7% withdrew from the program prior to completion.

- Of the students at a small school program for English language learners, 82% graduated with 32% completing the Plus Phase requirements. Some students (18%) withdrew from the program prior to receiving a diploma.

- At the three community-based programs, 45% of the students graduated with 19% completing the Plus Phase requirements, and another 5% completed the program, but did not graduate, because they had failed the MCAS. Of the students from these sites, 50% withdrew before finishing the program.

- At one small school site, only 9% of the students completed the program and earned a diploma with 91% withdrawing prior to program completion. Because of high attrition and at DP's urging, this site has since significantly redesigned its program with a stronger focus on foundational skills for students at an earlier stage in their high school careers.

- In community-based programs, females are more likely to graduate than males, a trend consistent with national data showing that males have higher dropout rates.

- Among programs that used the Tests of Adult Basic Education (TABE) as part of their applicant evaluation, students who earned a high school diploma had slightly higher scores in English and math on the TABE than those who withdrew.

- For students enrolled in the small school program for English language learners, 90% of the students who came straight to the program from their previous school graduated, whereas only 74% of the students who had been out of school for one year or more graduated.

Program Components

The Diploma Plus program consists of three stages: *the Foundation Level, the Presentation Level, and the Plus Phase*. Each stage of the program provides students with learning opportunities that build on their strengths and help to improve their weaknesses. During the Foundation and Presentation Levels, students participate in classes where multiple active learning strategies are employed and where projects and assignments have clearly defined competency expectations and content objectives. They also compile, present, and defend a portfolio containing their best work across subjects before a panel that includes adults from the community. Students are promoted to the Plus Phase, where they show they have attained proficiency in specified competencies and content objectives, as demonstrated by their portfolio work and other assessments. The Plus Phase is a guided transition to life after high school, where students participate in an internship, a postsecondary experience, usually coursework at a local community college, and development of a Graduation Portfolio. Plus Phase students also participate in additional high school coursework that enables them to build higher levels of proficiency in academic competencies, as well as a small group seminar, in which they prepare for and apply to college, receive tutoring, develop specific postgraduation plans, and support one another. Beyond meeting state graduation requirements (e.g., high school exit tests in states where they are mandated), successful completion of the Plus Phase and a Graduation Portfolio earns DP students a diploma.

Unlike traditional schools where credit accumulation is based upon time-in-seat or time-on-task, DP is *a performance-based route to a high school diploma*. Both promotion and graduation are based upon successful demonstration of proficiency in specified competencies and content objectives that are benchmarked at each program level. Therefore, DP places emphasis on contextual learning, portfolio development, and authentic assessment.

Diploma Plus not only graduates at-risk students with a high school diploma, but provides guidance and support to facilitate students' transitions to life after high school. These *challenging transitional experiences* include several major academic projects, a structured internship, and one or more college courses for credit, which allow students to have an opportunity to explore an array of postgraduation options. Most of these experiences occur in a structured environment during the Plus Phase while students continue to come to their DP site regularly to receive counseling from the DP staff.

Contributing Factors

Articulated learning objectives and performance-based promotion

Diploma Plus' emphasis on raising academic achieve-

ment is supported by a curriculum and assessments that are expressly tied to core academic competencies. The DP competencies emphasize habits of mind and the critical thinking skills that students need to use and master as they develop content knowledge in core academic subjects. Teachers at DP schools "plan backwards" from the DP competencies and state and local content objectives to design curricula and assessments, and students are promoted based upon demonstration of skills and knowledge, not time-in-seat.

Range of teaching and learning strategies

Recognizing that students have multiple learning styles, DP works to engage all students through a variety of student-centered learning approaches, including inquiry- or project-based learning, learning designed to promote higher-order thinking, and experiential learning. DP also emphasizes literacy strategies across the curriculum and differentiated instruction. Students do receive some instruction lecture-style during the Presentation Level or the Plus Phase to prepare them for the community college courses they will take during the Plus Phase.

Steady support and assistance from staff

Diploma Plus students are supported throughout their time in the program, through smaller classes, one-on-one attention from their teachers, counseling support, and advisories. After graduation from the DP program, students often return to their DP teachers and staff for assistance and counseling. The structure and culture of the school assists in the creation of this supportive and respectful environment.

Continued evaluation and professional development

Using the third-party evaluations, DP staff have improved the program's design and have worked with DP sites to improve their implementation of the model and service delivery. As the evaluations have pointed out, instructional leadership, sufficient time and resources, and a strong, committed staff are needed to fully implement DP's competency- and performance-based approaches. Additionally, DP provides ongoing professional development to staff at DP schools, both through site-based coaching and workshops, and through cross-site workshops and network-wide institutes.

A strong focus on the postsecondary transition and opportunities for dual enrollment

Diploma Plus's focus on postsecondary transition has always been significant; in particular, it requires that students, in order to graduate, successfully complete a postsecondary experience during the Plus Phase of the program (usually a course at a community college through dual enrollment). This requirement raises expectations on the part of both teachers and students in DP, and having a significant college transition experience is very important in helping students shape their postsecondary plans and giving them confidence to continue their formal education beyond high school.

Study Methodology

The research conducted by Brigham Nahas Research Associates included case study research conducted at three sites, analysis of student databases maintained by DP, and student surveys administered at entry to the program and after two semesters enrolled in the program.

Funding

Program Funding

Diploma Plus is managed by the Center for Youth Development and Education (CYDE), a division of the Commonwealth Corporation, a quasi-public corporation dedicated to workforce development and education reform. CYDE has received funding to develop, manage, and expand DP primarily from foundations, including the Bill & Melinda Gates Foundation, the Charles Stewart Mott Foundation, and the W.K. Kellogg Foundation. Core funding for DP schools is primarily provided by their local school districts through ADA monies.

The Center for Youth Development and Education was instrumental in the Massachusetts state legislature's decision in 2000 to earmark a small portion of dual enrollment funding for alternative education students, including students at DP sites. Funding of $200,000 was set aside for dual enrollment for alternative education students out of a total budget of $1.8 million for dual enrollment. Due to serious fiscal constraints, however, dual enrollment funding (including the alternative education setaside) was cut from the state budget several years later. Since then, CYDE and individual DP schools have ensured that DP's postsecondary requirement is maintained by raising funds to cover dual enrollment costs. As

of early 2006, there is a possibility that dual enrollment funding (and the alternative education setaside within it) may be restored to the Massachusetts state budget.

Evaluation Funding

The third-party evaluations of DP were funded through grants from the Charles Stewart Mott Foundation and the W.K. Kellogg Foundation.

Information from

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Diploma Plus web site: http://www.cyde.us/diplomaplus/about.html

Contact Information

Program Contact
William Diehl, EdD
Education Cluster Lead and Senior Program Manager
Center for Youth Development and Education
Commonwealth Corporation
529 Main Street, Suite 110
Boston, MA 02129
617-727-8158
wdiehl@commcorp.org

Evaluation Contact
Alex Hoffinger
Senior Program Manager
Center for Youth Development and Education
Commonwealth Corporation
529 Main Street, Suite 110
Boston, MA 02129
617-727-8158 x2239
ahoffinger@commcorp.org

Notes

1 Please note that the sample size in this follow-up study is very small, and, therefore, its results do not demonstrate significance and cannot be generalized to the program as a whole.

CUNY: College Now

Overview

College Now (CN) is a partnership between City University of New York (CUNY) and New York City Department of Education that provides students an opportunity to participate in no-cost college coursework (developmental/remedial and credit-bearing), Regents/SAT prep workshops, and summer programs with the goal of ensuring all students are college-ready upon high school graduation. Classes and workshops are offered in more than 240 New York City (NYC) public high schools through programs based on all 17 CUNY undergraduate campuses. Students can receive college credit for some of the coursework, while other offerings lead to elective high school credit or are developmental courses that lead to college credit course-taking eligibility.[1] College Now, which began at Kingsborough Community College more than 20 years ago, was expanded to a CUNY-wide program in 1999–2000 and has grown significantly since then. This partnership between CUNY and the New York City Department of Education has evolved without any state-level policies supporting dual enrollment.

College Now is part of CUNY's Collaborative Programs, which is comprised of various partnerships with the NYC secondary school system.[2]

Population

In so far as College Now was designed to serve a representative population of students in NYC public schools, it also is primarily intended to serve students who have been historically underrepresented in higher education. In 2003–04, almost 31,800 students, primarily juniors and seniors, participated in more than 51,400 courses and activities through the CN Program. These participants were 43% male and 56% female (with 1% unknown). Students were 23.5% Black, 20.9% White, 19.6% Hispanic, 16.4% unknown, 14.1% Asian/Pacific Islander, and 5.6% other. Additionally, approximately 31% of the participants were not native English speakers. College Now's goal is to have the participants reflect the diversity of the New York City public schools, and they are continuing to expand the program to meet this goal. Eligibility for CN is determined by standardized test scores,[3] grades, and recommendations from a teacher or counselor. For credit-bearing courses at CUNY's four-year colleges, students must meet these schools' admissions requirements, which require either 75 on the English Language Arts and Math Regents exams or 480 on the math and verbal sections of the SAT. For some credit-bearing courses at CUNY's community colleges, the Regents test scores on both English Language Arts or Math must be 65.

Key Findings

- In the Fall of 2002, of the 14,768 New York City public high school students who entered CUNY as first-time, first-year students, 4,185 (28%) had participated in College Now.
- In Fall of 2003, 38% of NYC public high school graduates who entered CUNY as first-time freshman had participated in CN. These figures are similar for CUNY's senior colleges: 45.9% at Baruch College, 41.8% at Brooklyn College, 36.0% at City College, 44.8% at Hunter College, 24% at Lehman College, 41.3% at Queens College, and 36.2% at York College.
- For CN students who entered CUNY in Fall 2003, the retention rates (defined as re-enrollment for a third semester) at senior colleges were 87.9% compared to 81.8% for non-College Now NYC public high school students in that cohort; comparable figures at CUNY's comprehensive colleges, which award both associate's degrees and bachelor's degrees, were 78.7% for College Now students compared to 70.4% for non-College Now students; and at community colleges, 76.4% for CN students compared to 66.5% for non-College Now students. One should keep in mind that these are descriptive statistics and do not control for various demographic, academic, and institutional effects that may influence these rates.

Program Components

There are universal components of the CN program established by the central office, but each CUNY campus in its collaboration with a local high school has autonomy to create partnerships and offerings in response to the unique needs of its community.

College Now has *preconditions for success when working at the intersection of the secondary and postsecondary systems*. These include a deep knowledge of both systems, an emphasis on and commitment to the centrality of teaching and learning as a program value, and a definition of academic goals

that aspires to academic rigor that will help prepare students to succeed in higher education.

By far, the largest number of CN courses are *located in high schools and taught by a high school teacher who is qualified to teach at the college level and hired by the CN program's campus as an adjunct for this purpose*. These classes are usually offered before or after the typical school day or on Saturday with a few programs integrating CN classes into their regular school day schedule. A relatively small percentage of CN students who take college credit courses sit alongside matriculated college students in their classes through the provision of tuition waivers.

Most participating high schools have a *College Now liaison* who serves as an advisor and academic support specialist to participating students. This position takes the burden of course scheduling off of the traditional school counselors. The addition of the CN liaison increases the number of supportive adults who students can look to for support, guidance, and advising.

College Now courses are available *at no cost* to students who participate. This makes the CN program open and available to all qualified students.

A wide range of academic experiences, including courses for *high school credit, college credit, college developmental coursework, and test prep courses*, is available through CN. These diverse opportunities provide students with multiple pathways to postsecondary educational readiness. Since many students are not academically eligible to take college-credit courses, CN offers a number of developmental and precollege credit academic experiences to help students prepare to do college-level work by their junior or senior year and enter CUNY upon graduation. CN is also designed to give students *an opportunity to experience college with appropriate support structures*. CN believes that these opportunities both improve students' college-going aspirations and better prepare them for the challenges of postsecondary coursework.

Contributing Factors

Access for all high school students

The portfolio of College Now programs provides all New York City high school students some access to postsecondary education through either no-credit preparatory coursework or through credit-bearing courses. CN helps create the expectation that all students should consider postsecondary education or training as the next step after high school graduation.

Engaged student learners

Students self-select to participate in courses and often choose courses in their respective areas of interest. College Now offers opportunities for students to participate in arts activities and performances, for instance, as part of the curriculum and through supplementary activities.

External funding and support

College Now is available at no cost to student participants and is primarily funded by an annual investment of $11 million by CUNY. In addition, it also receives some financial support from the New York City Council. The diversity of funding and support has proven critical to ensuring that the program remains free to all student participants.

Study Methodology

This was not a formal evaluation of the CUNY CN program; rather it was a compilation and analysis of data collected and maintained by CN, and research done through CUNY Collaborative Programs.

Funding

Program Funding

In its research on funding of dual enrollment arrangements, Jobs for the Future found that CUNY's Collaborative Programs are cofunded by the city and state, with CUNY contributing about $11 million a year. Book costs alone are approximately $1 million a year. College Now pays for credit courses at three rates: by the hour in high schools with high school teachers, at an hourly rate (average of $2,800) on campus for cohorts of high school students taught by CUNY adjuncts paid per course, and through course tuition waivers that enable students to enroll in "regular" college courses (Hoffman, 2005, p. 24).

Evaluation Funding

Included in the general budget for CUNY's Collaborative Programs is some funding for research and evaluation. The Office of Academic Affairs also awards fellowships each year to advanced CUNY doctoral students who work as research assistants.

Geographic Area

New York City public school students are eligible.

Information from

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Contact Information

Program and Evaluation Contacts
Tracy Meade
Deputy Director of Collaborative Programs
Office of Academic Affairs
City University of New York
101 W. 31st Street
New York, NY 10001
646-344-7300
Tracy.Meade@mail.cuny.edu

Stuart Cochran
Director of Research and Evaluation for Collaborative Programs
Office of Academic Affairs
City University of New York
101 W. 31st Street
New York, NY 10001
646-344-7300
Stuart.Cochran@mail.cuny.edu

Notes

1 As of 2000, remedial classes are no longer offered at CUNY's four-year or senior colleges, but are still offered at CUNY's two-year colleges.

2 CUNY's Collaborative Programs include an Early College Initiative, in which CUNY, working side-by-side with the Office of New Schools Development at the Department of Education, and with the support of a large multiyear grant from the Bill & Melinda Gates Foundation, is creating 10 innovative early college secondary schools throughout the city. Collaborative Programs also include university-affiliated high schools, a Middle Grades Initiative, and CUNY Prep, a transitional high school program for out-of-school youth.

3 This refers to the Regents exams, a series of comprehensive tests students must pass to earn a diploma in the State of New York.

College Now at Baruch College

Baruch College, which has engaged in high school outreach programs for more than 20 years, consolidated its programs into College Now at Baruch College in 2002. College Now at Baruch College has a range of programs that offer postsecondary credit, remedial coursework, and college preparatory and awareness programs.

Baruch tailors elements of its program to suit the variations among the 12 high schools it works with, where official graduation rates range from 37-96%. Of those students who enrolled in its CN programs from 2002 through 2005, 63% were female, compared to 55% for all CN programs in New York City. At Baruch, students' ethnic backgrounds were 33% Asian/Pacific Islander, 18% White, 15% Hispanic, 14% Black, and 9% other with 11% unknown.

Over the past three years, 55% of CN registrations at Baruch were for college, credit-bearing courses. These courses are taught on the campus to students who qualified based on their grades and their scores on SAT, PSAT, or state Regents exams. The most popular of these courses is Introduction to Business, where students learn business principles from business school faculty. This course allows students to attend information literacy workshops taught by library faculty, and develop the skills to decide whether to buy or sell certain stocks at the Subotnick Financial Services Center, the college's virtual trading floor. Additionally, a communications fellow from the college's Bernard L. Schwartz Communications Institute works with the faculty to integrate assignments that focus on oral and written communication.

The other 45% of registrations were for activities not for college credit, such as an early college awareness course for 9th-grade students. One example of these noncredit courses is a 10-week class developed by an instructor in close consultation with a high school principal and teachers for students whose test scores and grades indicate that they may qualify for a community college – but not a senior (four-year) college—within CUNY. The course includes a campus visit and is taught in an informal classroom environment, in which students learn about setting short-term and long-term goals, developing an educational plan, and envisioning one's future. Baruch's activities also include a noncredit summer journalism workshop in which students produce a 16-page newspaper and a college credit summer program during which a high school student can take one of seven courses and participate in a range of cocurricular activities.

Reflecting CUNY-wide trends, registrations in Baruch's CN program consistently grew: from 464 in 2002-03, to 594 in 2003-04, to 693 in 2004-05So far, 266 students have entered a CUNY institution as undergraduates, including 127 who enrolled at Baruch.

For more information on College Now at Baruch College, see http://www.baruch.cuny.edu/collegenow/

Gateway to College at Portland Community College

Overview

Portland Community College's Gateway to College program serves students who have either dropped out or are considering dropping out of their traditional high school by providing a positive educational experience that allows them to earn a high school diploma while simultaneously earning significant college credit or an associate's degree. These formally "at-risk"[1] students now thrive in an academically rigorous environment located on a college campus with supportive faculty and student resource specialists and a Gateway to College staff member who serves as both an academic advisor and counselor. Students spend their first semester as part of a cohort, during which all coursework is focused on ensuring they have mastered the basic reading, writing, and math skills necessary for success in college-level classes. During this initial semester, entitled Gateway Foundation, students also participate in college survival and success classes that help them develop effective study skills, acclimate to college life, and introduce them to the facilities and services available at Portland Community College (PCC).

For students that come to the program not ready to handle the rigors of Gateway to College, PCC offers academic preparation programs that allow students to either graduate with a GED or transition into the Gateway to College program. Currently, PCC is managing the replication project of the Gateway to College model that will include 17 new sites across the country by 2008 with support from the Bill & Melinda Gates Foundation.

Population

This research considers approximately 740 students served by Gateway to College across the four campuses of Portland Community College. These students either had dropped out or were on the verge of dropping out. The average high school GPA of entrants is 1.7 with approximately 7.3 high school credits, slightly more than the typical number of credits earned during one's freshman year. The students range from ages 16-20 with just over half of its participants male. Reflective of the greater Portland area school districts from which the program draws, the students are 64% White, 10% Hispanic, 10% not specified, 7% African American, 6% Asian, and 2% Native American. Through the Multicultural Academic Program, an academic preparation program geared to prepare students for Gateway to College, PCC makes a special effort to serve English language learners.

During the application process, students are evaluated for academic appropriateness and commitment to the program over a two-day period. Formal assessments, assignments, and a personal interview are used to determine a student's readiness, both academically and socially, for the program. Admission is contingent upon an average score of 70% or higher during this assessment. While Gateway to College is looking for students who are committed to staying in school and succeeding, they do recognize that at-risk students may have personal challenges that prevent them from pursing education in a traditional time frame. Gateway to College's policy allows students to leave, if needed, and return to the program when they are able.

Key Findings

As Gateway to College at PCC has not undergone a third-party evaluation, the data available are that collected and reported by the program, primarily for internal use. The findings reported here represent all participants since the program's inception in 2000 through the Fall 2005.

- 70% of participants successfully complete the cohort series, the first semester of classes that participants take together in groups of 20-25 students.
- After the cohort series, 75% of the students successfully complete a second semester enrolled in college-level classes with a GPA of 2.0 or better.
- Four terms after their cohort series, 53% are still enrolled in the program.
- By the fourth term in the program, Gateway to College participants' persistence rates were 26% higher than traditional degree-seeking students.
- The overall average attendance rate for Gateway to College students is 92%.
- By October 2005, 175 students had earned a high school diploma, an associate's degree, and/or a GED. Within this group, 84 students earned

a high school diploma, 21 students earned an associate's degree, and 67 students earned a GED. An additional 309 students (42%) left the program without a credential.

- 14% of the high school diploma recipients graduated with honors.
- 88% of the high school diploma recipients have been on the honors list for at least one semester during their enrollment in Gateway to College.
- High school graduates earned an average of 73 college credits, the equivalent of approximately 24 classes.
- 37% of the students have exited the program without a credential (high school diploma or GED), but continued their postsecondary education, usually at PCC.
- 73% of Gateway to College graduates are enrolled in programs to continue their education, some at four-year institutions.

Program Components

Gateway to College is *completely integrated with Portland Community College*, and all aspects of the program are *located on the college campus*. Although students are counted as high school students through their home district for funding purposes, students in the Gateway program are considered PCC students and have access to facilities and services on campus. All classes offered by Gateway are college courses, taught by the college faculty, that provide students both high school credit and credit toward an associate's degree. Students who need to take remedial courses receive high school credit only.

Students must attend *an orientation where program design, benefits, and expectations are explained*. The orientation sets the tone for the program and encourages students who are not fully committed to the program to consider other options or return when they are prepared. Parents are asked, but not required, to attend this session.

Students must meet a *minimum grade-level reading requirement* (8th-grade reading level). If the student is between the 7th-and 8th-grade reading level, he/she may be offered the opportunity to take *a preprogram readiness semester entitled Gateway Preparation*. If this option is not appropriate, the student will be referred to one of PCC's *other academic preparation programs*, which comprise PCC's alternative education continuum. These programs include: Multicultural Academic Program (MAP) designed for students with limited English proficiency and Youth Empowered to Succeed (YES!), offering GED classes also open to adult learners.

Participants' *first term is spent with their cohort, where classes in reading, writing, math, counseling and guidance, and an academic lab are taken together*. The counseling and guidance class both equip students with the skills they need to navigate the college and their college-level coursework and help direct them through career exploration and selection. Students also experience college-level work in a supportive and structured environment, so they learn how to approach their future classes.

Career majors (pathways) align high school completion requirements with college degree or certificate requirements. Currently, Gateway to College offers more than 50 pathway options and has created unique course sequences that ensure students will receive their high school diploma along with the appropriate postsecondary credentials for their chosen career pathway.

Ongoing student support and retention services, including a referral network to social services, are available. Gateway students often face a number of barriers to success, so the student resource specialists work to provide the necessary support and services to ensure students can succeed. Staff continues to follow up with students who have completed the program and with students who dropped out of the program to let them know they are always welcome back.

Contributing Factors

Students are treated as serious scholars

Student expectations are high; they must receive grades of "C" or better. If they do not, staff will help students identify what they need to do to improve their performance through a "success contracting" process. In some cases, students will be asked to leave the program if their performance does not improve. Location on the college campus and the opportunity to enroll in college-level courses demonstrate to students that they can succeed in postsecondary education. Through the selection of a career major, students have a clear picture of their academic path while in Gateway to College.

Personalized student support

Students receive support from their teachers, student resource specialists/academic advisors, and classmates, particularly during the Gateway Foundation cohort semester. Gateway to College makes every attempt to ensure that no one goes unnoticed. Students are referred to community social services when necessary. Each student is assigned a student resource specialist who serves as both an academic advisor and counselor. Many students stay in contact with their student resource specialist upon graduation from the Gateway program for continued advice and support.

Skilled instructors

Gateway to College staff have a background in both K-12 and postsecondary education. Many come to the program having previously worked with at-risk youth. These instructors teach all classes offered during students' first semester in the program, other remedial level classes, and support workshops throughout students' enrollment. Their commitment to these students often extends beyond the classroom as they help students balance the responsibility of school, family, and work.

Favorable regulatory climate within state

Since the mid-1980s, Oregon law has allowed funds to follow high school students, permitting local school districts to contract with alternative education providers. These providers receive 80% of the per-pupil expenditure, and the school district keeps the remaining 20% for administrative overhead. In most cases, since Gateway to College participants have dropped out of high school, their enrollment in this program brings additional dollars into the school districts that contract with Portland Community College.

Study Methodology

Portland Community College Gateway to College began collecting data when the program began in Spring 2000. The information represents almost 740 students who have participated across four campus sites, which was compiled by a research and development staff member in the Gateway to College main office.

Funding

Gateway to College at PCC receives its funding from a contract with the school district along with in-kind support from PCC that includes use of facilities. These funds pay for tuition, books, and all staff supporting the program. Students are asked to pay for the technology, student activity, and lab fees, averaging about $50 per term. Presently, PCC has awarded funding to replicate Gateway to College nationally at 17 community colleges. These funds are used to support the scaling up process and enhancement of PCC's Gateway to College.

Geographic Areas

Gateway to College began at PCC in Portland, Oregon. The replication project has expanded to nine sites and includes Montgomery College, Rockville, Maryland; Riverside Community College, Riverside, California; Georgia Perimeter College, Decatur, Georgia; Clackamas Community College, Oregon City, Oregon; Palo Alto College, San Antonio, Texas; Community College of Philadelphia, Philadelphia, Pennsylvania; College of the Albemarle, Elizabeth City, North Carolina; Tri-County Technical College, Pendleton, South Carolina; and Mt. Wachusett Community College, Gardner, Massachusetts.

Information from

Portland Community College's Gateway to College Internal Year-End Reports

Gateway to College PowerPoint presentation by Linda Huddle, Director of Alternative Programs, Portland Community College

PCC Gateway to College website: www.gatewaytocollege.org

Contact Information

Program and Evaluation Contacts

Linda Huddle, Director of Alternative Programs
PCC Prep Alternative Programs
Extended Learning Campus
Bldg MSH, Room 106D
2305 S.E. 82nd Avenue
Portland, OR 97216
503-788-6119
503-788-6144 fax
lhuddle@pcc.edu

Laurel Dukehart, Gateway to College Replication Manager
PCC Prep Alternative Programs
Bldg MSH, Room 106D
2305 S.E. 82nd Avenue
Portland, OR 97266
503-788-6226
503-788-6144 fax
ldukehar@pcc.edu

Notes

[1] At-risk is defined by program admissions criteria as: 1) behind in high school credits based on age cohort; 2) GPA of 2.0 or below; or 3) erratic attendance patterns.

The York County Community College Early College Program with Wells High School

Overview

The Great Maine Schools Project, a statewide high school reform initiative, supports a number of programs to increase student achievement, aspirations, and postsecondary access. One of these programs is the Early College Program (ECP), which was designed to expose students to postsecondary coursework during high school and provide additional support and personalized advising to ensure success and increase students' college-going rates. Currently, each early college site receives specialized funding and technical support from the Great Maine Schools Project, with a goal to create self-sustaining, community-supported programs.

The first Early College Program took advantage of the proximity of York County Community College (YCCC) to Wells High School. The Wells High School Early College Program (ECP) allows selected juniors and seniors to enroll in college-level courses for both high school and college credit. As high achievers are often served through other acceleration mechanisms at Wells, including Advanced Placement (AP), ECP specifically targets the mid-range students who might not otherwise be exposed to postsecondary education during their high school years. The goal of ECP is to expand each participant's opinion of what he or she can accomplish upon high school graduation. The ECP program is structured to allow coordinators, both at the high school and postsecondary institution, to advise and support students and to work with faculty at both institutions. Wells ECP is currently in its third year of operation and has been involved in data collection and analysis of its first three semesters with help from The Mitchell Institute.

Population

Wells ECP's qualifications for students include underperforming students,[1] students who face financial barriers to college, students who are uncertain about their aspirations and future, and those who would be first-generation college students. A typical participant has a high school GPA equivalent to a C+, has not previously taken honors or AP courses, has not taken a math course above Algebra II, and does not have a parent with a college degree. Student participants must be full-time students at Wells High School. The student population at Wells High School is 96% White and approximately 1% each Hispanic, Asian, African American, and Native American, respectively. Approximately 10% of the student body qualifies for free or reduced-priced lunch. The data collected in these evaluations reflect the experiences of 59 ECP participants. While this is a very small sample population, the participants represent 25% of the combined junior and senior classes at Wells.

Key Findings

The findings come from survey research conducted for the interim report and data from student records compiled for the final report.

- A significant number of Wells ECP students (48, equivalent to 86%) successfully completed 125 classes at YCCC, and earned grades of C or better in 108 (86%) classes.
- In 2004, 64% of graduating seniors had applied for and been accepted to college. This was a dramatic change from their aspirations prior to participation in ECP, as many of these students (51%) were unsure what their plans were prior to enrollment in Wells ECP, according to an initial survey.
- During one semester of the program, students' self-reported plans to attend a two- or four-year college full-time increased from 48% to 56%, and high school teachers reported that students enrolled in Wells ECP had significantly improved their college aspirations, motivation, and behavior in class. The high school faculty also noticed that postsecondary aspirations throughout the high school had improved overall.
- Through participation in ECP, the percentage of students who reported they planned to attend college full-time after high school graduation increased from 49% to 65%, as did the number of students who said they planned to attend a four-year college on a full-time basis (37% to 51%).
- Of the ECP students, 72% improved their high school GPA while enrolled in the program with 49% of the students improving their high school

GPA by 1.0 point or more. The median change in GPAs was 1.3 grade points for the three-semester period studied.

- ECP students earned between zero and 19 credits during the program's first three semesters with 39% earning between one and four credits, 22% earning six or seven credits, 20% earning nine or more credits, and 19% earning no credits, because they failed the course or dropped out of the program.

- ECP students' earned aggregate college GPA over the three semesters was 2.97 and for one semester, the median was 3.17. When compared with a national sample of typical community college students, Wells ECP participants earned higher grades overall with more As and Bs and fewer grades of C or lower.

- As of June 2005, 20 (65%) ECP participants who graduated from Wells in either 2004 or 2005 were currently enrolled in college full-time. The ECP college-going rate is significantly higher than the state average for Maine, which is 50%.

- Wells High School reported that since the creation of ECP, academically rigorous course taking has increased among the entire student population, including enrollment in AP courses, which has doubled during the three semesters studied. The number of graduates attending community colleges has also increased.

Program Components

Wells ECP was deliberately designed with a *"high-touch" philosophy* that engages students constantly with adult advisors for extensive support and personalized contact. *Program coordinators based at the community college* provide support and advice to students, as well as address faculty concerns at both institutions. The program coordinators are supplemented by a *high school advocate*, a guidance counselor at the high school, who assists with advisement and scheduling coordination. Both support systems serve as a critical link between the partners in this program; the program coordinators have been deemed essential to the program's success.

All courses at YCCC are open to Wells ECP students; there are no predetermined course sequences. Students are able to explore a variety of course options including vocational offerings. Students noted in survey responses that many of the YCCC classes have opened new career pathways such as culinary arts.

Students are *encouraged, but not required to take a one-credit course entitled College Success Management* to help them with the transition from high school. Approximately one-third of the ECP students took this class, and many say that it helped to clarify goals, improve time management, and make college seem like a viable option.

Wells ECP students *sign a contract listing expectations*, which includes making satisfactory academic progress, complying with codes of conduct established at Wells and YCCC, and assisting in the recruitment of new students. Participants' parents also are required to sign a student's application to the program to acknowledge that they, too, understand the program's expectations.

Peer mentors, Wells ECP students with at least one semester of YCCC coursework, host activities for incoming Wells ECP students. These activities are to help students adjust to the increased demands of college-level courses and also to provide a peer network of students who share similar experiences.

Contributing Factors

Cross-institution student advising

Students receive guidance from the program coordinators located at YCCC and the high school advocate at Wells. Together, the program coordinators and high school advocate keep in touch with faculty from both institutions to monitor progress. Both high school teachers and college faculty serve as advisors to student participants.

Raised expectations

As students have been successful at YCCC, the expectation that they can go onto college and succeed has increased. Students also have a number of adult role models from both their secondary and postsecondary institutions, who encourage them to continue their postsecondary studies after high school. Additionally, they have already been successful at a postsecondary institution, which, as noted in the key findings, both increased students' postsecondary aspirations and college attendance.

Location on a community college campus

All classes are held on YCCC's campus, a short distance from Wells High School. By attending courses on the community college campus, students experience college life. As the classes are mixed, students have an opportunity to meet other YCCC students and learn about and from their experiences. Additionally, many students commented that the college learning environment was better suited to their personal learning style.

Study Methodology

The data for the interim report were collected through surveys administered to student participants at the beginning and end of Spring 2004 semester, and faculty at both institutions at the end of Spring 2004 semester. The data for the final report came from participant surveys conducted in Fall 2004 and Spring 2005, and an analysis of participants records, both from Wells High School and from YCCC, including grades, GPAs, credit earned, and postsecondary plans.

Funding

Program Funding

In 1998, Maine enacted the Postsecondary Enrollment Options (Early Studies), which covers half of the tuition of a high school student enrolling in individual courses through the University of Maine or Maine Community College system. The postsecondary institution contributes the other half of the tuition, passing on some fees associated with enrollment to the high school or student participant. The Wells ECP does not charge tuition to student participants; often students pay a small student activity and lab fee along with the cost of books. ECP is supported by the Great Maine Schools Project, made possible by a grant from the Bill & Melinda Gates Foundation to The Mitchell Institute. Without the funding from these outside organizations, there is some concern that ECP would not be able to serve as many students or to fund the salaries of the program coordinators.

Evaluation Funding

The evaluations conducted by the Mitchell Institute were funded by a grant from the Bill & Melinda Gates Foundation as part of its support of the early college program.

Geographic Areas

Wells ECP is beginning its third year of operation at Wells High School and York County Community College in Wells, Maine. The Mitchell Institute is coordinating the expansion of the Early College Program model across the state of Maine. There are now programs at Lewiston High School with both public and private partner colleges, Hall-Dale High School with the University of Maine at Augusta, and seven Washington County high schools with the University of Maine at Machias and Washington County Community College. A grant from the National Governors Association to the Maine Department of Education will dramatically expand early college offerings in the state over the next two years.

Information from

Great Maine Schools Project website: http://www.mitchellinstitute.org/Gates/index.html

Plimpton, L. (2004, September) *The York County Community College Early College Program with Wells High School*. Portland, ME: Mitchell Institute.

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Contact Information

Evaluation Contact
Lisa Plimpton, Director of Research
Mitchell Institute
22 Monument Square, Ste. 200
Portland, ME 04101
207-773-7000
207-773-1133 fax
lplimpton@mitchellinstitute.org

Program Contact
Claudette Dupee
Early College Program Coordinator
York County Community College
112 College Drive
Wells, ME 04090
207-646-9282 x110
cdupee@yccc.edu

Notes

[1] Students not performing at their full potential, because they either are not challenged by or do not fit into the traditional high school.

Introduction to College Access Programs

More and more, education and policy leaders are focusing on improving college access rates, particularly for low-income, minority, and first-generation students. College access programs are growing across the nation, and community-based nonprofit organizations and statewide networks have expanded to supplement the college advising role traditionally provided by high schools. Increasingly, colleges and universities themselves, create outreach and access initiatives as a way to enroll a more diverse student body and improve parity in college-going rates.

Most college access programs provide activities such as financial counseling, last dollar scholarships, college visits, career guidance, tutoring, academic counseling, and test preparation courses rather than provide opportunities for dual credit, as the programs in this compendium do. These more comprehensive college access programs are increasingly viewed as critical partners in the effort to encourage more young people to pursue postsecondary education. While AYPF did not intend to include the traditional, community-based college access programs in this compendium, as we were looking for evaluations of SPLOs, we found that a number of nationally-known college access programs—AVID, GEAR UP, and Project GRAD—had been evaluated and that this information would be helpful to readers.

The three programs summarized in the following section are primarily housed in the public K-12 system, with a focus on the middle grades and high school years. The evaluations demonstrate the effectiveness of these programs in increasing the number of first-generation, low-income, and students of color attending and succeeding in college.

AVID

Advancement Via Individual Determination (AVID) is a 5th- through 12th-grade program to prepare students for four-year college eligibility. AVID closes the achievement gap by targeting students in the academic middle—B, C, and even D students—who have the desire to go to college and the willingness to work hard. These students are capable of completing a rigorous curriculum, but have fallen short of their potential. Typically, they come from low-income and/or minority families and will be the first in their families to attend college. AVID puts students on the college track: "acceleration instead of remediation," according to founder Mary Catherine Swanson.

AVID students enroll in their school's honors and Advanced Placement classes and receive the necessary support and assistance to succeed through the AVID elective class. The AVID elective class meets for one period each day, during which students learn organizational and study skills, how to develop critical thinking skills and ask probing questions, receive academic help from peers and college tutors, and participate in enrichment and motivational activities that make college seem attainable. Students' self-image improve, and they become academically successful leaders and role models for other students.

The AVID elective class is taught by a teacher who has been trained in the program's methodology. Teachers and administrators from throughout the school and district attend AVID's Summer Institutes, where they learn techniques for bringing out the best in average students. In this way, AVID students are supported in content-area classrooms, as well as in the AVID elective, allowing even more students to benefit from the AVID program. The AVID curriculum, based on rigorous standards, was developed by middle and high school teachers in collaboration with college professors. It is driven by the WIC-R method, which stands for writing, inquiry, collaboration, and reading, and is used in both the AVID elective classes and content-area classes.

A well-developed AVID program improves school-wide standardized test scores, advanced course enrollments, and the number of students attending college. Since 1990, more than 30,000 AVID students have graduated from high school and gone on to college. National statistics indicate that 95% of AVID students report enrolling in college, 77% in four-year institutions, and 17% in community colleges. The national average for four-year college enrollment is 35%. Currently, AVID is operating in more than 2,200 middle and high schools in 36 states and 15 countries. Large urban schools, tiny rural schools, resource-rich schools, and struggling schools all find that AVID meets the needs of their students in the middle.

Research Highlights

From AVID: A Comprehensive School Reform Model for Texas (2002-2003) by Karen Watt, PhD, Darlene Yanez, and Griselda Cossio:

- Findings suggest that AVID improves outcomes for all students in the school, as the total number of students enrolled in rigorous courses increased.
- Researchers also found that student enrollment in the AVID elective increased over the two years and non-AVID teachers adopted many of AVID's strategies.
- After two years in AVID, students improved their pass rates on the 1999 TAAS (Texas Assessment of Academic Skills) by 15% in math and 7% in reading.

From Constructing School Success, Cambridge University Press (1999) by Hugh Mehan, Irene Villanueva, Lea Hubbard, and Angela Lintz:

- AVID has shown great success with racial and ethnic subgroups that have been severely underrepresented in higher education. Research conducted on AVID students in the San Diego Unified School District, where there was high participation among these groups, found that:
  - Latino AVID graduates attended postsecondary education at a rate 2 times the national average;
  - African American AVID graduates attended at a rate 1.5 times the national average.

From Longitudinal Research of AVID 1999–2000: Final Report (2000) by Larry F. Guthrie, PhD, and Grace P. Guthrie, PhD:

- College retention rates of all AVID students is excellent; 89% are still enrolled in college two years after their high school graduation. Other short-term and long-term effects on student outcomes include:
  - Middle school students who had two years of AVID had significantly higher high school GPAs in 10th and 11th grades than their peers with only one year of AVID or no exposure to AVID during middle school.
  - AVID does prepare students for success in rigorous high school courses such as AP. More than twice the percentage of students with two years of AVID in middle school took three or more AP classes than those with one year of AVID or less during middle school.
  - Follow-up research done on a small portion of the student sample shows that 84% of these AVID high school graduates had completed the course sequence necessary for admissions to the two California university systems; the California state average is 34%.
  - Of these AVID graduates, 95% were enrolled in postsecondary education with 75% attending a four-year college, three times the state average.
  - Their mean college GPA was 2.94, and 85% of these students indicated it was their intention to graduate within four or five years of entering college.

Complete studies are available at http://www.avidonline.org/info/?ID=149&tabID=1

GEAR UP

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) is a discretionary grant program of the US Department of Education designed to increase the number of low-income students who are prepared to enter and succeed in postsecondary education. GEAR UP provides states with six-year grants to create partnerships that provide services at high-poverty middle and high schools. GEAR UP grantees serve an entire cohort of students beginning no later than the 7th grade and follow the cohort through high school. GEAR UP funds are also used to provide college scholarships to low-income students.

GEAR UP is unique from other initiatives, as it employs partnerships between school districts, institutions of higher education, and at least one community organization partner. All partners must be committed to serving and accelerating the academic achievement of cohorts of students through their high school graduation. The GEAR UP grant requires that partners match the dollars one for one. GEAR UP partnerships supplement, not supplant, existing reform efforts; offer services that promote academic preparation and the understanding of necessary costs to attend college; provide professional development; and continuously build capacity so that efforts can be sustained beyond the term of the grant.

Research Highlights

California

- San Jose State University and San Jose Unified School District report an 89% increase in the number of students from the high schools served by GEAR UP who qualified and applied for admissions to any of the University of California or California State University campuses since . Ninety-four percent of 12th-grade students at the three high schools served by the GEAR UP grantee applied for college; 90% have been accepted into college; and 52% qualified for four-year colleges.

- The number of 11th-grade students at the North Hollywood High School GEAR UP Project in Los Angeles Unified School District taking the SAT increased 74% over the past year. For the 2005 March SAT, 169 11th-grade students sat for the exam, a significant increase over just one year. Many of these juniors who took the exam did extremely well, with 44% scoring above 1,000, the national average for seniors.

- Last year, the Academic Performance Index goal for El Sausal Middle School in Salinas, California, was 17%. However, with new initiatives on curriculum alignment, professional development workshops, and additional instruction that GEAR UP brought to the school, El Sausal's Academic Performance Index increased to 43%.

New York

- The 8th-grade students at Westbury Middle School in Westbury, New York, who participated in a GEAR UP program showed a gain of 20% on the spring New York State English/Language Arts Assessment. This is the highest gain of any other middle school in Nassau County. The students improved from 32% in 2001 to 52% on the same test this spring.

Texas

- At the East Texas GEAR UP Project, the number of students taking algebra in 8th or 9th grade has increased from 69.3% of the student population to 90.4% since the inception of GEAR UP, reflecting a 20.1% increase.

Information from http://www.ed.gov/programs/gearup/performance.html

Project GRAD

Project Graduation Really Achieves Dreams (GRAD) is a comprehensive program with a record of improving the academic achievement of students from low-income backgrounds. Project GRAD was founded on the belief that there is a relationship between a student's family life, discipline problems, mathematics achievement, reading achievement, and college goals.

Project GRAD's integrated approach to teaching and learning hinges on the five pillars of its structural approach. These include:

- **Employing Existing Assets (Professional Development)**
  Project GRAD provides training and support to staff to equip them to succeed in their work with students.

- **The Feeder System**
  A feeder system consists of a high school and all the middle and elementary schools that send or "feed" students to the high school. Working within a feeder system also makes it possible to provide a comprehensive educational experience to children, in that there is an aggregated effect created by offering all the program components, at all grade levels, at the schools in which students are likely to enroll.

- **The Local Project GRAD Organization**
  In each city, an independent nonprofit organization is established to oversee the implementation of Project GRAD's components by working with the program component providers, the feeder schools, the school district, and the local community.

- **Community Involvement and Collaboration**
  Project GRAD actively seeks community engagement. Project GRAD provides an avenue for local corporations, foundations, universities, and concerned individuals to contribute to the success of public school students in their community. This is achieved through financial contributions as well as through direct involvement, including mentoring, tutoring, and event sponsorship.

- **Project GRAD USA**
  GRAD USA is a national organization that provides technical assistance, quality assurance, and some funding for all Project GRAD sites.

These five fundamental components of GRAD's structure have allowed it to sustain and improve a comprehensive program that responds to and advances each individual student, teacher, and administrator within an entire feeder system and school district.

Project GRAD's program has five core components.

- **Mathematics**
  At the heart of Project GRAD's mathematics program is a teaching system that promotes a balance between each student's understanding of mathematical concepts and computational fluency in Grades K-8. The program also incorporates algebra at every grade level to ensure preparation for more advanced courses in high school and beyond.

- **Literacy**
  Project GRAD focuses on teaching reading at the elementary level to ensure reading success for every student. In short, the GRAD-supported program focuses on early intervention and acceleration so that students have the opportunity to move ahead in their reading achievement.

- **Classroom Management**
  In each of GRAD's schools, classroom management consultants regularly observe classes, demonstrate key strategies, conduct student and teacher surveys, and help teachers plan lessons. Students become self-disciplined by experiencing greater responsibility in resolving conflicts, participating in decision-making, and managing the classroom.

- **Social Services & Parental Involvement**
  In each Project GRAD school, campus-based professionals provide dropout prevention, counseling, community outreach, and family case-management services to all at-risk youth. As a result, students and their parents learn how to access the private and public community resources that will help them meet their social, economic, and health

needs, and appreciate the value and importance of education.

- **The High School Program**
  When the partnership between GRAD and a high school, the apex of a K–12 feeder system, is established, a campus-based Scholarship Coordinator, together with social services/parent involvement staff, work to help students graduate and gain access to college through a number of key activities and programs.

Project GRAD's unique structural approach, along with its program components, contributes to higher academic standards and offers the dream of graduation and college to all students it serves. The cornerstone of Project GRAD is a scholarship for student participants if they meet certain requirements, such as a 2.5 GPA, specific coursework, and attendance at summer institutes.

On average, Project GRAD costs approximately 5-7% of the annual per student spending in the public schools where implemented. By focusing on a carefully selected set of high impact interventions, the Project GRAD program has been designed from the outset to produce significant results cost effectively.

Research Highlights

Atlanta, Georgia

- On the 2000 Georgia High School Graduation Test, Washington High School Atlanta, a Project GRAD school, lagged behind district pass rates by 10 points and the state by 15. By 2002, the gap with the district was nearly closed and the gap with the state was halved.

- Additionally, improvements in reading, language arts, and mathematics of up to 24.6 points have been noted in 4th-, 6th-, and 8th-grade student performance on the Georgia Criterion-Referenced Competency Test (CRCT) in GRAD schools.

- Over the last year, Project GRAD has increased 4th-grade scores on the mathematics and reading portions of the Georgia Criterion Referenced Competency Test by 16 and 9 points, respectively. These gains are significantly higher than those seen in non-GRAD elementary schools in the district.

Newark, New Jersey

- In 2000, a 13-point difference existed in the percent of students passing 4th-grade reading (Elementary School Proficiency Assessment Test) between GRAD Newark (Central Feeder) schools and the district. By 2002, GRAD had substantially narrowed this gap to 4 points.

- Similar progress was made with 8th-grade reading, where Project GRAD students closed the achievement gap from 8 to 0 points between 2001 and 2003.

Cincinnati, Ohio

- Project GRAD Cincinnati has increased the percentage of students who pass the Ohio Grade Three Proficiency Test between 2002 and 2003. Each one of the four feeder elementary schools has shown dramatic improvements over the past school year.

- In 2003, the student attendance rate at Western Hills University High School was 83%. In 2004, however, the attendance rate at the GRAD high school increased to 95%, 1% higher than the current district average of 94%.

Houston, Texas

- In 1997, only 6 Project GRAD students enrolled in advanced placement courses, and only 1 scored above 3 points (the passing grade). By 2003, 416 students had enrolled in AP courses, of which 163 scored a 3 or higher.

- Furthermore, in 2003, Davis and Yates High Schools ranked 1st and 3rd, respectively, among all district high schools in the number of students offered academic scholarships for college.

Information from http://www.projectgrad.org/site/pp.asp?c=fuLTJeMUKrH&b=374221

PART III

Outcomes, Findings, and Lessons Learned
Policy Considerations

Outcomes, Findings, and Lessons Learned

This section discusses the student outcomes described in the evaluations, as well as findings and lessons learned, based on our analysis of the research.

Overview of outcomes

In conducting the review of evaluations and program data, AYPF found that there was a variety of different outcomes considered. This range of outcomes makes it difficult to compare many of the programs and raises issues about the proper outcomes one should consider for SPLOs. For example, when considering the long-term impact of these educational interventions, one might choose to consider graduation from college and entry into and success in the labor market. Not surprisingly, very few programs look at those long-term outcomes, as tracking students through multiple education systems and into the workforce can be quite difficult. Most programs consider shorter term, intermediate outcomes, such as the number of college credits earned during high school, student performance on state standardized

TABLE 1

Outcome	Number of included studies that look at the outcome	Number of studies that demonstrated statistically significant positive results	Number of studies that demonstrated positive, but not statistically significant, results	Number of studies that reported positive results but did not consider results in terms of statistical significance
Credits earned during high school	12	0	0	12
High school standardized tests	7	0	1	6
High school graduation including other high school outcomes	11	1	0	10
College-going rates	15	0	0	15
College placement tests/ remediation[a]	6	2	1	4
College course grades/GPAs[b]	9	4	3	5
College retention[c]	5	3	1	2
Degree attainment/time to degree[d]	6	2	1	4
Job market outcomes	5	0	0	5

Please note that some results were categorized as both statistically significant and not statistically significant because when analyzed with additional variables, the level of significance changed. The differences in outcomes occurred by subject area (e.g. students would perform better in English courses than math courses) or when researchers considered additional variables in their analysis (such as high school GPA, class rank, or type of diploma). These occurrences were noted within the Key Findings section of each site profile.

high school tests, ACT or SAT scores, high school completion rates, college-going rates, performance on college placement tests, college course grades and GPA, retention, degree attainment, and time to degree. Table 1 illustrates the number of included SPLOs that considered each of these outcomes and whether their results were statistically significant or not. We estimate that only 15% of the findings are statistically significant, making it difficult to draw firm conclusions on their impact.

Despite the limitations with data, it is clear that SPLOs are improving college access and success, particularly for middle- and low-achievers, by providing more students with the opportunity to experience college during high school and to gain the academic skills and confidence to continue with postsecondary education. Although AYPF cannot substantiate claims of cost savings for either students or states, our analysis does show that SPLOs are improving short-term outcomes, such as high school graduation and college enrollment, for a wide range of students with an increasing emphasis on populations traditionally underrepresented in higher education. A discussion of the outcomes considered in this compendium follows. A chart in Appendix B shows the outcomes each program considered.

Credits earned during high school

While over half of the studies (12) considered credits earned during high school, few indicated the value of the credits once students graduated from high school and matriculated to postsecondary education. Limited information is available to indicate whether these credits are transferable to the institutions of higher education where these students subsequently enroll. Some of the included SPLOs indicated the number of credits attempted, as well as classes for which SPLO participants enrolled but did not earn a passing grade and did not receive any credit. In addition, there is limited information on the types of credit (academic, technical, or self-improvement) students are earning. While AYPF can make some assumptions based on the type of SPLOs (e.g. Tech Prep students are most likely to earn credit for technical courses), an indication of the types of the credits that students are earning could be helpful in planning for future growth. Ideally, SPLOs should collect data on credits earned during high school, as this is the primary objective of these programs.

High school standardized tests

One-third of the included SPLOs (7) reported participants' scores on high school standardized tests, usually state-mandated tests linked to high school graduation requirements. As expected, SPLO participants perform better than their peers who have not participated in SPLOs. This outcome is helpful in assessing the academic ability of SPLO participants, as one would expect SPLO participants to demonstrate mastery in subject areas in which they are enrolled in college-level coursework. The tests are typically offered only once, so researchers did not compare results to scores prior to SPLO participation to determine if participation improves students' overall academic ability.

High school graduation rates and other high school outcomes

Half of the included SPLOs (11) reported rates of high school graduation, high school attendance, and high school dropout, as well as the type of high school diploma earned. These outcomes are important for understanding the overall value of participation in a SPLO and the additional benefits besides the potential college credit earned. High school attendance and high school dropout rate improvements were most significant for students who were on the verge of dropping out of high school and made significant gains upon enrollment in a SPLO. It is important to note that high school graduation is an important outcome to report for SPLO participants but should not be the terminal outcome considered. Research must continue to track students to gain information on college-going rates and the value of SPLOs in students' success in postsecondary education.

College-going rates

The vast majority of included SPLOs (15) reported their participants' college-going rates using a variety of techniques, such as students' self-reports to the national database of students enrolled in postsecondary education. College-going rates can be difficult to calculate accurately, as it is hard to track students transferring from the K-12 to the postsecondary education systems, due to databases usually not being linked. Ideally, participation in a SPLO will increase college-going rates of participants. This was demonstrated by the included SPLOs by the high percentages of participants who continued in postsecondary

education after high school graduation. A few of the included SPLOs compared college-going rates among SPLO participants and nonparticipants, and as expected, rates were higher for participants. Only one of the included SPLOs disaggregated college-going rates by racial/ethnic subgroups, thus demonstrating significant improvement for subgroups typically underrepresented in higher education. College-going rates are another outcome that every SPLOs should track, as they are integral to its primary mission.

College placement tests/Need for remediation

College placement tests can be used for admission to SPLOs or to determine a student's need for remediation once enrolled at a postsecondary education institution. Only a handful of the included SPLOs (6) considered this outcome, which includes college placement tests like COMPASS and college entrance exams like SAT or ACT. Results from college placement tests provide information regarding the number of SPLO participants that need remedial coursework and can be used to assess the rigor and the academic value of SPLOs. If, upon matriculation to higher education, students who participated in SPLOs need remedial coursework, particularly in subject areas where they were supposed to be earning college credit through SPLOs, then the SPLO is not aligned with the traditional college class. It is important to note that a significant number of the students who needed remedial coursework in English and math were students who took technical courses through SPLOs, which often have lower English and math entrance requirements for participation.

Course grades/College GPAs

This outcome is extremely helpful in assessing the academic value of SPLOs. Nine of the included SPLOs considered these outcomes at two points in time, when a student was participating in a SPLO and when a student had matriculated and enrolled in a college course as a traditional student. Course grades and GPAs of SPLO participants demonstrate that students were appropriately selected to participate in a SPLO. Typically, SPLO participants do as well as or better than traditional college students, indicating that they are prepared for college-level work and benefiting from the experience. A few of the included SPLOs also considered course grades and GPAs upon matriculation to higher education. Again, students with SPLO credit typically did better than those without prior credit. More specifically, this finding held true in the subsequent course for which students had received initial course credit in the SPLO, indicating that the prior course was as rigorous as a college-level course.

College retention

A very small number of the included SPLOs (5) considered retention, from either the first to second semester or the first to second year. Retention is an important outcome when considering the overall value of a SPLO, as it is an indicator of how well students were prepared, academically and developmentally, for the realities of college-level coursework. It also demonstrates how closely aligned the SPLO is with the realities of both college-level coursework and college expectations. SPLO participants persisted at higher rates, but some variance exists between SPLO student subgroups based upon the types of credits earned.

Degree attainment/time to degree

Degree attainment/time to degree is a critical outcome in assessing the effectiveness and potential cost savings of SPLOs. Unfortunately, fewer than one-third of the included SPLOs (6) considered this outcome, and of this group, only two compared SPLO students' time to degree to that of their classmates with no prior credit. Another of the included SPLOs reported on credits to degree, a more accurate measure of whether or not SPLO participation is cost saving. Due to limited data of this outcome, AYPF cannot make any generalization about the ability of SPLOs to shorten time to degree or save on college costs.

Job market outcomes

Only a handful of the included SPLOs (5) considered job market outcomes, particularly for students who had received some technical training through their college-level courses. Overall, students with SPLO credit did better than their peers without it in terms of finding employment and earning higher wages. All job market outcomes included were self-reported by participants.

Findings and Lessons Learned

In reviewing the studies and evaluations, AYPF learned a number of important lessons that can benefit SPLO providers and policymakers interested

in supporting SPLOs. Some of these findings and lessons are focused directly on students and student services; others are focused on how the systems that support SPLOs can be improved. The findings and lessons learned are reported by the issues that we had earlier identified, including type of student served, funding, course rigor, extra supports, formal sanctioning, transferability of credit, and data. We have also identified one other issue, collaboration between systems.

Type of Student Served

SPLOs are viewed as a strategy to increase postsecondary access for underserved populations.

Limited demographic data make it difficult to draw conclusions about program effectiveness with certain student populations. However, AYPF is able to make some generalizations about the student populations served by different types of SPLOs included in this compendium.

When SPLOs were first introduced, usually in the form of dual enrollment, they were accessed primarily by academic high achievers. Many programs with rigorous admissions requirements of minimum test scores or mandatory preprogram coursework limited access to students who had demonstrated academic capability similar to traditional college students. This selection process served to underscore the tracked nature of many high schools. One exception is Tech Prep, which is designed to engage the "neglected majority" of students who tend to be average performers and who rarely are in college-preparatory classes or tracks.

More recently, SPLOs have been viewed as a strategy to increase postsecondary access for underserved populations. One example is the "AP for all" movement, which encourages schools and school districts to open up their AP classes to all interested students, regardless of grades or perceived ability, along with providing funding for the exams at low or reduced costs.

Other SPLOs were created to serve specific targeted populations. By design, middle college and many early college high schools serve, in their words, "at-risk students." At-risk students have been defined by these schools as students who have had trouble affiliating at large, comprehensive high schools; students who have been academically unsuccessful, but have demonstrated the ability to achieve through standardized test scores or college-level placement tests; or students who have previously dropped out of high school. Some programs have made outreach efforts to students who will be the first in their family to attend college. Through the limited available student demographic data, there are indications that some of the middle and early college high schools included in this compendium have served or are serving a large percentage of students who qualify for free or reduced-price lunch. Some alternative education programs with a dual enrollment component included in this compendium also describe serving a similar target population.

It is important to note that for many of the included SPLOs, the type of student served over a period of years has not been consistent. As some of these schools and programs, particularly middle and early college high schools, have continued to grow, both in numbers and popularity, there is some evidence of a shift in the student population served. As noted in some of the evaluations included in this compendium and in our review of the most recent student data available, there has been a shift by some SPLOs, in some cases intentionally and in others not, from serving the hardest-to-reach students in favor of serving more academically qualified students. We can speculate that this shift is due to a number of factors. One may be that programs are driven by results and recruit students who are more capable of completing college-level coursework. Another may be that higher performing students and their families are realizing these programs may be a low-cost means through which high school students can earn college credit and are pursuing these options, thereby crowding out lower-performing students. It will be important to watch this issue to ensure that SPLOs continue to provide opportunities for all students.

Funding

Funding formulas must distribute dollars fairly, so that institutions are paid based on the amount of services they provide to students.

Funding for SPLOs can be a complex equation as students are participating simultaneously in both secondary and postsecondary education. While both secondary and postsecondary education systems typically rely on student headcounts to receive their funding allotments from the state, many questions arise as to how to count SPLO participants. Although this publication is only able to skim the surface of funding issues, there are a few key points

to consider, particularly for policymakers.

There are a number of ways in which states fund SPLOs. The ideal scenario, according to many participating systems, is for the K-12 system to maintain its full ADA funding for students participating in SPLOs (despite their being out of the school building for a period of time each day) and for the institution of higher education to be able to count these students as part-time students in their FTE headcount for state reimbursement. However, this practice, often called "double dipping" or "do no harm," can be costly to the state and district as they pay to educate a student in two systems simultaneously. Although some would argue that it is worth the cost of paying both systems in order to ensure full participation by both parties, it is not necessarily cost effective. For this reason 10 states have recently amended their policies to ensure they are not paying twice to educate the same student (Karp, Bailey, Hughes, and Fermin, 2004, pp. 24–25).

Alternate funding structures involve schools or districts reallocating some of their ADA dollars to the postsecondary institutions where their students are enrolled in courses for dual credit. In this model, the ADA funds follow the student so that the high school and higher education institution each receive a portion of funds based on the number of courses a student takes at each institution. This funding structure has been touted as a cost-saving strategy to the state and district, as K-12 dollars cover the cost of postsecondary education for state resident students.

In other included SPLOs, the postsecondary education institution bears the entire financial cost of student participation in SPLOs. For example, The City University of New York's (CUNY) College Now, which is offered free to all New York City high school students, is funded through a set-aside in the CUNY budget.

Secondary-Postsecondary Learning Options also must consider costs to students, which could serve as a barrier to participation. Although there might not be a direct cost, such as tuition, there can be hidden costs including books, fees, or transportation costs, which can price a student out of participation. For example, the AP program is typically offered free of charge, yet students are required to pay a fee to sit for the examination, which is the vehicle through which students earn the college-level credit. Because many low-income students cannot afford the testing fee, increasingly, states, school districts, and schools are covering testing fees for such students. Some programs, primarily the middle and early college high schools, are able to use funds from either ADA or grants to pay for these costs on behalf of their students. Financial aid is available through The College Board, the organization administering the AP exam, and need-based dollars are available through the federal government.[1] Most SPLOs included in this compendium offer some form of financial aid to ensure accessibility by all students, but they are limited in the number of students they can serve by available dollars.

Funding formulas must also consider the nonfinancial contributions the postsecondary education institutions, in particular, make as well. Colleges often offer costly services (library, counseling, access to sports facilities, technology) free of charge to students in SPLOs, even if they are unable to consider SPLO students in the headcounts for funding (FTE). Postsecondary institutions that host middle and early college high schools located on their campus provide, at no cost, classroom space for high school courses and offices for high school faculty and administrators. These in-kind contributions need to be acknowledged in funding decisions.

While many SPLOs have made claims of cost savings for students, families, and taxpayers, AYPF was not able to fully investigate these claims based on the available data, but we have provided the available information regarding funding in each profile.[2]

Course Rigor

SPLOs need to ensure they provide college-level courses and work. Several program elements, including location, faculty preparation, prerequisites, and program length, contribute to course rigor.

As SPLOs differ in their design, they also vary in their academic rigor. While programs like AP have prescribed curricula that are periodically reviewed to ensure alignment with college courses, other SPLOs operate in a less prescriptive fashion. Most SPLOs strive to ensure that the quality of curriculum and instruction meets college-level standards. In reality, however, SPLOs provide classes for high school students that are not at a collegiate level. Because of this, a distinction should be made between "college-level" and "college-like" courses. College-level courses are those that mirror those offered to traditional college students, in which high school students

can enroll for credit. These courses usually have some type of prerequisite or requirement that the student demonstrate a level of competency similar to traditional college students.

In contrast, college-like courses are those that appear to be college-level, but are not as rigorous and do not require the same prerequisites as traditional college courses. Typically, college-like classes are offered at the high school with high school instructors. Although the material might be college-level, the workload and expectations of the student participants more closely mirror a typical high school class. Students in many cases earn credit for these courses, but they may also need to repeat the class at the college level due to lack of mastery and understanding of the material or college expectations.

This distinction between college-level and college-like courses becomes important when we consider the number of students who enter postsecondary education with some credits through a SPLO, but who still need remedial coursework in core subjects such as math, writing, or English. Unfortunately, there is very limited data on the exact number of students who need remediation or the amount of remediation needed. According to the evaluations included in this compendium, the greatest need for remediation is found among participants in career/technical orientated SPLOs, where students often have lower admissions requirements for participation.[3]

In order to investigate course rigor, AYPF considered a number of characteristics of SPLOs, including program location, faculty preparation, prerequisites for participation, and program length, which we believe contribute to a rigorous experience for students.

"High school students are used to running through the hallways. College students don't run down hallways. When the high school students come onto the campus, they see an entirely different type of behavior and environment. It's an adjustment for them, but the older students help set the tone."

Campus administrator

The location of the program

Almost all of the included SPLOs (AP being the notable exception) provide participants opportunities to take advantage of the resources on the campus of their partner postsecondary education institution. Ranging from accessing to libraries and technology labs to utilizing on-campus advising services, participants benefit from the wealth of resources available on these campuses.

As evidenced by the findings in many of the included evaluations, location on a college or university campus proves to be an important factor in program success. The college environment seems to foster a sense of responsibility with student participants. This finding is in accordance with the "power of place" theory first articulated by Janet Lieberman, founder of the first middle college high school at LaGuardia Community College. It states that by putting students on the campus of a college, they start to see themselves as college material (Wechsler, 2001). This theory holds true particularly for students who previously had not perceived themselves as college material. Through participation in a SPLO on a college or university campus, postsecondary education becomes an achievable goal in students' lives. Students also cite fringe benefits such as access to the postsecondary institution's student services such as libraries, technology, and academic/career counseling. These services are usually superior to what is available at a student's home high school. Attending courses on a college campus provides an experience for students that mirrors the experience they will receive once they enter college.

Having students attend SPLOs on a college campus also provides them an opportunity to attend classes with traditional college students, who act as effective role models. Traditional students model classroom behavior and often serve as informal advisors to high school students. If students participate in a SPLO that does not offer courses on a college campus, the program should find ways to provide opportunities for its participants to visit the campus and interact with traditional college students to learn more about life on campus.

High school and/or college faculty with different degrees of preparation

Teachers in SPLOs have various levels of preparation, which impact both course content and delivery methods. Some SPLOs, such as AP, are designed to

be taught in high school classrooms by trained high school faculty. These courses appear to be taught very similarly to traditional high school classes; the main difference is the college-level content. While AP teachers ideally should meet some minimum standards set by The College Board, the organization that sponsors the AP program, it is not required.[4] Other SPLOs, particularly dual enrollment programs, provide the opportunity for high school teachers to offer college-level courses in their classrooms. These programs often require teachers to obtain an adjunct professorship from the sponsoring postsecondary institution and utilize college-approved curricula and assessments. When college courses are taught in high school, questions are often raised about the teaching strategies and, therefore, the rigor of the course. More specifically, there are questions about whether high school teachers, even with appropriate credentials, can offer courses in their high school classrooms that mirror the rigor of courses offered in college classrooms, particularly for classes that rely on scientific or technical laboratory work.

Through some SPLOs, high school students are able to enroll in college faculty-taught courses at either a community college or local university and have the same experience as traditional college students. When students participate in SPLOs on college or university campuses, students are more likely to be taught by professors who hold PhDs in their subject areas. However, while college professors are subject area experts, they typically are not required to take coursework in pedagogy. Often their teaching methods present a difficult adjustment for high school students who are accustomed to teachers explaining expectations and noting materials that will be tested.

There is limited research on the impact of different types of SPLO instructors on student outcomes. One study conducted in Florida considered dual enrollment students at Florida community colleges from summer term 1994 to spring 1999. Researchers found no difference between the percentage of students succeeding (C or better) when their dual enrollment course was taught by a high school teacher (77.16%) versus a college faculty member (76.98%). Further analysis of these performance results did not find a statistically significant difference between the two groups (Windham and Perkins, 2001, p. 7).

Prerequisites for participation

Historically, SPLOs have been exclusively available for high achievers: students who met participation standards through outstanding academic performance and high scores on standardized or college placement tests. By selecting the most academically qualified students, programs could ensure that these students were able to handle the rigor of college-level courses. Even as SPLOs become more inclusive of all students, they still need a mechanism to ensure students are prepared for the academic rigor of the courses. Therefore, the majority of SPLOs continue to set admissions criteria for participation. In most cases, the admissions requirements are set at the minimum academic capabilities a student must possess to take the course. Requirements can often vary by the type of course. For example, career/technical courses typically have lower admissions requirements, including lower minimum scores on standardized tests, than academic courses. Admissions vary by program type, but typically include at least one of the following:

- Scores on standardized tests such as SAT, ACT, or college placement tests,
- High school transcript/GPA,
- Age/student status (year in school), and/or
- Recommendations from teachers/counselors.

SPLOs 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. Therefore, they need to be cautious about setting prerequisites that can restrict access and participation. While admissions standards are necessary to screen a student's ability to participate in and do college-level work, they also limit access for some students. Weakness in one academic area should not preclude students from participating in college-level coursework in another, if they are qualified. Academic prerequisites can be a barrier for students who have been disengaged in their traditional high school, have dropped out, or are middle- or low-achieving students.

Making the decision to allow a student to participate in a SPLO based on a single assessment measure, such as a college admissions test, does not always accurately reflect the student's true ability to participate in college-level work. As in most cases

where assessments are used to make eligibility decisions, multiple measures to determine a student's ability to succeed are preferable. For example, the admissions processes at many of the included middle and early college high schools ask students not only for their academic transcripts, including high school grades and scores on standardized tests, but they also require students to participate in application and interview processes to gauge their willingness to commit to a rigorous academic program.

It is important to note that programs specifically designed to serve middle-and low-achieving students often do not require students to initially demonstrate their ability to participate in college-level courses. Students in these programs typically have access to remedial courses offered by the host postsecondary education institution or an opportunity to participate in preparatory coursework through their high school classes. However, if a student enrolls in a SPLO, but does not meet the academic qualifications, there is no guarantee that that he or she will be able to take college credit-bearing classes. While the goal of these programs is to enroll students in college-level courses, programs must be careful to protect course rigor by not allowing access to unqualified students.

Program length

Program length is not directly related to course rigor, but it has some implications for student performance and growth. Students who are involved with a program and participate in noncredit-bearing courses or other college activities over a number of semesters are provided with more opportunities to gain the academic foundation, skills, and tools necessary for success in credit-bearing courses than students who simply participate in a program that allows them to take one credit for one semester.

Program length can vary from one semester to five years depending on when a student becomes involved with the SPLO and the type of SPLO. Traditionally, SPLOs enroll high school juniors and seniors, as they are more likely to have the academic skills to meet the admissions requirements of the postsecondary institutions. Some SPLOs have opened their credit-bearing courses to sophomores and freshmen, assuming they meet the necessary admissions requirements. The minimum length of participation in SPLOs to earn credit is one semester, the length of most college courses.

With the growing intent of SPLOs to serve more middle- and low-achieving students, program administrators have realized that they need to begin working with students earlier to ensure they have the academic skills to succeed in college-level courses. Middle and early college high schools provide opportunities during students' freshman and sophomore years of high school to gain the necessary academic skills to qualify for college-level, credit-bearing courses for their remaining three years. From the included SPLOs, programs that begin in Grade 9 were more successful in preparing the majority of students for college-level courses by their junior year.

Extra Supports

For students to be successful, SPLOs need to provide appropriate experiences and supports to their students based on their individual needs.

To serve their student populations, particularly those less academically qualified, many SPLOs provide a range of extra supports for students. These supports vary from intensive preparatory coursework to advising services. Based on the practices of SPLOs included in this compendium, AYPF has identified the four most common extra supports that have proven effective with middle- and low-achieving students: caring adult advisors, academic assistance and tutoring, college success classes, and a safe environment and peer support network.

Caring adult advisors

Success for many young people is dependent upon having an adult advisor who serves as a mentor and guide. This is particularly true for SPLO participants who are being asked to navigate the K-12 and postsecondary education systems simultaneously. Advisors serve a dual role of helping students with the technicalities of enrolling in two educational systems and providing academic and emotional support for students as they face new challenges in classroom and social environments. Many of the included SPLOs formalize these advisor relationships for their participants by providing case managers and counselors or requiring regular meetings with teacher advisors. Other SPLOs allow advisor relationships to form more naturally, based upon individual student needs and students' willingness to reach out to certain teachers or administrators. For example, students at one middle college high school commented that the school secretary acted as an advisor, mentor, and coach, because she was knowledgeable about

course scheduling and she was always in her office and easily accessible to the students.

Academic assistance and tutoring

Providing students additional academic support as they face more challenging curricula and expectations has proven critical to ensure all students succeed. College-level coursework often requires more independent work than high school classes, so it is essential to provide SPLO students opportunities for additional academic assistance and guidance. For SPLOs located on a college or university campus, additional assistance becomes increasingly important to students, because the setting, teacher, and teaching style all are new. Many of the included SPLOs monitor the students who are enrolled in courses on college campuses by working with the college professors to identify areas in which the students need additional support. Other SPLOs encourage students to take advantage of the academic support services available on the college campus or to meet with professors for additional assistance. In addition, other SPLOs have built academic assistance into their advising programs. One of the included SPLOs has created a unique tutoring program that provides opportunities for SPLO participants to assist classmates who are currently enrolled in courses they have already completed.

College success class

Many of the included SPLOs require students to participate in a college success class prior to enrolling in credit-bearing courses. The goal of the college success class is to ensure all students are equipped with the necessary skills to succeed in college-level work and to make transparent the expectations for college-level coursework. Generally, these classes focus on including success strategies and techniques such as critical reading, note taking, time management, and study skills. SPLOs structure their college success classes in a variety of different ways, either as semester-long electives, preprogram orientation sessions, or a curricular component of an advising program. College success classes have proven effective with disengaged students and dropouts, serving as a way for them to reacclimate to the classroom and academic and behavioral expectations. Many of the included programs combine the college success class with a career or major exploration activity to help students select a focus for their future courses.

Safe environment and peer support network

The environment created at SPLOs, particularly those that are all-encompassing schools, was cited by students as a key ingredient to success. Students reported that school became a place where it was "cool" to do well and classrooms provided opportunities to engage in lively discussions with classmates. The evaluations point to an effort by SPLOs to value these students as serious scholars. Student participants also commented on a culture of positive peer pressure that exists when their classmates challenge themselves and each other, and where adults set high expectations for their performance.

Some of the included schools and programs have institutionalized this concept through advisory groups. These small groups of students meet on a regular basis with a faculty member to deal with issues, both academic and socioemotional, that could prevent effective learning. For example, at Mott Middle College, a formal curriculum dealing with issues such as anger management and conflict resolution is used during the advisory group time. Students commented on the benefits of having a safe place to discuss problems with their peers and professional staff (Bilby, 2004, p. 7).

Formal Sanctioning

While many states have some state framework to support SPLOs, many SPLOs have grown as a result of flexible local policies.

Currently, 40 states have some state legislation or regulations that sanction or govern dual enrollment or the operation of SPLOs. While many of these policies do not specifically address funding, most provide a framework for the organization of programs and student eligibility requirements. AYPF did not review every state policy affecting SPLOs for this compendium. Although, others in the field have done extensive work on the state policies governing dual enrollment. (Karp et al., 2004 and Western Interstate Commission for Higher Education, 2006) Within the profiles, it has been noted where state policy has been helpful or has hindered the creation of SPLOs.

Within this compendium, three state dual enrollment programs, Florida (dual enrollment at community colleges only), Washington, and Georgia (dual enrollment at technical colleges only), are considered. It is evident that within these states there is an effort to create a variety of SPLO opportunities to serve the needs of all types of students. It is important to note

that because these states have a strong commitment to SPLOs, there are typically choices of programs within each school for students to earn college-level credit. Based on the few examples we reviewed, it appears that state legislation can help promote various forms of SPLOs.

At the federal level, the only law supporting SPLOs is the Perkins Act, which provides funds to secondary and postsecondary schools to develop articulated programs of study in a technical field (Tech Prep). The program has seven essential elements defined in the legislation that govern the relationship between the two entities, including an articulation agreement, specific Tech Prep curriculum, and professional development for instructors and counselors. The infusion of federal dollars into these partnerships helps offset local dollars and is often used to support the professional development and common planning time for teachers and faculty. In addition, there are federal dollars to promote access to Advanced Placement for low-income students through the Advanced Placement Incentive Program (APIP) grants. Federal legislation and funding also support college access for low-income, first-generation college students through programs like GEAR UP that often encourage students to participate in SPLOs.

Many of the SPLOs have grown out of flexible local policies that have no formal legislative or regulatory sanctioning. Rather, they exist based on local arrangements and agreements made between a high school and a postsecondary education partner. Some SPLOs receive charter status under state charter authorizing legislation, thus guaranteeing K-12 dollars to fund their educational programs. Some SPLOs might also seek status as an alternative school within the district so that they can receive ADA funds.

Transferability of Credit

Very little data is available on what courses transfer for credit or how students use credit earned from participation in a SPLO.

One of the great values of a SPLO is the receipt of college credit while a student is in high school. SPLOs award credit in a variety of different ways, which have implications for the portability and transferability of that credit, and therefore raise the issue of the value of the credit to the student. The two main ways in which credit is awarded are:

- Upon completion of the course or passing the final exam, or
- Credit in escrow, held until the student completes high school and enrolls in postsecondary education.

The difference between these two types of awards is who has ownership of the credit. If students receive credit upon the completion of a course or upon passing an exam, then they "own" the credit, ideally to use where and when they wish. Credit in escrow is credit that belongs to the university until the student meets all the stipulations for earning credit, typically high school graduation and/or enrollment in postsecondary education. This credit often is not as portable as the credit awarded through the first method, as it has a stipulation of enrollment at the awarding postsecondary institution.

Some programs, such as AP, are designed for the college credit to be extremely portable, as all students are required to take the same test and demonstrate mastery of the same material, no matter where or when the course was taken. While AP remains the most widely accepted form of SPLO credit, many schools have begun to question its alignment with the content and rigor of college courses, and a number of postsecondary education institutions have announced that they no longer accept AP credits (Marklein, 2006, p. 1D, 2D). With other SPLOs, college credit is not as easily transferable beyond the institution from which it was earned. For example, in many Tech Prep programs, credit is only awarded if the student matriculates at the community college that is the partner for the Tech Prep program.

Course transferability can also be limited by the accepting institution through a cap on the number or type of courses that students are eligible to earn from other institutions. To the accepting institution, this cap serves as a screening device to ensure students only receive credit for courses that are as academically rigorous as the courses offered on their campus. If the academic rigor of SPLO courses, particularly those taught in high schools, is in question, the accepting institution might require a student to retake a course rather than fail in a subsequent course. These limitations on transferability could negate some of the benefits of SPLOs and could potentially prove costly to the student.

One of the best examples of a coherent system of credit transferability is the course numbering system used at all state-sponsored postsecondary education institutions in Florida. The state has created a universal course numbering system used at both two- and

four-year institutions that ensures parity across institutions. Therefore, no matter where students earn the credit, they are guaranteed to receive credit for the same course at any other state-sponsored institution.[5]

However, there was very little data available on what credits were transferable and accepted, and the evaluations provided little information on how students used any credits earned from participation in a SPLO.

Data

Data is limited and so, therefore, are our findings. As we have reiterated throughout this compendium, the available data in the field do not meet the "gold standard"[6] for data collection set by the US Department of Education. Yet, there is much to be learned from the data snapshots that many of these programs provide us. Data snapshots are typically short-term and provide information on student achievement and attainment at a particular point in time, for example, at high school graduation or after a semester or one year of postsecondary education. While it is important to understand a student's transcript at a given point in time, the available data do not allow us to tell the full story of how participation in a SPLO affects time to degree, type of degree, or impact on work-related earnings either during or after college.

Collaboration

Collaboration between secondary and postsecondary teachers and administrators helps create a supportive environment for SPLO participants. In addition to the issues that we had planned to study, we found that collaboration between secondary and postsecondary teachers and administrators helps to create a supportive environment for SPLO participants.

SPLO students straddle two educational systems that have very different pedagogies and course content. High school teachers provide frequent guidance, advice, and help on homework, tests, and projects. In contrast, college faculty members treat their students as independent learners and typically do not provide the same level of guidance on a day-to-day basis. Teacher qualifications also differ between these two systems, as secondary teachers are required to demonstrate proficiency in subject matter and pedagogy while postsecondary teachers usually have deep mastery of the content area but receive limited instruction in pedagogy. Understanding how each system operates and how programs can be developed to help high school students move from a supported classroom with significant direction from the teacher to an independent one is important for the success of the student, and it requires close collaboration between the high school teachers and college faculty.

When secondary and postsecondary faculties collaborate to create a classroom experience that combines college content and supportive instructional techniques, students are able to benefit from the best of both worlds. The postsecondary faculty partner delivers content material covered in traditional college classrooms, ensuring the integrity of the courses. The secondary faculty provides insight on managing younger students and effective instructional strategies. Students' exposure to college-level courses and rigor, with support on homework, testing, and projects, creates a true transitional experience to blend the familiar and the new.

Collaboration also needs to extend beyond the faculty to the administration at institutions participating in SPLOs. As demonstrated through the included SPLOs, strong leadership at one or both of the partner institutions can often make or break a SPLO. When creating a SPLO, support from the college or university administration and the school district are critical to manage funding arrangements, credit transfers, and diploma granting. In addition, administrative support typically leads to buy-in from skeptical faculty members at both the secondary and postsecondary levels. For school-based SPLOs such as middle or early college high schools, dynamic principals have been critical in creating collaboration with the host postsecondary institution and the local school district.

Effective SPLOs must share responsibility between both systems to ensure students' needs are being meet. Working at the intersection of secondary and postsecondary education requires strong knowledge of both systems. Ideally, at the high school, a liaison would monitor students in college-level classes and be in close communication with the postsecondary education partner regarding scheduling and other issues. And, at the college, counselors associated with the SPLO would advise and monitor students and communicate with the high school about any issues or problems that arise.

Summary

In summary, we have learned that SPLOs result in positive outcomes for youth, especially with regard to performance in high school, earning college credit while in high school, and better grades in college. We are hampered in our efforts, by the data, to say whether SPLOs result in reduced time to degree or cost-savings. We must also keep in mind that many of the programs reviewed serve high-achieving students, which obviously influences the outcomes.

Our analysis also provided an opportunity to learn some lessons about the most effective characteristics of programs, which, we hope, will be of great benefit to program providers and policymakers.

Finally, our review led us to recognize that there are a number of serious policy considerations that need attention. They are addressed in the next chapter.

Notes from Table 1

[a] At Sinclair Tech Prep, there was not statistical significance for scores on the COMPASS test for some of the subgroups within the Tech Prep population.

[b] The following are the occurrences of duplication of findings under statistically significant and not statistically significant:
1. The dual enrollment program with Florida's community colleges showed statistical significance dependant upon the subject area. Dual enrollment students demonstrated positive and statistically significant results in subsequent courses in English, statistics, and humanities. Results for dual enrollment students were positive, but not statistically significant for courses in political science, biology, and social psychology.
2. Students at Sinclair Tech Prep demonstrated higher grades in both English and math courses, but the results were only statistically significant for the math courses.
3. The New York Tech Prep study found differences based upon the type of high school diploma students received. Students with local diplomas did better in both their first and second years of postsecondary education, while students with Regents diplomas did not demonstrate significant results until their second year of postsecondary education.

[c] At Sinclair Tech Prep, there was no difference in retention rates between first and second quarters of their first year, yet there was a statistically significant difference between the first and second years. In addition, subgroups within the Tech Prep population had different retention rates.

[d] In the New York Tech Prep study, students with local diplomas graduated at higher rates than non-Tech Prep students; the same did not hold true for Tech Prep students with Regents diplomas.

Notes

[1] Grants are available through the Advanced Placement Incentive Program (APIP) administered by the US Department of Education. These grants enable state educational agencies, local educational agencies, or national nonprofits to expand access to AP courses and materials for low-income students. For more information on APIP, see http://www.ed.gov/programs/apincent/index.html.

[2] For more information on funding and recommendations of funding structures, please see Hoffman, N., (2005, April). *Add and subtract, Dual enrollment as a state strategy to increase postsecondary success for underrepresented students*. Boston, MA: Jobs for the Future.

[3] For example, 45% of the Tech Prep students who matriculated at Sinclair Community College needed some remediation in either reading or writing, and 37% required remediation in math.

[4] For more information on AP teacher standards, visit http://apcentral.collegeboard.com/repository/ap05_teacher standards_46509.pdf.

[5] For more information, see http://scns.fldoe.org/scns/public/pb_index.jsp#.

[6] The gold standard refers to evaluations that use random assignment to create treatment and control groups for comparison.

Policy Considerations

As Secondary-Postsecondary Learning Options gain favor as a way to help youth succeed, policymakers and practitioners should proceed with some caution when seeking to expand or create programs. AYPF has identified a number of issues that need to be taken into consideration by policymakers and practitioners, particularly at the state and local levels, as they explore strategies to support academic achievement and improve college-going rates of all young people.

To begin, policymakers and program designers should be clear about the problems they are attempting to solve by providing SPLOs, as well as the goals and objectives they set for any such program. For instance, is the goal to provide assistance to a certain group of students, and if so which group(s)? Is it to provide more rigorous curricula in certain disciplines? Is it to increase the number of students who enter college? Is it simply to prepare a larger number of students for the option of attending postsecondary education? Is the ultimate goal to increase college degree attainment? Or is it to help a particular subgroup of students achieve one or all of these goals? Because there are multiple outcomes from these programs, it is well worth the time and effort for program designers and policymakers to be clear on goals and target student populations to be served. While we hoped our analysis of these programs would yield clear answers as to which SPLOs work best for which groups of students, the limited data hindered our task, but nonetheless made evident to us the widespread lack of clarity about the purpose of SPLOs.

Adding to the policy debate is the reality that some policymakers may raise the question of how best to use limited education resources. Should funds be used for SPLOs that serve a finite number of students or to support broad-scale interventions that reach all students? For instance, some might argue that it makes sense to develop a rigorous science or math curriculum with specialized instruction closely linked to college and university entrance requirements that every student would be required to take with appropriate supports to ensure success rather than fund a dual enrollment program for a smaller group of students. While AYPF is not equipped to make these kinds of judgments, we know that policymakers always must question the use of resources, and we recognize this is a legitimate policy inquiry at any time.

This policy debate is also linked to one of the central claims about SPLOs: that they reduce time to degree and result in savings for students, families, and the public. One of our prime goals with this project was to try to answer this question based on rigorous research and evidence. Unfortunately, the research and evidence do not exist, and from a purely scientific perspective, we cannot claim that SPLOs reduce the time to degree or result in savings in any significant manner. What we do see is that students may need fewer *credits* to graduate, but without a reduction in time. The included SPLOs demonstrate that students are earning credits, but questions emerge about what happens to those credits after students graduate from high school.

What we see from our review is that many students who earn credits in high school do not use or count those credits for various reasons. Some students choose to repeat college courses because they want an easy "A," some want to experience a laboratory science with college-level facilities, some feel as though they could benefit from repeating a course in order to have a deeper knowledge of the subject before moving on, and some recognize that the rigor of the course, especially if it was taught in the high school, may not equal college standards and opt to repeat it. In other cases, credits awarded in high school may not transfer to the college the student attends, the number of transferable credits is capped by the receiving institution, or students may decide to change majors, discarding earlier credits. Other students, particularly those who participate in Tech Prep, may be unaware that they earned credit or uncertain how to get the credit accepted on their transcript. In reality, there are many reasons why credits are not counted toward a degree, and we hope more research will be conducted on this topic.

At most colleges and universities, credit transfer is dealt with on a case-by-case basis, which is costly to the receiving institution and time-consuming for students. Florida has partially eliminated some of these difficulties by developing a common course

numbering system used at all of their two- and four-year public colleges and universities. Students still must deal with credit transfer issues from private institutions, but a large number of transfer problems for public college students have been avoided. Policymakers can aid in the development of common course numbering systems or standardized procedures for credit transfer or acceptance to help avoid many of these problems.

There is another variable in the "time to degree" story. Students, in general, now take longer to complete both two- and four-year degrees due to financial and personal pressures. While some students enter college with credits on their transcript, thus reducing the number of credits they must earn in college to graduate, many still take longer to earn a degree. Thus, for some students, credits received in high school through SPLOs are not substantially influencing the length of their college career. According to research by Adelman (2006a), however, a student who earns 20 credits by the end of the first year of postsecondary education has a significantly greater likelihood (78% vs. 22%) of earning a bachelor's degree. Credits earned through SPLOs can help students get over that 20-credit hurdle. Therefore, even if credits earned through SPLOs do not necessarily reduce a student's time to degree, they do have a positive effect on the student's likelihood of earning a degree.

Because we were unable to find rigorous evidence, through longitudinal transcript reviews for example, of shortened time to degree, it is consequently difficult to state that SPLOs result in marked savings for families or the public. We are well aware, however, of stories and reports of individuals who have reduced both the number of credits needed for college graduation and length of time to degree, due to participation in SPLOs and hope that these anecdotal stories become the norm. The Early College High School Initiative (ECHSI) appears to be intent on collecting such data to show the benefits of their program, but most programs cannot yet reliably make such claims, as many of the programs have not yet graduated their first class or have just begun rigorous data collection efforts. Again, research is sorely needed, and policymakers need to be aware of the complexity of and lack of solid data on these programs.

While the primary purpose and value of SPLOs is to provide students with an opportunity to earn college credit, it is evident that many of the programs have served an additional, equally important, purpose: enabling more students to experience college and to believe they are capable of succeeding in postsecondary education. Significant qualitative evidence has shown that SPLO participants who previous to program involvement had never expected to attend college later consider doing so. For these students, the goal may not be about shortening time to degree or reducing the number of credits needed for graduation, but simply believing that they are as able as any other student to climb the ladder to college.

This may be particularly true for students from low-income or first-generation families. Many such students may have never considered going to a four-year institution, but are taking advantage of accessing community colleges through SPLOs. Increasing the number of students who attend two-year institutions may not be the ultimate goal of many policymakers, but we believe expanding access to postsecondary education by encouraging more students, who would normally not consider a four-year institution, to attend a two-year college, a supremely worthwhile goal.

There are several other key issues that surfaced in our review of SPLOs that warrant further consideration and discussion, including how SPLOs are financed, the alignment of SPLOs with the K-16 system, equitable access of students to SPLOs, quality and accountability issues, and the weak state of data and research.

Funding

Because SPLOs cross systems and involve multiple players, policies on issues like funding need to be made with all parties involved. Education stakeholders at the federal, state, and local levels, parents and students, and college and school administrators all have different vested interests in how SPLOs are structured and funded. For example, from their point of view, parents and students would probably prefer that all fees and expenses for participation in a SPLO be paid for. But from a state policymaker's viewpoint, always conscious of finite funding, that decision might mean that fewer students could participate. Parents, students, and local education and college officials might believe that high school students should have access to federal student financial assistance when they take college-level courses in high school. But federal officials might view this

as diverting funding from matriculated or traditional students. If federal officials allowed this practice, they would then have to decide if paying for college-credit courses in high school counted against the current student financial aid limits, or if it should be drawn from K-12 funding sources. These are difficult challenges that need attention and discussion at multiple levels.

Because SPLOs involve secondary and postsecondary education systems, policymakers also have to balance the goal of fairly reimbursing the education partners based upon services provided to students to encourage active participation. This can be a challenge to ensure that schools and colleges are adequately compensated with ADA and FTE dollars (and in some cases additional support for program activities, such as professional development or program evaluation) while balancing the need for fiscal responsibility (not paying twice for the same student).

Policymakers need to be mindful of low-income families who cannot bear even minimal costs for participation in SPLOs. For instance, unexpected costs, such as registration, lab, or examination fees, textbooks, and transportation costs, can prevent low-income students from participating. State and local programs that provide scholarships for tuition costs, exams, test-taking, or participation have been crucial in broadening the pool of students participating in these programs, but without financial assistance or waivers, qualified, low-income students can quickly be excluded.

Policymakers also need to recognize that without public support, many SPLOs would cease to exist. While there have been cases of high schools and colleges paying for dual enrollment slots themselves, it is not usual practice. To ensure that SPLOs reach larger numbers of students and/or specific groups of students, public support is needed. Given the current limited federal funding from programs such as Tech Prep and APIP, the bulk of the support comes from the state through ADA and FTE allotments, therefore state legislators are in a key position to determine the scope of SPLOs.

Alignment of Programs and Systems

To ensure that students in SPLOs can easily transition to postsecondary education, there must be alignment of curricula, expectations, and supports between the individual high school and college and among the larger systems that support them.

Mapping the curriculum to postsecondary admissions standards becomes increasingly important to ensure all students are receiving the preparatory skills to succeed in postsecondary education. Efforts like the American Diploma Project[1] are designed to ensure state standards are aligned with the entrance requirements for postsecondary education and/or work, and many states are using their K-16 councils as a forum to bring together educators and administrators from each system to help create a more cohesive continuum of services and support. As these councils work, they need to ensure that SPLOs, as a growing high school intervention, are well-integrated into a thoughtful, statewide strategy, not haphazardly added as an afterthought.

Alignment efforts ideally should begin in the middle grades, before students enter high school. Programs such as AVID and Project GRAD, which begin working with students in the middle grades, are successful in ensuring students receive the academic foundation necessary to succeed in college-level work during the later years of high school. Policymakers should reach back to the middle grades as they consider implementing SPLOs to ensure the pipeline of prepared students, from all backgrounds, is strong.

Equitable Access to SPLOs

Traditionally, SPLOs were accessible only to high performing students. Although the number of SPLOs has increased in recent years with more students than ever before participating, issues of access to programs continue to persist. Many programs still require students to meet the same admissions criteria as traditional students, which precludes lower-performing students from participating. Other programs that do not have strict academic prerequisites have other entry requirements related to attendance, attitude, and desire to participate. These prerequisites clearly do limit student participation, despite claims to the contrary. Policymakers need to be thoughtful about which students should be targeted for participation in SPLOs and then be very clear about program qualifications or prerequisites. In some cases, multiple assessments, rather than a strict reliance on test scores or grades, may open up the pool of participating students.

To be eligible to participate in an SPLO, students must possess strong foundational academic skills to

ensure they meet the admissions criteria. Schools and colleges working together can identify students in need of assistance and provide appropriate supports to ensure they are able to meet these standards. To compensate for students with limited skills, some SPLOs are beginning to identify potential candidates at younger ages and provide intensive academic support. Other SPLOs provide students, who are unable to meet the academic qualifications for participation in credit-bearing courses, opportunities to take remedial coursework or preparatory programs on the college campus. Early identification also serves as a signal that students might need additional assistance in order to meet college admissions standards by high school graduation.

Another issue that limits access to SPLOs is location and technology. Not every high school is located within a reasonable distance of an institution of higher education, so not every student will be able to take classes on a college campus or satellite campus. As well, transporting students during the school day can prove to be a costly and timely expense that schools and students cannot afford. While online courses are an option (AP has extensive online course offerings), limitations on accessing technology can prevent students from participating. Rural schools, in particular, face issues of accessibility, and some rural SPLOs seem to offer more career-related than academic courses, raising the issue of the rigor of their SPLOs.

Equally important to physical accessibility of SPLOs is the need to ensure that there are appropriate SPLOs to meet the diversity of student needs. As demonstrated through this compendium, certain SPLOs were designed for and are effective with a specific target population. Therefore, in order to serve all students, high schools need to offer a variety of SPLOs to best accommodate the needs of each individual student. If a community only offers a dual enrollment program for high achievers, for example, a large percentage of students will be barred from participation.

Cost of programs, as discussed previously, can also limit access. Because many policies are aimed at increasing the number of low-income, first generation students in college, policymakers should take care to ensure that such students are not just eligible in theory, but also in practice. Funding formulas and financial aid must remain equitable to ensure participation by all qualified students.

Lastly, not all high schools have the capacity within their teaching ranks to offer college-level courses. Most SPLOs require teachers to demonstrate subject level mastery comparable to a college or university professor or serve as an adjunct faculty appointment. If a school does not employ teachers with this level of competency, classes may be seriously compromised.

Quality and Accountability

The quality of SPLOs is a subject barely addressed in the evaluations we reviewed. We rarely read or learned about an outside regulator or authority that had reviewed the quality of individual SPLOs. Granted, the AP program has a national curriculum and is very close to being a national standard for some courses, but participation of teachers in their training and development is still voluntary. It is likely that the host institutions perform some type of quality review for SPLOs, but this was not described or discussed in the SPLOs we reviewed.

Clearly, higher education has a strong role to play in quality assurance, but if SPLOs are not state-sanctioned, the state higher education agency may have little authority over them. Questions were raised in our work about the level of rigor of some SPLOs, and we often ran into the terms "college-level work" and "college-like work"—a significant distinction. If students who participate in SPLOs are doing college-like work, not college-level work, but they expect to be prepared for college and earn credit as a result, serious questions should be raised about program goals and integrity. Before states or communities move forward with the creation or expansion of SPLOs on a large scale, policymakers and program administrators need to ask some hard questions about who is overseeing the quality of programs and what accountability measures are being used.

Data Collection, Evaluation, and Research

As we have reiterated throughout this compendium, the poor quality and scarcity of the data on SPLOs has severely limited us in our efforts to answer many specific questions about the value of these programs and to make concrete policy recommendations. We are pleading for a strong investment in research, evaluation, and data collection on SPLOs by the federal government, states, colleges, and high schools.

We have noted a number of gaps in research and evaluation throughout this report, thus leading to a number of important questions that have barely been studied and deserve attention. For instance, we know almost nothing about the academic development and preparation of students who participate in SPLOs (does the sequence of high school courses make a difference to success; what level of math and English are absolutely necessary to succeed?). What is the dosage (amount of time or involvement in the program) that helps students move to postsecondary education successfully? What are the longitudinal, not intermediary, outcomes for these programs (we know that students may earn more credits, but do they earn a degree and/or find a good job?). How much credit actually is counted or transferred? Who determines and oversees the quality of SPLOs? There is also a glaring lack of data on certain categories of students, such as those with disabilities and English language learners. While a number of SPLOs do include demographic data on the student population, the outcome data for those students are usually not disaggregated.

Schools and programs rarely use data to improve their own internal practice, usually due to limited trained staff and funding constraints. Funders should require and pay for SPLOs (and any programs they fund, for that matter) to conduct evaluations and report certain data. However, it is contingent upon the funding authorities to be clear on the outcomes they expect and the data they want collected. Lastly, if and when research on SPLOs is conducted, we strongly encourage researchers to employ techniques that include measures of statistical significance.

Conclusion

SPLOs vary in their design, scope, goals, duration, program location, students served, and outcomes. There is no single model of an SPLO, and there is a great deal of variation even within subcategories of them. The variability of SPLOs makes it risky to draw generalizations about them, particularly with regard to their impact. Because there are so many different approaches, policies need to be flexible and encourage innovation. Thus, the variability among SPLOs should signal policymakers to go slowly. At the same time, policymakers need to be deliberate in standardizing certain aspects of these programs, particularly with regard to equity, access, funding, and data collection. Policymakers will need to wrestle with maintaining a balance between flexibility and standardization in supporting SPLOs.

Understanding the potential of SPLOs will, hopefully, promote a new approach to secondary education, one which breaks down the barriers between high school and college and involves youth more directly in the adult world. The structures and supports necessary to blend secondary and postsecondary education are being explored and tested as we write. We cannot know if such a hybrid approach would look like one of the SPLOs we describe in this compendium, but we strongly believe that blending secondary and postsecondary education is the right direction for high school reform. Youth need a broader view of their future than what high schools normally offer, and being on a college campus may help them imagine a different, more positive future. There is growing recognition that learning can and must happen in places throughout the community, not just in the high school building.

Although we have not answered all the questions we originally posed about SPLOs, we can say for certain that SPLOs provide students access to rigorous academics, exposure to the world of college, and an opportunity to imagine a different future – many of the things otherwise missing from their high school experience. For these reasons, SPLOs should be included in the range of options that communities and educators make available to young people. SPLOs are improving outcomes for high school-aged youth, and continue to build a strong track record of success.

Notes

[1] The American Diploma Project (ADP) Network is a coalition of 23 states dedicated to aligning K–12 curricula, standards, assessments, and accountability policies with the demands of college and work. For more information, please see www.achieve.org.

PART IV

Appendices
References

Appendix A: Matrix of Program Characteristics

SPLO	Students served	Funding	Location	Prereqs for participation	Program length	Faculty	Extra Supports	Formal sanctions
	High, middle, low achievers: First-generation college, At-risk, etc.	*Cost to students*	*College campus, high school (HS) classroom, or both*	*Tests or grades, recommendations, or interviews*	*One semester —up to five years*	*HS, college, both*	• *Caring adults* • *Academic assistance* • *College success class* • *Safe environment/peer support network*	*Categorization by state, funding sources*
AP and ACC at St. Louis University	High achievers	Students pay AP: exam fee ACC: $50/ credit hour	HS classrooms	ACC admissions: • Junior or senior status • 3.0 GPA • Counselor/ principal recommendation • Teacher approval for course	AP—one year ACC—min. one semester	HS faculty, who were trained to teach AP or who had received adjunct status at SLU	Caring Adults	Dual enrollment in public high schools is encouraged by state regulations
University of Missouri System	High achievers	Cost to high school students: $54/ credit hour, approximately 1/3 the cost to traditional students	Evaluation only considered courses offered in HS classrooms	Meet university admission standards	Students enroll in semester-long course and can enroll throughout high school (up to four years)	HS faculty, who were trained to teach AP or who had received adjunct status at a postsecondary institution	None	Dual enrollment in public high schools is encouraged by state regulations

SPLO	Students served	Funding	Location	Prereqs for participation	Program length	Faculty	Extra Supports	Formal sanctions
Florida: dual enrollment with community colleges	High and middle achievers	No cost to student	Both HS classrooms and college classrooms	• An unweighted 3.0 GPA for academic credit and an unweighted 2.0 GPA for vocational courses • Passing scores on appropriate sections of college placement tests • Additional admissions criteria set by the individual postsecondary institution such as high school attendance record	One semester through four years	• For courses offered in high school classrooms, high school faculty with adjunct status at community college • In college classrooms, community college faculty	None	• School districts must use some of the ADA funds to cover books and fees for participating students • Community colleges can count students in FTE as part-time, but may not charge tuition
Washington State Running Start	High achievers	No cost to students up to 18 credit hours per semester, students pay books and transportation costs	College classrooms and online courses	Admissions requirements set by postsecondary institution	Juniors and seniors	Faculty at postsecondary institution	None	Dual enrollment mandated by state's Learning by Choice law. Postsecondary institutions bill school districts, who can keep 7% for administrative costs
Georgia: dual enrollment with technical colleges	Middle achievers	No cost to students unless books went over book allowance	Both HS classrooms and technical college classrooms	• Meet admissions criteria of technical college through score on a placement test such as ASSET or the SAT • 16 years old • Resident of state for at least one year	One semester to up to two years	Instructors from technical college or from the field	None	• Previously funded as double dipping/do no harm. • Current restrictions require students to use state scholarship/grant dollars to cover cost of course

SPLO	Students served	Funding	Location	Prereqs for participation	Program length	Faculty	Extra Supports	Formal sanctions
Tech Prep at eight local consortia	Middle achievers	Typically, no cost to students	Both HS and college classrooms		Four to six years, the final two years encompassing postsecondary	For postsecondary-level courses, college faculty	None	Federally funded program implemented by states
Sinclair Tech Prep	Middle achievers	Typically, no cost to students	Both HS and college classrooms	• College prep algebra with a "C" or better. • A 2.0 grade point average or better • Junior standing with no academic deficiencies • Some programs require completion of certain high school classes with a grade of C or better	Typically, junior and senior year of high school plus two years at postsecondary	For postsecondary-level courses, college faculty	None	Federally funded program implemented by states
Southern Idaho Tech Prep	Middle achievers	Typically, no cost to students	Both HS and college classrooms	• COMPASS test (for ability and placement purposes)	Not defined	Not defined	Caring adults	Federally funded program implemented by states
New York Tech Prep	Middle achievers	Typically, no cost to students	Both HS and college classrooms	None	At least two years of high school plus two years postsecondary	Not defined	None	Federally funded program implemented by states
Texas Tech Prep	Middle achievers	Typically no cost to students	Both HS and college classrooms	None	Not defined	Both high school and postsecondary faculty	None	Federally funded program implemented by states

SPLO	Students served	Funding	Location	Prereqs for participation	Program length	Faculty	Extra Supports	Formal sanctions
Academy of the Canyons (AOC)	Low achievers: • discrepancy between standardized test scores and grades • has adequate social adjustment, but is often disconnected from the high school environment from lack of commitment to clubs or athletics • a creative, artistic individual	No cost to students	All classes on college campus	• Application • Recommendations from current school counselor and teachers • College assessment tests • Interview by both parents and student	2 years (11th- and 12th-grade years)	High school courses taught by AOC high school faculty and other courses taught by community college faculty	• Caring adults • College success class • Peer support network/ safe environment	• District considers AOC an alternative school and funds at same ADA as traditional school • California community colleges offer coursework to qualified high school students at no cost • AOC has a private grant to cover additional operating cost
Contra Costa MCHS	Middle and low achievers: those who would fall behind in traditional high school	No cost to students	All classes on college campus	Application: • student essays and agreement • parent agreement • counselor recommendation	Up to five years	HS and college faculty	• Caring adults • Academic assistance • College success class • Safe environment/peer support network	• District covers the salaries of high school teachers and textbooks, both high school and college classes • California community colleges offer coursework to qualified high school students at no cost • Additional support from Gates Foundation to support 5th year of high school and teacher professional development

SPLO	Students served	Funding	Location	Prereqs for participation	Program length	Faculty	Extra Supports	Formal sanctions
MCHS at San Joaquin Delta College	Middle and low achievers: may be the first members of their family to attend college, historically underserved, and would have had difficultly affiliating within a large high school	No cost to students	All classes on college campus	Admissions process linked to AVID indicators	Up to five years	• HS and college faculty • Students, both high school and college, are often used as tutors in academic support classes	• Caring adults • Academic assistance • College success class • Safe environment/peer support network	• District funds same as traditional high school as well as transportation-California community colleges offer coursework to qualified high school students at no cost • Additional support from grants covers cost of textbooks, faculty professional development, and planning activities
Mott Middle College (MMC)	Middle and low achievers: struggling students who, though capable of academic excellence, have tuned out academics or are poised to drop out	No cost to students	All classes on college campus, there is a dedicated space for MMC classes and offices	• Admission process including conference with parent and student • Student must demonstrate genuine interest in attending MMC	Initially accepted students in 10th or 11th grade through high school graduation Currently accepts students in grades 9–11 and provides opportunity to stay connected for a 5th year while completing their AA at MCC	HS and college faculty	• Caring adults • Safe environment/peer support network	• District ADA funds • In-kind support from host postsecondary institution • Additional support from grants, both private foundations and federal government

SPLO	Students served	Funding	Location	Prereqs for participation	Program length	Faculty	Extra Supports	Formal sanctions
Williamson County MCHS	Middle and low achievers: "potential high school dropouts"	No cost to students	All classes on college campus. Now school has its own space near new postsecondary partner	Application requires both student and parent essays	Up to three years, if student enters in 10th grade	HS faculty, primarily except for courses taken on college campus	• Caring adults • Academic assistance • Safe environment/peer support network	Districts fund at ADA
Olive-Harvey MCHS	Low achievers: officially withdrawn or expelled from Chicago Public Schools	No cost to students	All classes on college campus	• TABE as admissions test (8th grade minimum scores on reading and math) • Interview required	Two to three years, students can enter in grades 10-12	• Both high school and community college faculty • Many classes are co-taught	• Caring adults • Academic assistance • Safe environment/peer support network	• Categorized by district as retrieval school, but has charter status for funding • Additional dollars from Department of Children and Family Services and Illinois Board of Education
Shelby State MCHS	Low achievers: high-ability, underachieving, at-risk young people from the Memphis City School District	No cost to students	All classes on college campus	Complete 9th grade in Memphis City School	Up to three years	HS and college faculty	• Caring adults • Academic assistance • Safe environment/peer support network	No information available

SPLO	Students served	Funding	Location	Prereqs for participation	Program length	Faculty	Extra Supports	Formal sanctions
High School Dual Enrollment Program at Santa Fe Community College (SFCC)	Original population: middle and low achievers Current population: high and middle achievers	No cost to students	All classes on college campus, but students can participate in sports, clubs, and activities at their home HS	• Application • Computerized placement test • Review of student grades, conduct, and attendance	Up to two years: junior and senior year	HS and college faculty	• Caring adults • Academic assistance	• Had been vocational-technical center for district • Now alternative school that receives 95% of ADA funding from district for in-district students • SFCC can count district and private school students as part-time FTE
Diploma Plus	Low achievers: high school dropouts and students at-risk for dropping out or not passing state required graduation tests	No cost to students	Locations vary by site and include small schools, postsecondary campuses, and community-based organizations	Set by each program site	Dependent on site and student needs	If in college course, then college faculty, otherwise DP staff and high school faculty	• Caring adults • College success class • Safe environment/peer support network	• Funding for day-to-day operations is provided by school districts • College-level courses had been covered by state which had a set-aside for alternative education dual enrollment, now sites cover the cost of classes • Additional support from private foundations covers operating cost of overseeing organization

SPLO	Students served	Funding	Location	Prereqs for participation	Program length	Faculty	Extra Supports	Formal sanctions
CUNY College Now	Different programs for all levels of students	No cost to students	Both HS and college classrooms	Ability level through scores on standardized tests dictate the classes/ programs students participate in	Classes are typically one semester, but students can participate in programs throughout high school	Both high school and college faculty	Caring adults	Funded by city and state through CUNY's budget
Gateway to College at Portland Community College (PCC)	Low achievers: high school dropouts	$50 lab and activity fee for students	College campus	Application process includes: • placement tests • assignments • personal interview Students who do not meet the minimum academic requirements are given an opportunity to participate in a pre-program semester to improve their skills	Students ages 16 to 21 can participate until they earn a high school diploma	Both high school and college faculty	• Caring adults • Academic assistance • College success class • Safe environment/peer support	• Through a contract, district pays ADA • In-kind support from host postsecondary institution • Additional support for replication project from Gates Foundation
Early College Program at Wells High School	Middle achievers	Student costs include lab fees, activity fees, and cost of books	College campus	Application	Up to 2 years	College faculty	• Caring adults • College success class	• Tuition paid half by the state and half by the host postsecondary institution through Postsecondary Enrollment Options legislation • Additional funding from Gates Foundation supports program coordinator

Appendix B: Outcomes Considered by Program

This matrix is intended to serve as a quick reference for the types of outcomes considered by the included programs and not to be used to evaluate effectiveness. The outcomes included in this matrix represent all the included outcomes considered by AYPF in the site profiles in this compendium. While these included outcomes are all positive, they are not all statistically significant. In fact, only approximately 15% of the included outcomes considered are statistically significant.

SPLO	Credits earned during high school	High school standardized tests	High school graduation (includes other high school outcomes)	College-going rates	College placement tests/ remediation	Course grades/ GPAs	College retention	Degree attainment/ time to degree	Job market outcomes
AP and ACC at St. Louis University*							Higher persistence rate after first year	• Higher college graduation rate • More credits earned at college graduation • Less time to degree (4.16 years vs. 4.51 years)	
University of Missouri System*					Higher ACT composite scores	Higher first-year GPA and course grades, specifically in next sequential course	Higher return rate for second year		
Florida: dual enrollment with community colleges*				Higher college-going rates at state colleges and universities		Higher grades in next subsequent class		Higher graduation rates at community colleges with shorter time to degree	

*Denotes the SPLOs that had evaluations that compared participants to students with no prior credit.

SPLO	Credits earned during high school	High school standardized tests	High school graduation (includes other high school outcomes)	College-going rates	College placement tests/ remediation	Course grades/ GPAs	College retention	Degree attainment/ time to degree	Job market outcomes
Washington State Running Start				71% of Running Start students continue at same community college		Both during Running Start and upon matriculation to postsecondary education, Running Start students have higher GPAs, course grades, and course completion than traditional students without prior credit		• 5% of Running Start students complete an associate's degree • Running Start students complete their bachelor's degree with an average of 33 fewer state-supported credits	Running Start workforce students have higher job placement rates than traditional workforce students exiting college
Georgia: dual enrollment with technical colleges	28% of dual-enrolled students earned one or more technical certificates[1]		• 40% earned a technology/ career prep diploma • 24% earned a college prep diploma • 29% earned a dual seal (college prep and technology/ career prep) diploma • 6% earned a certificate of performance	Dual enrollment students enrolled in technical colleges at a higher rate than all high school graduates	One in four dual enrollment students required at least one developmental studies class, which is lower than the general technical college student population, where one in five students needed a developmental class	84% of students with dual credit from technical college earned As, Bs, or Cs on their coursework upon matriculation to a technical college			

*Denotes the SPLOs that had evaluations that compared participants to students with no prior credit.

SPLO	Credits earned during high school	High school standardized tests	High school graduation (includes other high school outcomes)	College-going rates	College placement tests/ remediation	Course grades/ GPAs	College retention	Degree attainment/ time to degree	Job market outcomes
Tech Prep at eight local consortia	On average, Tech Prep students earned more credit than their non-Tech Prep peers			Across all consortia, 65% of Tech Prep students enrolled in postsecondary education within three years of high school graduation					After high school graduation, Tech Prep students were likely to be working compared to non-Tech Prep students
Sinclair Tech Prep*					• Higher scores on all sections of COMPASS • Lower need for remedial coursework	• Higher GPAs • Higher course grades	Higher rates from first year to second year		
Southern Idaho Tech Prep*					Lower need for remedial coursework	Higher GPA (for Business and Engineering students only)			
New York Tech Prep*		Higher pass rates on Regents exams for Math I and Science	• Higher high school GPAs (11th and 12th grade) • Lower absences • More likely to graduate from high school in four years • In urban areas, more Regents diplomas	Steady increase among Tech Prep students		• Among students with local diplomas, Tech Prep students did better in first and second years of college • Among students with a Regents diploma, higher GPA after two years of college		Among students with local diplomas, a slightly higher percentage of Tech Prep students remained in or graduated from college than non-Tech Prep students	Increased number of Tech Prep high school graduates went onto jobs in fields related to their coursework

*Denotes the SPLOs that had evaluations that compared participants to students with no prior credit.

SPLO	Credits earned during high school	High school standardized tests	High school graduation (includes other high school outcomes)	College-going rates	College placement tests/ remediation	Course grades/ GPAs	College retention	Degree attainment/ time to degree	Job market outcomes
Texas Tech Prep*	Increased number of Tech Prep students also completing college prep curriculum		• Higher attendance rates • Lower dropout rates • Higher graduation rates						
Academy of the Canyons (AOC)	76% completed four or more courses transferable to either CA state university system	Higher scores on CAT/6[2] than 11th grade students in the district and across the state		Higher than district (84% v. 68%)	Over time, graduates have decreased need for remediation	Higher success rate in college courses than traditional students	Higher retention rate in college classes than traditional students		
Contra Costa MCHS		• Higher scores on California Standards Tests than district high schools • Higher average scores on Stanford 9 Achievement Tests than state, county, and district			81% of students take SAT			Yearly, 10%–15% receive an associate's degree	

*Denotes the SPLOs that had evaluations that compared participants to students with no prior credit.

SPLO	Credits earned during high school	High school standardized tests	High school graduation (includes other high school outcomes)	College-going rates	College placement tests/ remediation	Course grades/ GPAs	College retention	Degree attainment/ time to degree	Job market outcomes
MCHS at San Joaquin Delta College	On average, students graduate with 30 credits transferable to the state university systems	• Higher scores on California Standards Tests than district high schools • Higher average scores on Stanford 9 Achievement Tests than state, county, and district							
Mott Middle College (MMC)	Students earned three to 12 college credits	On the MEAP[3] test, 30 students scored 1, 2, or 3 in four or more areas and 17 scored 1, 2, or 3 in five areas to qualify for Michigan Merit Award	• Yearly graduation rate between 90%-95% • Decreased district dropout rate	84.4% of graduates continue in higher education					
Williamson County MCHS		• TCAP[4] writing scores increased • 95% of students received passing scores on Gateway Biology and English II tests[5]	• 95% retention rate and decreased dropout rate • Improved attendance	Of graduates, 75% immediately continued in postsecondary education					

*Denotes the SPLOs that had evaluations that compared participants to students with no prior credit.

SPLO	Credits earned during high school	High school standardized tests	High school graduation (includes other high school outcomes)	College-going rates	College placement tests/ remediation	Course grades/ GPAs	College retention	Degree attainment/ time to degree	Job market outcomes
Olive-Harvey MCHS (OHMCHS)	Students earned from 3 to 15 college credits		• Improved attendance and high school GPAs • 65% graduated from OHMCHS	Of high school graduates, 77% attending a college or university, 7% learning a trade, 7% in military					Of high school graduates, 10% entered workforce
Shelby State MCHS (SMCHS)	23% of SMCHS students earned 1 to 12 credits		• Improved attendance and GPAs • 53% graduated with high school diploma or certificate	Of high school graduates, 54% attending a college or university					
High School Dual Enrollment Program at Santa Fe Community College	Increasing number of students earning credit in courses that transfer to state universities at rates consistently higher than students who earned credits through AP exams		Over time, graduation rate improved	According to director, 70–80% of graduates return for additional college coursework					

*Denotes the SPLOs that had evaluations that compared participants to students with no prior credit.

SPLO	Credits earned during high school	High school standardized tests	High school graduation (includes other high school outcomes)	College-going rates	College placement tests/ remediation	Course grades/ GPAs	College retention	Degree attainment/ time to degree	Job market outcomes
Diploma Plus	81% of eligible students took college courses, 61% took remedial courses and 39% took credit-bearing courses	Small follow-up study showed 88% passed MCAS[6]	62% of all enrolled students completed program, earning either a GED or high school diploma between 2002 and 2004	78% reported they plan to enter postsecondary education upon high school graduation and 18% planned to continue after taking some time off		71% earned C or better in at least one course			32% reported they had a job after high school graduation and 45% reported they were looking for a job
CUNY College Now				In 2002, 28% of first-time freshman at CUNY were participants, and in 2003, this rose to 38%			At CUNY's senior colleges, rates were higher for participants than non-participants		
Gateway to College at Portland Community College	• 70% completed first semester cohort experience • 75% completed a second semester • Graduates average 24 college classes		Four terms after cohort experience, 53% were still in the program • By October 2005, 84 students had earned high school diploma (14% with honors) and 67 earned a GED • Average attendance is 92%	• 37% of students who exited the program without a credential continued postsecondary education at PCC • 73% of the high school graduates continued their postsecondary education				By October 2005, 21 students had earned an associate's degree	

*Denotes the SPLOs that had evaluations that compared participants to students with no prior credit.

SPLO	Credits earned during high school	High school standardized tests	High school graduation (includes other high school outcomes)	College-going rates	College placement tests/ remediation	Course grades/ GPAs	College retention	Degree attainment/ time to degree	Job market outcomes
Early College Program at Wells High School	• 86% of participants completed a total of 125 classes with a C or better in 108 classes • Average credits earned range from 0 to 19		• Improved high school GPAs • Improved academic rigor among entire student body	• 64% seniors applied and accepted to college • Increased self-reported plans to attend college full-time		Higher GPAs than traditional college student sample			

*Denotes the SPLOs that had evaluations that compared participants to students with no prior credit.

Notes

1 Technical certificates are industry certifications that do not provide credits toward diploma programs.

2 CAT/6 is the California Achievement Test, sixth edition survey, the normative component of California's standardized assessment system.

3 MEAP stands for Michigan Educational Assessment Program, a series of five tests developed to measure what Michigan educators believe all students should know and be able to achieve in five content areas: mathematics, reading, science, social studies, and writing. MEAP is scored on a scale of one to five, with one being the highest score and three indicating proficiency.

4 Tennessee Comprehensive Assessment Program (TCAP) Achievement Test

5 Gateway tests are Secondary TCAP assessments in math, English, biology, history, and physical science.

6 The Massachusetts Comprehensive Assessment System, abbreviated as MCAS, is a series of standardized tests administered by the Massachusetts Department of Education based on the Massachusetts Curriculum Frameworks.

Glossary of Terms

ACT (American College Testing Program)
A college entrance exam that assesses high school students' general educational development and their ability to complete college-level work. (http://www.act.org/aap/index.html)

Advanced Placement (AP)
Overseen by the College Board, Advanced Placement (AP) courses are offered at high schools and taught by high school faculty. The AP curricula are standardized, and the exams are administered in May each year. Students with passing grades of 3 or better, out of a total score of 5, may be able to earn course credit and/or advance to higher-level courses at the colleges and universities where they enroll. (http://www.ecs.org/clearinghouse/28/11/2811.pdf)

Articulated credit
Allows high school students to take courses that lead to college credit in technical courses. Course credit is awarded by the college after the student has enrolled at a participating college. (http://www.netnet.org/students/student%20glossary.htm)

Average Daily Attendance (ADA)
The average number of students present during a given reporting period (usually a regular school session). ADA is calculated by dividing the total number of days in attendance for all students during a given reporting period by the total number of days the school is in session during a reporting period. (http://nces.ed.gov/nationsreportcard/glossary.asp#c)

Average Daily Membership (ADM)
The aggregate membership of a school during a reporting period (normally a school year) divided by the number of days school is in session during this period. The average daily membership for groups of schools having varying lengths of terms is the average of the average daily memberships obtained for the individual schools. (http://nces.ed.gov/nationsreportcard/glossary.asp#c)

California Achievement Test, sixth edition survey (CAT/6)
The normative component of California's standardized assessment system. (www.startest.org/cat.html)

Charter school
A publicly-funded school that, in accordance with an enabling state statute, has been granted a charter exempting it from selected state or local rules and regulations. A charter school may be newly created, or it previously may have been a public or private school. It is typically governed by a group or organization (e.g., a group of educators, a corporation, or a university) under a contract or charter with the state. In return for funding and autonomy, the charter school must meet accountability standards. A school's charter is typically reviewed every three to five years and can be revoked if guidelines on curriculum and management are not followed, or if the standards are not met. (http://nces.ed.gov/nationsreportcard/glossary.asp#c)

Computer Adaptive Placement Assessment and Support System (COMPASS)
A comprehensive computer-adaptive testing system that helps place students into appropriate courses and maximizes the information postsecondary schools need to ensure student success. The test focus on three main areas: reading, writing, and mathematical skills. (www.act.org/compass/index.html)

Concurrent enrollment
An arrangement that allows high school students to enroll in postsecondary courses, for postsecondary credit, but usually not for high school credit. Generally students are taught by college faculty, either at the college or high school, or through distance education. (www.ecs.org/clearinghouse/28/11/2811.pdf)

Double dipping/Do no harm funding/Hold harmless
Double dipping is generally defined as seeking reimbursement from two or more funding sources for the same unit of service. In the case of SPLOs, this means that both K-12 and postsecondary education institutions are receiving full funding amounts for students that are participating in both systems. In essence, the

state pays twice to educate the same student in two systems, while he/she is actually only taking the class in one system. (http://72.14.207.104/search?q=cache:HilhRbHwSmcJ:www.tceponline.org/topics/funding.htm+definition+of+double+dipping+funding&hl=en&gl=us&ct=clnk&cd=6)

Dual enrollment
Programs that allows high school students to enroll in college courses and earn college and high school credits simultaneously, thereby exposing them to the academic and social demands of postsecondary education. (Karp, Bailey, Hughes, and Fermin, 2004, p. 1)

Early college high school
Small schools where students earn both a high school diploma and two years of credit toward a bachelor's degree. They are designed to help young people progress toward the education and experience they need to succeed in life and family-supporting careers. (www.earlycolleges.org/)

Full Time Equivalent (FTE)
For institutions of higher education, enrollment of full-time students, plus the full-time equivalent of part-time students as reported by institutions. In the absence of an equivalent reported by an institution, the FTE enrollment is estimated by adding one-third of part-time enrollment to full-time enrollment. (www.atlantahighered.org/archereports/fte_defined.asp)

General Educational Development (GED)
A term used to describe both a comprehensive test used to appraise the educational development of students who have not completed their formal high school education and a high school equivalency certificate that may be awarded based on achievement of satisfactory scores on this test. The test is developed and distributed by the GED Testing Service of the American Council on Education, and GEDs are awarded by states or other agencies. (US Department of Education, 2005, p. 290-291)

Massachusetts Comprehensive Assessment System (MCAS)
The Massachusetts Comprehensive Assessment System, abbreviated as MCAS, is a series of standardized tests administered by the Massachusetts Department of Education based on the Massachusetts Curriculum Frameworks. (http://www.doe.mass.edu/mcas/1998/interpretive_guides/fullguide.pdf#search=%22Massachusetts%20Comprehensive%20Assessment%20System%20definition%22)

Median National Percentile
The median national percentile (NP) represents the percentage of students in the norm group whose scores fall below a given level. For example, a student whose NP is 65 scored higher than 65% of the students in the norm group. NPs are useful for comparing the achievement of students in a local group with that of students in the nation as a whole. (http://titlev.adams.edu/Outreach/TerraNova.htm)

Michigan Educational Assessment Program (MEAP)
A series of five tests developed to measure what Michigan educators believe all students should know and be able to achieve in five content areas: mathematics, reading, science, social studies, and writing. MEAP is scored on a one to five scale, one being the highest score and 3 representing proficiency. (www.michigan.gov/mde/0,1607,7-140-22709_31168-94522--,00.html)

Middle college high schools
A high school program on a college campus designed to serve students with college potential whose needs are not being met in a traditional high school setting. (http://newdesigns.oregonstate.edu/compendium/Partnerships/design68.htm)

Scholastic Assessment Test (SAT)
An examination administered by the Educational Testing Service (ETS) and used to predict the facility with which an individual will progress in learning college-level subjects. The SAT differs from the ACT in that it assesses students' aptitude in English, reading, and mathematics generally rather than their curricular knowledge. (www.atlantahighered.org/archereports/fte_defined.asp)

Statistical significance
Statistical tests are conducted to determine whether the changes or differences between two result numbers are statistically significant. The term "significant" does not imply a judgment about the absolute magnitude or educational relevance of changes in student performance. Rather, it is used to indicate

that the observed changes are not likely to be associated with sampling and measurement error, but are statistically dependable population differences. (http://nces.ed.gov/nationsreportcard/glossary.asp#c)

Student fees
In contrast to tuition, student fees are charged for noninstructional services, activities, and facilities, including student government, intercollegiate athletics, health insurance, transportation, student publications, student health services, and debt service and maintenance costs of student unions, recreation and fitness centers, and athletic facilities. Some student fees are mandatory; others apply only to certain students at certain times (e.g., laboratory and transcript fees). (www.ibhe.state.il.us/board/Agendas/2000/April/itemii-1.pdf)

Tech Prep
Tech Prep is a 4+2, 3+2, or 2+2 planned sequence of study in a technical field beginning as early as the 9th grade of school. The sequence extends through two years of postsecondary occupational education or an apprenticeship program of at least two years following secondary instruction, and culminates in an associate's degree or certificate. (www.ed.gov/about/offices/list/ovae/pi/cte/techprep.html)

Tennessee Comprehensive Assessment Program Achievement Test (TCAP)
A timed, multiple choice assessment that measures skills in Reading, Language Arts, Mathematics, Science, and Social Studies. (www.meritsoftware.com/standardized_tests/TN.php)

The Test for Adult Basic Education (TABE)
TABE is a commercially-produced multiple-choice test published by McGraw-Hill/Contemporary with answer booklets, color-coded answer sheets, and supporting materials. It is a norm-referenced test designed to measure achievement of basic skills commonly found in adult basic education curricula and taught in instructional programs. Reading, language, mathematics, and spelling are the areas measured. The content used for the measurement stresses subject matter of high interest to adults – skills used in problem solving, decision making, and living itself. (http://www.mhcontemporary.com/pages/tabe.php)

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About the Authors

Jennifer Brown Lerner is a Program Associate at the American Youth Policy Forum (AYPF), where she identifies and researches education-related issues, policies, and programs for AYPF's publications and learning events—Capitol Hill forums, site visits, and roundtable policy meetings. In addition to her work on secondary-postsecondary learning options, Ms. Lerner currently organizes a forum series on academically-based workforce development and researches learning opportunities relating to high school reform. She served as an Education Policy Fellow at the Institute for Educational Leadership in 2005-06.

Prior to joining AYPF, Ms. Lerner was at Teacher's College, Columbia University. There, she pursued a concentration in leadership, policy, and politics and drafted a policy brief for the National Center for Schools and Communities at Fordham University entitled "Measuring and Defining Social Capital."

Ms. Lerner has also worked as a teacher and development officer for two independent schools in the Boston area, prior to which, she was active in the creation of a school-supplement program called Summerbridge (now Breakthrough Collaborative) in Atlanta, Georgia, that engages middle school students in year-round academic enrichment with high school and college students serving as teachers and mentors.

Ms. Lerner received her BA from the University of Pennsylvania and her MA from Teachers College, Columbia University.

Betsy Brand, Director of AYPF, is a leading expert in how to improve the lives of young people through education and labor policies, specifically career and technical education (CTE) and secondary education. She has spoken and written extensively on these issues and has testified multiple times before the US Congress.

As AYPF's Director, Ms. Brand identifies best policies and practices that lead to positive outcomes for the nation's young people. She oversees the creation of nearly 40 policy-oriented learning events annually—forums, briefings, and field trips—and the research and development of publications and policy briefs, all of which serve to inform the work of leading policymakers, practitioners, and researchers. Prior to her appointment in 2004, she served as the organization's Co-Director since 1998.

Ms. Brand has developed a deep understanding of education and workforce issues by crafting, implementing, and analyzing policy for the US Congress, the US Department of Education, and private clients. She was previously President of Workforce Futures, Inc., where she provided clients with public policy advocacy as well as analysis and development of legislation and regulations related to education reform and workforce preparation and development.

From November 1989 to January 1993, Ms. Brand served as Assistant Secretary of the Office of Vocational and Adult Education, US Department of Education, where she served as primary spokesperson for the US Federal Government on issues relating to vocational-technical and adult education and workforce development; directed the White House Task Force on Literacy; and increased programmatic collaboration with the Departments of Labor, Health, and Human Services, Commerce, and Housing and Urban Development; implemented the Perkins and Adult Education Acts.

Prior to this, Ms. Brand spent twelve years working for the US Senate and the US House of Representatives, covering a wide range of legislation, including the Title I, Perkins, Adult Education, Individuals with Disabilities Education, and the Higher Education Acts.

A leader in her field, Ms. Brand currently chairs the Center for Occupational Research and Development and the National Child Labor Committee Board of Directors, and the National High School Alliance Steering Committee. She serves on multiple boards and advisory committees, including those of the Alliance for Excellent Education and the National College Access Network.

Ms. Brand received her BA from Dickinson College in Carlisle, Pennsylvania.

American Youth Policy Forum Publications

Following is a sampling of American Youth Policy Forum publications. Prepaid orders only, please. Prices include shipping and handling in the contiguous United States only. Send orders to: American Youth Policy Forum, 1836 Jefferson Place, NW, Washington DC 20036. Call (202) 775-9731 for rates on bulk orders. Also see our website for additional and online publications: www.aypf.org

Whatever It Takes: How Twelve Communities Are Reconnecting Out-of-School Youth (2006)
Documents what committed educators, policymakers, and community leaders across the country are doing to reconnect out-of-school youth to the social and economic mainstream. Provides background on the serious high school dropout problem and describes in-depth what twelve communities are doing to reconnect dropouts to education and employment training. Includes descriptions of major national program models serving out-of-school youth. ***online only***

The Link between High School Reform and College Success for Low-Income and Minority Youth (2005)
An in-depth review of school reform research presenting evidence of college preparation for all students; examines the predictors of college-going behavior and how they have been addressed by the high school reform movement. The report then describes promising practices from existing reform initiatives and makes recommendations. ***online and in print, $8***

Youth Court: A Community Solution for Embracing At-Risk Youth—A National Update (2005)
Builds upon research by the Urban Institute and an extensive survey of youth court programs by the National Youth Court Center. Provides up-to-date data to give policymakers and the public an overview of youth court programs, their characteristics, and benefits. Findings cover program completion, cost, returns on investment, impact on youth offenders and volunteers, educational and civic opportunities, program sustainability, and recommendations to policymakers. ***online and in print, $5***

Restoring the Balance Between Academics and Civic Engagement in Public Schools (2005)
Co-published with the Association for Supervision and Curriculum Development (ASCD), questions the current focus on core academic subjects at the expense of an equally important role: preparing students to be engaged and effective citizens. The product of collaborative discussion among policymakers, education practitioners, community groups, parents, and youth, the report offers a seven-step action plan to help schools refocus on creating both academically proficient and civically engaged students. ***online and in print, $5***

Finance and Resource Issues in High School Reform (2003)
Summarizes discussions among education and youth development leaders regarding financial and resource issues in high school reform. These issues were identified as serious obstacles to meaningful reform in the 2000 American Youth Policy Forum report, High Schools of the Millennium. Addresses challenges in four distinct areas: 1) allocation and alignment of resources to support standards-based reform and higher expectations for all students, 2) generating resources for the interventions and specialized programs necessary to support the learning of students with special needs, 3) allocating resources to support learning in alternative education settings, and 4) developing funding strategies for dual enrollment programs. ***online and in print, $5***

Essentials of High School Reform (2003)
Speaks to a concern that much attention is being paid to greater academic achievement in core subjects, resulting in little focus on other outcomes that youth need to be successful: communication, teamwork, analytical and interpersonal skills. Contends that students also need to learn about potential careers, have a familiarity with the world of work beyond the classroom walls, and develop occupational competencies. Summarizes roundtables that offered policy recommendations and practical advice on how to structure contextual teaching and learning and alternative assessments. ***online and in print, $8***

Preparing Youth for Careers, Lifelong Learning, and Civic Participation (2003)
Designed for practitioners in both the public and nongovernmental sectors who implement youth development and employment programs, the policy-makers who support them, and youth leaders who wish to learn more about the principles and characteristics of leading youth development programs in the United States. Identifies components that may be applicable to the settings of other nations. ***online and in print, $2***

No More Islands: Family Involvement in 27 School and Youth Programs (2003)
When families are active in their children's learning at home, in school, and in youth programs, this connection yields higher grades and test scores, better attendance, attention to homework, fewer special education placements, better attitudes and behavior, higher graduation rates, and greater enrollment in postsecondary education. Family involvement is a requirement of both the No Child Left Behind and the Workforce Investment Acts. The report asserts that young people should not be treated as "islands" by school and youth programs, separate from the context of learning involving their families. ***online and in print, $8***

A Guide for the Powerless; A Political Process Primer (2000)
Acquire essential political skills and attitudes to engage productively with both elected and appointed officials at all levels of government. This easy-to-read guide is a perfect introduction to effective citizenship for community leaders, educators, students, youth workers and other human service providers. (Over 90,000 in print with numerous reprints.) ***print only, $3***

Building an Effective Citizenry: Lessons Learned From Initiatives in Youth Engagement (2003)
In 2002-2003, AYPF conducted a series of forums and field trips focused on the development of effective citizenry and youth engagement. Participants learned about the wide variety of work helping young people take action in their schools and communities and to become engaged and effective citizens. Researchers presented findings about youth civic engagement, and leaders of youth organizations discussed their efforts to engage young people in education reform, service-learning, and community activism. ***online and in print, $5***

Shaping the Future of American Youth: Youth Policy in the 21st Century (2003)
AYPF celebrated its tenth anniversary in January 2003 by inviting 14 of America's leading experts on youth affairs—analysts, activists, advocates, institution-builders—to write the essays and commentaries in this volume. These leaders accepted the challenge to step back from the press of their fully-committed working days and reconsider the development of their particular field of youth affairs over the past decade, take a leap into the future, and sketch their personal hopes and visions for a positive and creative future for American youth. o***nline and in print, $8***

Finding Common Ground: Service-Learning and Education Reform (2002)
Highlights areas of compatibility between Comprehensive School Reform (CSR) programs and elements of service-learning. Most CSR programs (or models) provide opportunities for students to apply their knowledge and skills to real-life situations, address local community issues and interests, and develop civic skills and competencies. It remains to be seen whether these two educational movements collaborate to develop a unified approach to linking classroom academics to service in school and the community, providing a truly comprehensive education for America's children and youth. ***online and in print, $8***

Lessons Learned: What the WAY Program Can Teach Us About Program Replication (2002)
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