Success at Every Step:
How 23 Programs Support Youth on the Path to College and Beyond

SARAH HOOKER ◼ BETSY BRAND

AMERICAN YOUTH POLICY FORUM

Bridging Youth Policy, Practice, and Research

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To improve opportunities, services, and life prospects for youth, we provide learning experiences for national, state, and local policymakers and practitioners.

The American Youth Policy Forum (AYPF), a nonprofit, nonpartisan professional development organization based in Washington, DC, provides learning opportunities for policymakers, practitioners, and researchers working on youth and education issues at the national, state, and local levels. AYPF's goal is to enable participants to become more effective in the development, enactment, and implementation of sound policies affecting the nation's young people by providing information, insights, and networks to better understand the development of healthy and successful young people, productive workers, and participating citizens in a democratic society. AYPF does not lobby or advocate for positions on pending legislation. Rather, we believe that greater intellectual and experiential knowledge of youth issues will lead to sounder, more informed policymaking. We strive to generate a climate of constructive action by enhancing communication, understanding, and trust among youth policy professionals.

Founded in 1993, AYPF has interacted with thousands of policymakers by conducting an average of 40 annual events such as lunchtime forums, out-of-town field trips, and policy-focused discussion groups. Participants include Congressional staff; federal, state, and local government officials; national nonprofit and advocacy association professionals; and the press corps. At forums, these professionals interact with renowned thinkers, researchers, and practitioners to learn about national and local strategies for formal and informal education, career preparation, and the development of youth as resources through service and skill development activities. Study tour participants visit schools undergoing comprehensive reforms, afterschool and community learning sites, and youth employment and training centers, where they learn experientially from the young people and adults in the field.

AYPF focuses on three overlapping themes: Education, Youth Development and Community Involvement, and Preparation for Careers and Workforce Development. AYPF publishes a variety of nationally disseminated youth policy reports and materials, many of which may be viewed on our website (www.aypf.org).

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Although many people provided a wealth of suggestions and ideas for this document, the views expressed in this publication are the sole responsibility of AYPF.

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About This Publication

This publication is designed to help policymakers and practitioners learn about effective programs supporting college- and career-readiness. These programs help diverse youth to improve their academic performance, identify career aspirations, build employer-desired skills, plan for postsecondary education, and develop the personal resources necessary to achieve their goals. Twenty-three program evaluations are briefly summarized to give policymakers and practitioners an understanding of the research findings on effective programs along with a description of why the programs work. The 23 initiatives summarized in this publication clearly do not represent the universe of programs that are successful in helping youth progress along the pathway to postsecondary success; rather, they are the ones that had recent, high-quality evaluations. This review was limited to programs that serve older youth, primarily in middle school, high school, and postsecondary education.

Other chapters present information as follows:

Setting the Stage frames the imperative for college- and career-preparation by reviewing research on the personal and societal benefits of postsecondary education, and presents sobering national data on the current level of achievement, attainment, and labor market preparation of many youth. This section also briefly reviews some of the leading perspectives on what it takes for youth to become ready for postsecondary success, including cognitive and noncognitive skills, personal resources, contextual knowledge of the college-going process, and career awareness. After this overview, we present AYPF's comprehensive definition of college- and career-readiness, which is used throughout the publication. The chapter closes with a discussion of the importance of adopting a long-term focus on college retention and completion, beyond college access, as persistence and graduation rates leave much room for improvement.

A Logic Model for College- and Career-Readiness and Success presents AYPF's conceptual framework, or logic model, that illustrates what it takes for youth to be prepared for postsecondary education, careers, and long-term success, based on the information drawn from an analysis of the 23 effective programs included in this compendium. AYPF posits that if young people have access to a range of quality supports that lead to the attainment of foundational knowledge, skills, abilities, and personal resources, they will achieve positive outcomes at every stage of the educational and developmental process.

Methodology and Research Notes describes the process and criteria that AYPF used to identify and review evaluations for inclusion in the compendium, provides some observations about the limitations of existing research in the field, and suggests improvements in data collection and evaluation for programs related to college- and career-readiness.

Elements of Success describes the common themes that emerge in the profiles that may contribute to the programs' effectiveness in improving educational, career-related, and developmental outcomes. Ten Elements of Success have been identified. They were derived from the evaluations and grouped into two broad categories: Programmatic Elements of Success and Structural and System-Focused Elements of Success. The programmatic Elements of Success include Rigor and Academic Support, Relationships, College Knowledge and Access, Relevance, Youth-Centered Programs, and Effective Instruction. Structural and System-Focused Elements of Success consist of Partnerships and Cross-Systems Collaboration, Strategic Use of Time, Leadership and Autonomy, and Effective Assessment and Use of Data.

Program Profiles includes a brief summary of each of the 23 included programs and the evaluations that demonstrate their effectiveness. Each profile provides an overview of the program; AYPF's analysis of the elements that may have contributed to the program's success; AYPF's Policy Takeaways, which are key points related to the program that AYPF believes can inform policy; an overview of the key findings, a description of the program and the evaluation methodology; funding sources; and contact information.

Participant Outcomes summarizes the range and patterns of the outcomes observed across the included program evaluations. The most common outcomes measured in these programs can be organized into the categories of Secondary-Level Academic Outcomes, Planning for College and Careers, Postsecondary Academic Outcomes, Career-Related Outcomes, and Developing Personal Resources. This chapter also provides a table illustrating which of the 23 program evaluations indicate positive results in each of these five main areas.

Policy Recommendations presents a number of considerations for developing college- and career-readiness policies, which can be used to inform national, state, and local policy, as well as to help inform the work of practitioners. These guidelines include developing a continuum of services for all youth across the community; holding all providers accountable to shared outcomes; supporting collaboration among providers; promoting the attainment of a range of skills and competencies, including those that are valued by employers; supporting initiatives to use time differently; ensuring that youth who drop out have opportunities to reconnect to college and career pathways; building the capacity of the adults in the various systems; and collecting data to assess programs against long-term outcomes.

The final section of the publication includes a matrix of programs that provides a very brief description of each program and evaluation, as well as the evaluation outcomes and elements of success, a glossary of commonly used terms, and a list of references.

Executive Summary

About this Publication

This publication is designed to help policy-makers and practitioners learn about programs and policies that have been effective in helping youth become ready for college and careers. Twenty-three evaluations of programs that support youth as they prepare for college and careers are briefly summarized to give policymakers and practitioners a quick understanding of the research findings on effective programs along with a description of why the programs work. The 23 programs summarized in this publication clearly do not represent the universe of programs that are successful in helping youth prepare for college and careers; rather, they are ones that had quality evaluations. This review was also limited to programs that serve older youth, primarily middle and high school youth.

Setting the Stage

The Imperative for College and Career Preparation

Obtaining a high school diploma is no longer sufficient for young people who hope to land a job that pays a family-sustaining wage in today's economy. Without some type of education beyond high school (four-year college, two-year college, an industry certificate, or apprenticeship program), most young adults will find themselves out in the cold in the current labor market. Postsecondary education plays an increasingly important role in economic mobility for youth from low-income communities, and the financial benefits of education for young adults have only risen since the 1980s. Four-year college graduates earn approximately one million dollars more over their lifetimes than those with only a high school diploma. Higher levels of education translate to higher earnings for all racial and ethnic groups. Closing the racial and income-based achievement gaps within US schools would increase the nation's productivity, raising the Gross Domestic Product by $400 billion or more.

Education is also associated with improved health and increased civic participation. Moreover, the education of today's young adults bears significant consequences for the next generation, as parental education is a strong predictor of children's achievement, college-going rates, and future income.

College- and Career-Readiness: A Distant Reality

Despite the importance of postsecondary education, many youth in the United States never even earn a high school diploma. Approximately one-quarter of all students do not graduate from high school in four years. For the class of 2006, graduation rates hovered at 55 percent or lower for African American, Native American, and Latino youth, and that number dropped to 44 percent for African American males. Across the educational pipeline, African American and Latino students lag approximately two to three years behind their White peers, in terms of achievement and graduation rates. Approximately 7,200 US students drop out of high school each day.

With regard to college enrollment, low-income students are 23 percentage points less likely to enroll directly in college than high-income students, and the corresponding gap is 35 percentage points when comparing students with a parent who has obtained a bachelor's degree to those whose parents had no college experience.

In addition to low levels of college-readiness, many young people leave high school without critical skills and competencies for success in the labor market. Employers indicate that the level of preparation of many youth is inadequate for entry-level jobs in fields offering career ladders and pathways to a family-sustaining wage. Sixty percent of employers rate high school graduates' basic skills as "fair or poor." In today's unforgiving labor market, youth who are high school dropouts, ex-offenders, aging out of the foster care system, English language learners, or students with disabilities have the hardest time overcoming labor market barriers, and are most likely to join the growing ranks of disconnected youth.

Framework for College- and Career-Readiness

AYPF takes a broad view of the concept of college- and career-readiness, expanding it to include the concept of success, not just readiness. By this definition, readiness means being prepared to success-

fully complete credit-bearing college coursework or industry certification without remediation, having the academic skills and self-motivation necessary to persist and progress in postsecondary education, and having identified career goals and the necessary steps to achieve them. Readiness also requires the developmental maturity to thrive in the increasingly independent worlds of postsecondary education and careers, the cultural knowledge to understand the expectations of the college environment and labor market, and the employer-desired skills to succeed in an innovation-based economy. In order for students to be successful in this broader framework of expectations, they need rigorous academic preparation, college and career planning, academic and social supports, employer-desired skills, and personal resources.

It is also important, in the discussion of college- and career-readiness, to recognize that youth will choose their own paths in life, with some young people charging forward on a traditional four-year college pathway and others moving equally quickly to pathways that are more technically- or occupationally-oriented. In either case, policymakers and educators need to acknowledge that young people will make diverse choices (due to family background,

> Youth and their families should be able to wisely determine the professions, careers, and vocations they wish to pursue rather than having a particular path dictated to them because of the failure of the school system to provide students with the "right" gateway courses; offer sufficient information and counseling in the college admission and financial aid processes; and dispel the myth that some youth do not need or will not be able to succeed in college.

economic needs, interests, and innate abilities), and that some choices will blend college and careers, whereas others will focus predominately on one or the other. For example, the postsecondary education pathway required for a Certified Production Assistant or Registered Nurse will differ from that required for a college history professor or attorney. Each of these students is on a valuable pathway that can lead to economic independence, even though

the types and levels of prerequisite education differ. Youth and their families should be able to wisely determine the professions, careers, and vocations they wish to pursue rather than having a particular path dictated to them because of the failure of the school system to provide students with the "right" gateway courses; offer sufficient information and counseling in the college admission and financial aid processes; and dispel the myth that some youth do not need or will not be able to succeed in college.

College Retention and Completion

While this publication primarily focuses on programs that help youth graduate from high school prepared to enter college and careers, access represents only part of the story. Getting in the door to college does not necessarily equal college completion, and many students drop out of college before completing a degree or certificate. Although recent efforts to expand access to postsecondary education have yielded positive results, today's college students face myriad academic, economic, and social challenges that affect their chances for success in higher education. Nationally, college persistence and graduation rates leave much room for improvement, and the achievement gaps that exist between subgroups in the K-12 school system persist in the college years.

Policymakers and practitioners must bring college persistence and completion to the forefront of conversations regarding educational opportunity. The challenge is to figure out how to graduate more young people, across all racial, ethnic, and socio-economic groups, with degrees and certificates that enhance their long-term career prospects and earning potential.

Logic Model

Because the process of developing young people who are college- and career-ready is complicated and multi-faceted, AYPF has developed a comprehensive logic model to illustrate what it takes to prepare youth for postsecondary education, careers, and long-term success. This logic model is based on the information drawn from an analysis of the 23 effective programs included in this compendium. Rather than a trajectory with distinct phases, the logic model should be viewed as a fluid set of experiences and processes, allowing youth to continuously build their knowledge and skills, providing direction and support systems at every level, and incorporating choices and multiple opportunities for young people to shape their own pathways to success.

AYPF posits that if young people have access to a range of quality supports that lead to the attainment of foundational knowledge, skills, abilities, and personal resources, they will achieve positive outcomes at every stage of the educational and developmental process.

First, young people need a Foundation for Learning and Growth that consists of knowledge, skills, and abilities, such as academic content; academic success behaviors; technical, problem-solving, teamwork, and goal-setting skills; and college and career knowledge. Personal resources, such as motivation, self-efficacy, resilience, and financial support for postsecondary education, also play a crucial role in the Foundation for Learning and Growth.

The logic model holds that if young people possess this foundation, they will have a greater likelihood of achieving positive academic, professional, and personal outcomes across the short-term, intermediate, and long-term future. The short-term outcomes of the programs included in the compendium take place during the middle and high school years and measure academic performance, planning for college and careers, and the development of personal resources. Commonly measured indicators of success include improved academic performance, engagement in school, high school graduation, and planning for college.

Intermediate outcomes take place during the years of postsecondary education and occupational training, and include indicators of postsecondary academic performance (such as credit accrual or degree attainment), career-related outcomes (employment, wages, attainment of industry credentials), and the development of higher-level personal resources such as increased independence and maturity.

The long-term outcomes of the logic model are career success, civic engagement, and the capacity for lifelong learning. AYPF believes that the ultimate goal of any effort to help students become college- and career-ready is to develop economically independent adults, who are involved in their communities and civic life, and who value and participate in continuous learning.

There are many ways for youth to develop their Foundation for Learning and Growth and reach positive outcomes. Youth need a continuum of supports to develop their knowledge, skills, abilities, and personal resources at each level of the educational and developmental pipeline. Services and programs can be provided by many different individuals and types of organizations across the public and private spheres. Key providers of supports include the family and caregivers, schools, medical and social service providers, community-based organizations, private providers of academic support, employers, and institutions of higher education. Sometimes it is easy for youth to access these institutions and individuals, but in many cases youth need direction and guidance to such resources. Providers of education and youth services influence young people's trajectory by setting high expectations; serving as caring role models; providing guidance, counseling, and assistance in completing college applications; offering academic support through tutoring or enrichment activities; providing financial support through scholarships; and exposing youth to college, internships, work-based experiences.

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Our logic model shows the complexity of the process for youth to develop the foundational knowledge, skills, abilities, and personal resources required for success and helps to demonstrate that the path will be different for each young person. The logic model brings coherence to a complex process and can help policymakers and practitioners better understand how the entire process flows, how the various systems interconnect (or do not connect), and where supports might be missing.

Methodology in Selecting Evaluations

In selecting evaluations to include for analysis, AYPF looked for comparative, external, or third-party evaluations of programs that aimed to help youth progress along a pathway to postsecondary success and that touched upon some aspect of the logic model used in this publication. The scope of potential programs for inclusion was quite broad, spanning the fields of comprehensive school reform, career and technical education, expanded learning opportunities, college access, dual enrollment, and postsecondary student services. During this process, AYPF also sought out evaluations that were published within the past five years.

AYPF identified 23 programs for inclusion. All of the these program evaluations had a control or comparison group design, allowing researchers to examine the outcomes of the program participants relative to similar students or schools. Seven evaluations used an experimental, random assignment design, and the remainder used a quasi-experimental design with comparison groups. Some of the programs have longitudinal evaluations that followed former program participants for a number of years, whereas other studies examined short-term outcomes immediately following a one-semester or one-year intervention. A number of studies measured findings at the student level, allowing researchers to disaggregate data based on individual characteristics, while others only collected school-level data. Each profile provides an overview of the program; AYPF's analysis of the elements that may have contributed to the program's success; AYPF's Policy Takeaways, which are key points related to the program that AYPF believes can inform policy; an overview of the key findings; a description of the program and the evaluation methodology; funding sources; and contact information.

> These programs increase the number of young people who graduate from high school prepared to make informed decisions about education and training and ready to succeed in college and careers.

Elements of Success

A number of common themes that emerge in these profiles may contribute to the programs' effectiveness in improving educational, career-related, and developmental outcomes. Ten Elements of Success have been identified from the 23 evaluations. The Elements of Success are grouped into two broad categories: Programmatic Elements of Success and Structural and System-Focused Elements of Success. The Programmatic Elements of Success include factors related to the content and interactions that characterize young people's experiences in the programs, such as Rigor and Academic Support, Relationships, College Knowledge and Access, Relevance, Youth-Centered Programs, and Effective Instruction. Structural and System-Focused Elements of Success include factors related to the context and environment in which the programs operate, such as Partnerships and

Cross-Systems Collaboration; Strategic Use of Time; Leadership and Autonomy; and Effective Assessment and Use of Data.

It is worth noting that a few of the Elements of Success were repeatedly cited across the majority of the program evaluations. In particular, the areas of Rigor and Academic Support (cited 18 times), Relationships (cited 17 times), and Partnerships and Cross-Systems Collaboration (cited 13 times) appear to be important shared aspects of many effective programs promoting college- and career-readiness and success.

Outcomes

The programs included in this compendium have a positive impact on young people's preparation for postsecondary success at various stages of their educational, professional, and personal development. Broadly speaking, they increase the number of young people who graduate from high school prepared to make informed decisions about education and training and who are ready to succeed in college and careers. Participants in these programs are more likely to be engaged in school, take advanced courses, apply for financial aid, enroll in college, earn postsecondary degrees, and find employment. The most common outcomes measured in the compendium can be organized into the categories of Secondary-Level Academic Outcomes, Planning for College and Careers, Postsecondary Academic Outcomes, Career-Related Outcomes, and Developing Personal Resources.

The most commonly measured and observed findings were academic outcomes in middle or high school. Overall, 20 evaluations measured academic outcomes at the secondary level, and all 20 demonstrated evidence of effectiveness. Many of the programs in the compendium aimed to increase postsecondary access. Five evaluations specifically examined behaviors and contextual knowledge related to planning for postsecondary education, each of which had a positive impact in this area. Overall, 10 evaluations measured college-level academic outcomes, including enrollment, persistence, grades, credit accumulation, and degree completion, and nine demonstrated a positive impact. Only four evaluations measured career-related outcomes, and three demonstrated statistically significant impacts in this area. Nine evaluations measured outcomes related to the development of personal resources, at either the secondary or postsecondary level, and all nine demonstrated positive outcomes on at least one indicator.

Policy Recommendations

Policymakers at the national and state levels are in key positions to help create an overall framework and expectation of college- and career-readiness for all students. They can help establish system-wide goals, based on the long-term outcomes identified in the logic model, and hold all the various providers accountable for meeting those goals. Setting up common and long-term goals across programs and systems is a difficult undertaking, but moving toward shared accountability for youth outcomes, across various funding streams, should result in greater coherence and ultimately more resources targeted at a common challenge. This should also result in improved services for students, more comprehensive approaches, and fewer opportunities for youth to fall through the cracks as they transition from one program, system, or level to another. Finally, programs will be working toward the same goal, with the same framework, and each program will see how it fits into a larger whole.

Based on the review of the evaluations AYPF suggests the following general guidelines for policy:

■ Develop a comprehensive plan with various agencies, systems, and programs to ensure that a continuum of services, from middle school to college completion, is provided to all youth across the community, and that targeted services are made available to the youth who need them most.

■ Hold all providers accountable for shared outcomes that lead to career success, civic engagement, and the capacity for lifelong learning.

■ Support collaboration among providers to address the needs of students in a comprehensive manner by allowing greater flexibility in funding, reducing barriers to coordination, and supporting the role of intermediaries that help to pull services and providers together.

■ Ensure that the full range of education and youth service providers, such as afterschool, alternative education programs, employers, colleges, community-based organizations, and social services, are involved as partners in the college- and career-readiness system.

■ Place a value on the attainment of not only academic skills, but also the full range of knowledge, skills, abilities, and personal resources that are necessary for career success, civic engagement, and lifelong learning. Promote the development and use of assessments that measure more than academic skills, including the competencies that are valued by employers.

> Policymakers are in key positions to help create an overall framework and expectation of college- and career-readiness for all students. They can help establish system-wide goals, based on the long-term outcomes identified in the logic model, and hold all the various providers accountable to meeting those goals.

■ Support initiatives that use time to increase learning opportunities that occur during out-of-school hours or that use the school-day hours differently with the purpose of adding time for learning and skill development in nonacademic areas. Some of these approaches could involve the blending of secondary and postsecondary learning opportunities to accelerate learning.

■ Ensure that youth who drop out of middle or high school have opportunities to reconnect to education programs that lead into college and career pathways, and that the programs are targeted to their needs and status.

■ Build the capacity of the adults within the various systems so they have a commitment to high expectations for all youth and the skills to provide high-quality services to young people based on their needs and interests.

■ Collect data from various systems over time to assess progress toward long-term outcomes and use the data to improve programs and services.

Closing

The process of preparing young people for college- and career-readiness is not an easy or quick undertaking, and many systems need to work together to provide the necessary supports and services to achieve this goal. The evaluations profiled in this compendium indicate many effective strategies to help young people during this process, which have informed the logic model and framework for college- and career-readiness. Using the logic model and the information gained from each effective program can help policymakers as they seek ways to improve the career success, civic engagement, and capacity for lifelong learning of all young people.

PART I

Setting the Stage: College- and Career-Readiness for All

A Logic Model for College- and Career-Readiness and Success

Research Notes

Setting the Stage:
College- and Career-Readiness for All

The Imperative for College and Career Preparation: Why Does More Education Matter?

During his first address to a joint session of Congress in February 2009, President Barack Obama emphasized the national priority to improve educational attainment. He stated, "In a global economy, where the most valuable skill you can sell is your knowledge, a good education is no longer just a pathway to opportunity. It is a prerequisite." Consequently, the President called on every American to pursue at least one year of postsecondary education. Yet the reality is that the educational pipeline loses far too many young people before they can even enter an institution of higher education or technical certification program, while an unacceptable number of college students find themselves under-prepared and lacking the resources to succeed in their chosen field. The inadequate level of college- and career-readiness of many youth bears significant consequences for their future success and well-being and for the economic health of the nation as a whole.

As the President acknowledged, obtaining a high school diploma is no longer sufficient for young people who hope to land a job that pays a family-sustaining wage in today's economy. Without some type of education beyond high school (including four-year college, two-year college, an industry certificate, or apprenticeship program), most young adults will find themselves out in the cold in the current labor market.

Postsecondary education plays an increasingly important role in economic mobility for youth from low-income communities, and the financial benefits of education for young adults have only risen since the 1980s.[1] In 2007, the median annual earnings of young adults with a bachelor's degree were $45,000 and those for individuals with an associate's degree were $35,000, compared to $29,000 for those with a high school diploma or its equivalent and $23,000 for those who did not have a high school diploma or equivalent degree.[2] Put another way, four-year col-lege graduates earn approximately a million dollars more over their lifetimes than those with only a high school diploma.[3] Higher levels of education translate to higher earnings for all racial and ethnic groups. In the knowledge-based economy of the 21st century, the returns from education will likely continue to rise.[4] By 2014, 22 of the 30 highest growth industries will require some postsecondary education.[5]

Beyond the obvious economic benefits, education is also associated with improved health and increased civic participation. The National Center for Education Statistics found that the higher a person's level of education, the more likely he or she was to report being in "excellent" or "very good" health, regardless of income.[6] Adults with higher levels of education are also more likely to vote than those with less education.[7] Moreover, the education of today's young adults bears significant consequences for the next generation, as parental education is a strong predictor of children's achievement, college-going rates, and future income.[8]

From a human capital perspective, the level of preparation of the workforce holds important implications for US employers. When young people enter the labor market unprepared, corporations often must invest in additional education and training for their employees. One study estimated the cost of remedial training in reading, writing, and mathematics for a single state's employers at nearly $40 million per year.[9]

Indeed, the country's future economic position depends in no small part on whether the United States will be able to keep pace with other nations in terms of preparing a highly skilled workforce with the knowledge and skills that are relevant to employers. Although the United States was once the international leader in the level of education of its population, it is now lagging behind other countries

1   National Center for Education Statistics, 2007.
2   National Center for Education Statistics, 2009.
3   Cheeseman Day & Newburger, July 2002.
4   Osterman, August 12, 2008.
5   Bureau of Labor Statistics, 2008.
6   National Center for Education Statistics, 2004.
7   Baum & Ma, 2007. In Bill & Melinda Gates Foundation, 2008.
8   Ibid.
9   Mackinac Center for Public Policy, 2000. In American Diploma Project, 2004.

in achievement and degree attainment. In the past decade, US college graduation rates have remained essentially static while other nations have made rapid progress, causing the United States to drop from first place to 14th in terms of degree completion.[10] In particular, the United States' poor performance in math and science, as compared with other industrialized nations, poses alarming implications for the country's global economic competitiveness. The results of the 2006 Program for International Student Assessment (PISA) show that 15-year-olds in the United States rank 25th of 30 nations in math literacy and 24th in science literacy, and the United States also has greater income-based achievement gaps than the highest-performing nations.

The achievement gaps between the United States and other countries, as well as those between groups within the United States, limit the nation's productivity. According to estimates by McKinsey & Company, if the United States had closed the international achievement gap over the last 15 years and raised performance to the level of world-leaders Finland and South Korea, the US Gross Domestic Product (GDP) would have risen by 9 to 16 percentage points, for a gain of $1.3 trillion to $2.3 trillion. Closing the income and racial achievement gaps within US schools would have brought similar benefits; erasing the inequality between the performances of students with high and low socioeconomic statuses (SES) would have brought the GDP up an additional $400 billion to $670 billion.[11]

Raising the level of educational and career success of all youth is also particularly pressing in light of the changing demographics of US schools and labor markets. Although 78 percent of public school students were White in 1972, the proportion of White students had dropped to 56 percent by 2007. This change was largely a result of growth in the Latino student population, which experienced a fivefold increase over the same period and now represents 21 percent of all students.[12] The number of public school students who are English language learners grew by more than 50 percent between 1995 and 2005.[13] Nearly all large, urban school districts now enroll a majority non-White student body.[14] Closing the achievement gap, in many areas, is virtually synonymous with improving the performance of all students.

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10 National Governors Association, et al., 2008.
11 McKinsey & Company, 2009.
12 National Center for Education Statistics, 2009.
13 Editorial Projects in Education Research, 2009.

College- and Career-Readiness: A Distant Reality

It is not a secret that the US education system fails to prepare a large proportion of the country's youth for long-term success in postsecondary education and the workforce. National policy leaders have increasingly drawn attention to the dropout crisis and the poor performance of many schools, particularly those attended by low-income students and students of color. Some of the most illustrative statistics bear repeating, to appreciate fully the imperative to improve young people's chances to achieve their educational, professional, and personal goals.

Despite the importance of postsecondary education, many youth in the United States never even earn a high school diploma. Approximately one-quarter of all students do not graduate from high school in four years.[15] For the class of 2006, graduation rates hovered at 55 percent or lower for African American, Native American, and Latino youth, and that number dropped to 44 percent for African American males.[16] Across the educational pipeline, African American and Latino students lag approximately two to three years behind their White peers, in terms of achievement and graduation rates.[17] According to the Editorial Projects in Education Research Center, approximately 7,200 US students drop out of high school each day.[18]

Of the students who do graduate from high school, approximately two-thirds enroll directly in a two-year or four-year college, representing a substantial increase in the college-going population since 1980. However, this number conceals gaps based on income, race, and parental education level that have persisted over time. Low-income students are 23 percentage points less likely to enroll directly in college than high-income students, and the corresponding gap is 35 percentage points when comparing students with a parent who has obtained a bachelor's degree to those whose parents had no college experience.[19] Students' background characteristics also have profound implications for the types of institutions of higher education they are likely to attend; only 9 percent of the first-year students in the nation's top colleges come from families in the bottom half of the income distribution.[20] Additionally, a Manhattan

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15 National Center for Education Statistics, 2009.
16 Editorial Projects in Education Research Center, 2009.
17 McKinsey & Company, 2009.
18 Editorial Projects in Education Research Center, 2009.
19 National Center for Education Statistics, 2009.
20 National Center for Education Statistics, 2005.

What do we Mean by "College?"

When AYPF uses the term "college" in this publication, it means much more than the traditional four-year college experience leading to a bachelor's degree. The term "college" is meant to be inclusive of the full range of postsecondary education experiences that young people have. AYPF's definition of college includes traditional programs such as associate's, bachelor's, and graduate programs leading to degrees, but also includes shorter-term programs that lead to industry or apprenticeship certifications. We also include other high-quality postsecondary experiences that young people might have on their developmental path that allow them to accumulate college credit leading toward a certificate or degree.

Institute study found that only one-third of all high school graduates are qualified for admission to a four-year college, based on the their academic coursework and National Assessment of Educational Progress (NAEP) reading scores.[21]

In addition to low levels of college-readiness, young people are also leaving high school without critical skills and competencies for success in the labor market. Employers indicate that the level of preparation of many youth is inadequate for entry-level jobs in fields offering career ladders and pathways to a family-sustaining wage. Sixty percent of employers rate high school graduates' basic skills as "fair or poor."[22] In particular, recent surveys point to deficits in "soft skills" such as analysis, innovation, problem-solving, and effective communication, which some have dubbed "21st Century skills." According to Wagner,

"Young people who want to earn more than minimum wage and who go out into the world without the new survival skills [critical thinking and problem solving, collaboration across networks and leading by influence, agility and adaptability, initiative and entrepreneurialism, effective oral and written

communication, accessing and analyzing information, and curiosity and imagination] are crippled for life…. Parents and educators who do not attend to these skills are putting their children at an increased risk of not being able to get and keep a good job, grow as learners, or make positive contributions."[23]

In today's unforgiving labor market, youth who are high school dropouts, ex-offenders, aging out of the foster care system, English language learners, or students with disabilities have the hardest time overcoming labor market barriers, and are most likely to join the growing ranks of disconnected youth. An estimated 3.8 million youth ages 18-24, roughly 15 percent of the young adult population, are disconnected from both school and work.[24] The unemployment rate for youth ages 16-19 reached a 20-year high of 20 percent in July 2008, and summer teenage employment rates were reportedly at their lowest in more than 60 years.[25]

All young people need guidance to build the knowledge, skills, and social capital necessary to pursue postsecondary education and reach economic self-sufficiency. The K-12 school system, higher education, youth service providers, businesses, and communities all share the imperative to improve young peoples' chances of postsecondary success. Interventions across different systems have the potential to raise the level of academic preparation of all students, equip youth with the skills and qualities most valued by today's employers, and support the development of the personal resources necessary for success in postsecondary education and the workforce.

Framework for College- and Career-Readiness

Despite widespread acknowledgement that high schools need to prepare young people for postsecondary education and careers, there is no national agreement on a definition of college- and career-readiness. Debate continues over whether college- and career-readiness are the same thing, or whether preparation for college and careers require different skills and knowledge. At the heart of this debate lie efforts to counter a persistent cultural belief that many students are not "college material" and cannot handle rigorous academics, and therefore do not

21 Green & Forster, 2003.
22 Johnson & Duffett, 2002.

23 Wagner, 2008.
24 Annie E. Casey Foundation, 2004.
25 Bureau of Labor Statistics, in National Youth Employment Coalition, 2008.

need strong academic preparation during middle and high school. Another barrier to agreement is the underlying assumption that to succeed students only need academic skills, whereas in today's competitive world, students need a complex array of knowledge, skills, and abilities to navigate the economy and society. Lastly, in many education circles, there is the belief that the straight pathway to a four-year college degree trumps other options, which may devalue and limit young people's access to occupationally-oriented postsecondary certificate and degree programs in high-growth industries.

College- and career-readiness should be viewed in a broader context, acknowledging that every student needs a rigorous academic foundation and a wide range of skills; that there are multiple types of postsecondary options and careers available; and that interventions should be based on reaching the long-term goals of career success, civic engagement, and capacity for lifelong learning.

It is also important, in the discussion of college- and career-readiness, to recognize that youth will choose their own path in life, with some young people charging forward on a traditional four-year college pathway and others moving equally quickly to pathways that are more technically- or occupationally-oriented. In either case, policymakers and educators need to acknowledge that young people will make diverse choices (due to family background, economic needs, interests, and natural talents), and that some choices will blend college and careers, whereas others will focus predominately on one or the other. For example, the postsecondary education pathway required for a Certified Production Assistant or Registered Nurse will differ from that required for a college history professor or attorney. Each of these students is on a valuable pathway that can lead to economic independence, even though the types and levels of prerequisite education differ. Youth and their families should be able to wisely determine the professions, careers,

> For students to make informed decisions about college and/or careers that lead to long-term prosperity, they need rigorous academics, college and career planning, supports to meet their needs, and opportunities to develop employer-desired skills and personal resources.

and vocations they wish to pursue rather than having a particular path dictated to them because of the failure of the school system to provide the "right" gateway courses or offer sufficient information and counseling in the college admission and financial aid processes, or to dispel the myth that some youth do not need or will not be able to succeed in college.

For students to make informed decisions about college and/or careers that lead to long-term prosperity, they need rigorous academics, college and career planning, supports to meet their needs, and opportunities to develop employer-desired skills and personal resources.

AYPF strongly supports a common baseline academic foundation for all high school students, regardless of whether they plan to pursue a technical career soon after high school, intend to earn a higher-level degree, or intend to do both at some point. Youth need opportunities to develop technical skills and other employer-desired skills to help them on their pathway to a solid economic future, and they need to be supported to develop college knowledge, career awareness, and the personal resources to succeed. Lastly, the young people that must work or choose to work right after high school graduation (often due to family circumstances), or that have left school and returned to education and training, should have opportunities to develop the necessary knowledge, skills, and abilities so that they are equally prepared to enter postsecondary education when their circumstances are more favorable.

In this section, the various aspects of college- and career-readiness are discussed. In closing, AYPF's definition of readiness for college and career success is provided.

Do College- and Career-Readiness Really Mean the Same Thing?

Researchers have examined the convergence between the knowledge and skills needed to become college-ready and career-ready. According to a 2006 study by ACT, comparable levels of preparation in reading and mathematics are required for success in both credit-bearing college courses and workforce training programs focused on job-specific skills.[26] ACT defined workforce readiness by focusing on occupations that are projected to grow in the future, are likely to pay a family-sustaining wage, and are expected to provide potential for career advancement. Many

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[26] ACT, 2006.

of these jobs do not require a bachelor's degree, but they do require vocational training or some postsecondary education. The level of knowledge and skills required for entry-level jobs in these fields, based upon scores on WorkKeys, ACT's job skills assessment system, were compared with the ACT's College Readiness Benchmarks, or the minimum ACT test scores required to have a high probability of success in a first-year college course. The study found these thresholds for college- and career-readiness to be equivalent.

The American Diploma Project (ADP), an initiative of Achieve, Inc., the Education Trust, and the Thomas B. Fordham Foundation, has also found convergence around the skills that youth should possess in order to become ready for college or careers in high-performance, high-growth fields, according to their survey of leaders in K-12 education, postsecondary education, and the business sector. The ADP established a set of benchmarks based on the level of knowledge and skills required for entrance into such careers and credit-bearing college courses, and it stated that students who meet these standards will be prepared for success, whatever path they choose to pursue after high school.[27]

Moving beyond the findings of ACT and ADP, some argue that being career-ready requires an additional set of abilities usually not taught in high schools, particularly with regard to the skills employers want.[28] In a joint study of more than 400 employers across the United States, the Conference Board, Corporate Voices for Working Families, Partnership for 21st Century Skills, and the Society for Human Resource Management found that professionalism/work ethic, teamwork/collaboration, and oral communications were ranked as the three most important applied skills for new workforce entrants, yet employers rated the average high school graduate as deficient in these areas.[29] Youth from underserved communities are the least likely to have had opportunities to develop these skills during high school, if they have not been exposed to on-the-job learning opportunities, extracurricular activities, and leadership opportunities. Given that many young people

are neither taught employability skills in school nor have opportunities such as internships, apprenticeships, service-learning, or paid or unpaid work from which to learn these skills, it is not surprising that there is a gap between the skills employers want and the skills young people possess. The college- and career-readiness agenda needs to incorporate these skills more intentionally into school and learning opportunities for youth.

Lastly, because in today's economy the average person will have six to eight careers in his or her lifetime,[30] it is essential that young people develop foundational and transferable skills and knowledge that will help them navigate these future career transitions.

A Broader Perspective on College- and Career-Readiness

The traditional vision of college-readiness, which has for many students meant a focus on improved academic performance, may fail to fully capture the developmental process required for youth to enter, succeed in, and graduate from postsecondary education and training. Increasingly, researchers and policy analysts recognize that the necessary qualities for persistence in and completion of postsecondary education involve more than just academic components. A brief review of the multiple perspectives on what it takes for youth to become ready for postsecondary success helps to inform the logic model developed by AYPF (described in the following chapter) and helps explain why there is such a broad and diverse range of programs highlighted in this compendium. These necessary elements include cognitive and noncognitive skills, personal resources, college knowledge, and career awareness.

Cognitive and Noncognitive Skills

There is a significant research base that identifies high school academic preparation in core courses as a strong predictor of college success.[31] Recently, however, education leaders have sought to define additional indicators of college readiness beyond academic preparation to include "noncognitive measures." According to the Institute for Higher Education Policy (IHEP), "Noncognitive measures are used to evaluate such characteristics as adjustment, motivation, and student perceptions, which are not measurable using typical standardized tests."[32]

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27 American Diploma Project, 2004.

28 There are many variations on the lists of skills employers want, but a popular website lists the following top skills desired: communication, analytical, adaptability, interpersonal, organizing, problem-solving, professionalism, teamwork, integrity, responsibility, and willingness to learn, among others. From Hansen and Hansen, n.d.

29 The Conference Board & Corporate Voices for Working Families, et al., 2006.

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30 Remington, 2004.

31 Adelman, 1999.

32 Ramsey, 2008.

The Gates Millennium Scholars program, which aims to provide high-achieving, low-income, minority students with four-year college scholarships, represents an early implementer of noncognitive measures for college-readiness. The program incorporates noncognitive assessments into its selection process by rating students in eight categories that have been linked to successful outcomes for minority students, such as positive self-concept and successful leadership experience. The College Board has also initiated several research projects to identify higher education admission tools that are more relevant for the 21st century, including noncognitive measures.

Many other groups of policy advocates, educators, and researchers offer their own visions of the comprehensive set of knowledge and skills required for college and career success. Conley argues that a more comprehensive definition of college readiness should include "key cognitive strategies, key content, academic behaviors, and contextual skills and awareness."[33] "Key cognitive strategies" refers to the ways of thinking that are associated with college success, according to studies of college faculty members. These include intellectual openness, analysis, interpretation and problem solving. Conley differentiates "academic skills" (such as writing and research) from knowledge of core academic subjects. "Academic behaviors" associated with success include study skills and self-monitoring, or the ability to analyze one's own thinking and level of understanding. "Contextual skills and awareness" involve college knowledge, which refers to knowing about and understanding the college admission and selection processes, the options available to help pay for a college education, the academic requirements for college-level work, and the culture of college.

Academic Success Behaviors: Study skills and other effective learning habits, such as self-monitoring and discipline.

Departing from a slightly different perspective, the Partnership for 21st Century Skills presents a framework that defines core outcomes necessary for students to "succeed in work and life in the 21st Century," which shares similar components and offers some additions. The interconnected elements of this framework include "Core Subjects and 21st Century Themes; Learning and Innovation Skills; Information, Media, and Technology Skills; and Life and Career Skills." Core academic subjects are considered essential for all students, but the Partnership recommends that course content be augmented to include themes of increasing relevance in the global economy, such as "global awareness; financial, economic, business and entrepreneurial literacy; and civic and health literacy."

The Partnership's concept of "learning and innovation skills" reflects the same higher-order cognitive strategies that are promoted by Conley's model, such as critical thinking and problem solving, and it also adds an emphasis on creativity and innovation, along with communication and collaboration. "Life and career skills" include qualities such as initiative, leadership, flexibility, productivity, and social and cross-cultural skills.[34]

Personal Resources

"**Youth development** is defined as the ongoing process in which all young people are engaged and invested. Through youth development, young people attempt to meet their basic personal and social needs and to build competencies necessary for successful adolescence and adult life. It is an approach, a framework, a way to think about young people that focuses on their capacities, strengths, and developmental needs, and not on their weaknesses and problems. All young people have basic needs that are critical to survival and healthy development. They include a sense of safety and structure; belonging and membership; self-worth and an ability to contribute; independence and control over one's life; closeness and several good relationships; and competency and mastery. At the same time, to succeed as adults, all youth must acquire positive attitudes and appropriate behaviors and skills in five areas: health; personal/social; knowledge, reasoning and creativity; vocation; and citizenship."[35]

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33 Conley, 2007.

34 Partnership for 21st Century Skills, 2009.
35 Politz, 1996.

Youth have fundamental needs that must be met for the sake of their personal well-being, competency, and development. Lack of safety, mental and physical health problems, and economic hardship can all pose obstacles to their learning and growth. According to Maslow's hierarchy of needs, individuals must ensure that their physiological needs, safety, and desire for love and belonging are met before they can achieve their higher-order needs of esteem and self-actualization.[36] It is particularly important that programs and structures promoting college- and career-readiness recognize the out-of-school factors affecting vulnerable populations, such as youth who are homeless, in the foster care system, or recent newcomers to the United States.

Despite the growing recognition of a broader set of indicators and competencies that comprise college- and career-readiness, the leading perspectives do not address the personal resources necessary for success. A report by Child Trends highlights the intersections and points of divergence between the college-ready, career-ready, and youth development fields.[37] It finds that the three fields share many common goals, including an emphasis on many aspects of psycho-logical development, such as goal-setting and plan-ning, self-management, and motivational strategies. All three fields also maintain that youth need critical thinking, reasoning, problem solving, and lifelong learning skills, as well as social competence. But other critical elements recognized by youth devel-opment research, such as physical safety, positive mental health, resilience, flexibility, a strong moral character, creativity, and spiritual development, are seldom mentioned in the college- and career-ready literature.

The developmental needs of late adolescence and the passage into early adulthood make the postsec-ondary transition one of the most complex and chal-lenging times in many people's lives. According to developmental theorists, youth at this stage need to adapt to more demanding roles, and to identify their strengths, weaknesses, and the necessary skills to fulfill these roles. Youth disengagement from school during adolescence can be a function of a poor fit between the school environment and the adolescent's developmental needs. Zarret and Ecles note that personal self-efficacy, social skills, self-esteem, and coping skills play a critical role in a student's ability to successfully navigate the high school environment,

and interventions that foster these developmental as-sets may help students stay on track for college- and career-readiness. Since not all youth are provided equal opportunities to develop these key qualities and explore new roles, however, it is increasingly important for schools, postsecondary institutions, and other youth-serving programs to ensure that youth receive ongoing support for their social and emotional development at all stages.[38]

College Knowledge

In addition to having the necessary combination of knowledge, skills, and social and emotional develop-ment, students need to be able to navigate complex application, selection, and financial aid processes in order to attend college. Low-income and first-gener-ation college students often face particular challenges in making the step from readiness to enrollment, let alone persistence, in college. College access research typically identifies informational, financial, and social barriers commonly faced by students from underrep-resented groups.

> **College Knowledge:** An understanding of the complex college admission and selection processes, the options available to help pay for postsecondary education, the academic requirements for college-level work, and the cultural differences between secondary and postsecondary education.

Researchers have noted an overall mismatch between students' educational aspirations, academic qualifications, and their actual college-going rates. Many youth may be lost in the college admission process, and unaware of the necessary steps and recommended timeline to achieve acceptance. The Consortium on Chicago School Research at the University of Chicago found that only 59 percent of Chicago Public School students who said that they wanted to attend a four-year college even applied to a four-year institution during their senior year, and only 41 percent actually enrolled in a four-year col-lege.[39] Even high-achieving students with the quali-fications to attend selective institutions often failed to apply to four-year colleges or applied to colleges

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[36] Maslow, 1943.
[37] Lippman, 2008.

[38] Zarrett & Eccles, 1006. In Piha & Hall, 2006.
[39] Roderick & Nagaoka, et. al., 2008.

below their potential. Additionally, students from underrepresented groups often lack the social capital to understand the world of postsecondary education, as they are less likely to have role models who have attended higher education and may have less collective college knowledge in their communities. Another challenge is that many students know it is important to go to college, but they know very little about their choices for postsecondary studies. As a result, many students aspire to attend a four-year college, but in reality have very little knowledge about the academic and social preparation needed to enter and succeed. Far too many students do not receive counseling on the range of postsecondary options or on finding a course of study that matches their interests and career aspirations.

The Consortium on Chicago School Research also found that attending a high school with a strong "college-going culture" was the most consistent predictor of whether students took the steps required for college enrollment, underscoring the importance of receiving timely information and assistance with the college application process. This impact was particularly strong for Latino students, many of whom may be first-generation college students.

Findings from a 2008 national survey of high school graduates and counselors by IHEP indicate that academically qualified students are also deterred by the high cost of college tuition and concerns about the availability of financial aid.[40] There may be a misperception that students and families cannot afford college costs, due to the complexity and lack of transparency of the financial aid process. The Consortium on Chicago School Research found that students who take the step to fill out the Free Application for Federal Student Aid (FAFSA) are much more likely to enroll in college than other students with equivalent qualifications and aspirations.

Career Awareness

Many of the same barriers to college access also affect young people's access to living-wage careers. Early paid work experience helps youth develop important employer-desired skills and has been linked to future career and educational success, but many youth are unable to find quality jobs that are both financially and developmentally rewarding. Informational and social barriers also affect a young person's job search and career planning process, and many

youth lack the social capital needed to navigate both formal and informal job networks.

The Alfred P. Sloan Study of Youth and Social Development found that low-income and minority youth often have difficulty identifying potential career opportunities.[41] However, the presence of adult role models that are employed in various fields helps youth identify specific job opportunities and career pathways. Many high school guidance counselors are not able to assist students with career exploration, assessment, and development, and are often unfamiliar with industry certification programs and work-based learning opportunities due to large case loads and the focus on college enrollment. If youth are not exposed to relevant information about current employment and training opportunities in either their communities or traditional school environments, it is all the more important for high school reform models, alternative schools, expanded learning opportunities, and dual enrollment programs to help participants make these critical connections.

AYPF's Definition of College- and Career-Readiness for Success

Given the broad construction of College- and Career-Readiness, AYPF has developed the following definition for use in this publication:

> **Readiness** means being prepared to successfully complete credit-bearing college coursework or industry certification without remediation, having the academic skills and self-motivation necessary to persist and progress in postsecondary education, and having identified career goals and the necessary steps to achieve them. Readiness also requires the developmental maturity to thrive in the increasingly independent worlds of postsecondary education and careers, the cultural knowledge to understand the expectations of the college environment and labor market, and the employer-desired skills to succeed in an innovation-based economy.

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40 Hahn & Price, 2008.   41 Schneider, 2008. In Lippman & Atienza, et al., 2008.

College Retention and Completion

While this publication primarily focuses on programs that help youth graduate from high school prepared to enter college and careers, access represents only part of the story. Getting in the door to college does not necessarily equal college completion, and many students drop out of college before completing a degree or certificate. Although recent efforts to expand access to postsecondary education have yielded positive results, today's college students face myriad academic, economic, and social challenges that affect their chances for success in higher education. Nationally, college persistence and graduation rates leave much room for improvement, and the achievement gaps that exist between subgroups in the K-12 school system persist in the college years. Only about half of college students currently graduate within six years, with significantly lower rates for low-income students, students of color, and those at community colleges. Although approximately 60 percent of students at four-year colleges and universities earn a degree within this timeframe, only 32 percent of students entering public, two-year institutions receive a credential.[42] Only approximately 20 percent of low-income students of color earn any postsecondary degree. Alarmingly, Latino young adults have not made significant progress in college degree attainment over the last 30 years, while other groups have made substantial gains.[43] Moreover, today's youth are the first generation to be less likely to obtain a postsecondary degree than their parents.[44]

Behind the problem of low college completion rates lies the issue of low rates of student retention, also known as persistence, from year to year. Many students leave postsecondary education before beginning their second year. In particular, the retention rates at community colleges are low, with only one-half of first-time students at two-year colleges persisting to the second year, compared with three-quarters of students at four-year colleges.[45]

The reasons young people leave college range from personal factors, such as academic difficulties and financial hardship, to institutional factors related to the college environment. As McIntosh and Rouse articulate, "Students will perceive that the effort required to remain enrolled may not be worth the perceived benefits if the courses are not well taught,

if they do not feel well integrated into the institution, or if the institution does not provide adequate support."[46] The National Center for Education Statistics surveyed a national sample of students who left college within the first three years without earning a credential to examine the reasons for their departure. The study found that approximately one-quarter of students cited needing to work as the reason for leaving college, while 16 percent cited other financial reasons. A substantial number of students left college because of conflicts at home or personal problems (10 percent) or a change in family status (8 percent).[47]

College retention and completion is the next emerging issue in education that demands policy attention, as institutions of higher education must find ways to better support the success of their diverse student body. For too long educators have been content to measure college success by the number of students who enroll, the number of books in the library, or the number of research papers written by faculty. It is time to look at how students perform throughout the higher education system and to focus attention on what works to help more students graduate. Three programs that work with college students to keep them engaged and complete a certificate or degree have been included in this publication. It seems that the interventions that young people need to be successful in college are not so different from the supports they need in high school. The continuum of support needs to be extended and continued as youth gain increasing independence and responsibility in early adulthood.

> College- and career-readiness is only part of the equation that needs to be addressed to ensure the success of young people. College persistence and completion also need to be on the radar screen of policymakers and practitioners. The challenge is to figure out how to graduate more young people, across all racial, ethnic, and socioeconomic groups, with degrees and certificates that enhance their long-term career prospects and earning potential.

42　National Center for Education Statistics, 2004.
43　Gándara & Contreras, 2009.
44　OECD, 2006. *Education at a Glance 2006.*
45　National Center for Education Statistics, 2009.
46　McIntosh & Rouse, 2009.
47　Bradburn, 2002.

A Logic Model for College- and Career-Readiness and Success

"Readiness" for college and careers represents a complex undertaking and goal. It requires many different systems and providers that serve youth and their families to act with clear, consistent goals at the same time as they respond to the individual needs of each young person based on age, academic and personal development, and family circumstances. Because the process of developing young people who are college- and career-ready proves complicated and multi-faceted, AYPF has developed a comprehensive logic model to illustrate what it takes for youth to be prepared for postsecondary education, careers, and long-term success, based on information drawn from the 23 effective programs included in this compendium. This model is illustrated in **Figure 1**. Although AYPF does not intend to overlook the importance of a strong foundation in early childhood and at the elementary school level, this logic model focuses on youth at the stages of middle school, high school, postsecondary education, and early adulthood.

This logic model was constructed in the context of positive youth development, which recognizes that young people must develop skills and competencies in various and multiple domains in order to be successful as adults. No two adolescents are the same, and they need attention at different times in their lives, on different facets of their development, and in varying intensities, based on their personal circumstances. Rather than a trajectory with distinct phases, the logic model should be viewed as a fluid set of experiences and processes, allowing youth to continuously build their knowledge and skills, providing direction and support systems at every level, and incorporating choices and multiple opportunities for young people to shape their own pathways to success.

AYPF posits that if young people have access to a range of quality supports that lead to the attainment of foundational knowledge, skills, abilities, and personal resources, they will achieve positive outcomes at every stage of the educational and developmental process. As the programs in this compendium demonstrate, it is critical for youth to receive guidance from caring, competent adults in their lives, or to otherwise develop the resilience and motivation necessary to navigate their developmental journeys. With such guidance, most young people find their way. The challenge is that many youth face considerable barriers to college and career success, lack the guidance or coping skills to find the appropriate resources to help with the transition to adulthood, or do not know when, or even if, they need help. This logic model is based on the assumption that a young person will navigate this pathway much more smoothly with adult advocates and programs to provide guidance and match services and supports to various needs.

This logic model is also based on the expectation that the various providers of education and youth services (K-12, postsecondary, community, expanded learning opportunities, etc.) will work together to organize a comprehensive approach to ensure that young people are supported. The notion of partnerships across systems and programs suggests that each program or service provider shares some responsibility for the healthy development and success of each young person.

We introduce the logic model by providing vignettes of how three fictitious students with differing life situations move through the pathway to college- and career-readiness, relying on a diverse range of individuals, organizations, and interventions to help them achieve a necessary foundation of knowledge, skills, abilities, and personal resources.

> AYPF believes that the ultimate goal of any effort to help students become college- and career-ready is to develop economically independent adults, who are involved in their communities and civic life, and who value and participate in continuous learning.

Examples of the Logic Model in Action: Vignettes

In order to demonstrate how diverse youth connect with the necessary inputs of the logic model and progress through positive short-term and interme-

diate outcomes, three fictitious accounts of young peoples' experiences on the pathway to college and career success are presented below.

Student A

Student A is in the 12th grade in a well-respected high school with a rigorous, college-preparatory curriculum. Her grades are mostly As and Bs, though she struggles with math. In addition to receiving extra help from her teachers and her father, an engineer, she meets with a private math tutor once per week. Her parents both have four-year college degrees. They have been saving for her college tuition since her early childhood, have helped her to fill out financial aid applications, and have taken her to visit several college campuses. She has a good relationship with her college counselor as well as her English teacher, who both help answer her questions about the college application process. Her afterschool activities include playing on the basketball team, participating in school plays, and volunteering as a tutor for younger students. During the summers, she has worked and held internships, helping her to build teamwork, maturity, and self-esteem. She plans to attend a four-year college and major in psychology, with a long-term goal of working as a clinical psychologist. She feels academically prepared for college, but she is nervous about being on her own once she leaves home, and she is not sure who she will be able to turn to for help on a large university campus.

In this case, Student A has already benefited from the strong support of her family and the various services that she and her family sought out and would most likely benefit from assistance during the transition to college. Activities such as mentoring by a current college student, participating in a learning communities program or another cohort model for incoming students, attending a summer orientation, or receiving extra advising would help Student A build the self-advocacy skills needed to navigate the unfamiliar college environment.

Student B

Student B is in his first semester at a local community college. It has not been an easy path for him to get to postsecondary education, but he has benefitted from a number of supportive programs and a mother with high expectations. Like many of his peers, he was scoring below grade level on standardized tests at the end of middle school. Although he attended a high-poverty high school, his school had recently implemented a comprehensive reform initiative that included smaller learning communities based on career themes and more rigorous courses for all students. He developed a close relationship with several of his teachers, who helped him recognize his strengths, and also encouraged him to enroll in an afterschool tutoring program offered by a local community-based organization during his early years of high school. His mother made sure that he stayed on track with his assignments, and she participated in parent education workshops offered by the school to learn more about helping her son plan for college and careers and about student financial aid programs.

Student B began to think more seriously about higher education after he started participating in an afterschool college access program during his sophomore year. Through this program, which was offered through a partnership between his school district and the community college, he took a "college success" class on the college campus and met regularly with a mentor who was an alumnus of the same high school and had continued his education to earn a four-year college degree. Student B had always had strong technical skills, and his high school pre-engineering teacher helped him to explore different career fields in this area. He learned about interesting job opportunities and growing demand in the field of environmental technology and regulation. The summer before his senior year, he had the opportunity to intern in the environmental compliance department of a manufacturing firm. After he learned about the community college's associate's degree program in Environmental Technology, he set his sights on this goal. Student B received a federal Pell Grant, as well as additional financial aid from the college.

The transition to college has been difficult for Student B. The classes are very demanding, and he has trouble balancing his academic workload and his part-time job. Fortunately, he recently learned about a program for new students on his campus that provides extra tutoring and counseling, as well as workshops on time management and how to access college resources. He plans to continue on his path to the associate's degree, and he thinks he might even go back to school to earn a four-year degree after working in the field for a few years.

Student C

Student C attends an alternative high school, and she is four credits away from earning her high school diploma. Two years ago she dropped out of school,

because she was struggling with family and personal problems and was unable to keep up in her classes after missing so much school. She eventually moved out of her parents' house and started staying with an aunt. She got a job at a shopping mall, where she had a supportive employer and coworkers, and her self-esteem improved when they gave her increasing responsibilities and recognized her strong communication skills. She still wanted to earn her high school diploma, and when her boss told her about an alternative high school that offered a flexible schedule and helped older students get their diplomas, she decided to try going back to school. At her new school, she has a case manager who has connected her with mental health counseling and a free medical clinic, as well as a career counselor who has helped her learn about different career pathways. She has small classes and knows her teachers and peers well. Most of her classes have final projects instead of exams. Student C's school offers dual enrollment classes taught by high school teachers that are certified as adjunct college faculty, and she has already

earned eight college credits in Health Studies. She is planning to continue at the community college as a part-time student after she receives her high school diploma, and will continue working at her current job to help pay for college. Because of her personal skills and the knowledge she has gained from her life experience, she is interested in becoming a Certified Substance Abuse Counselor.

These vignettes illustrate how three young people have experienced the secondary-postsecondary transition. Through their trajectories, one can identify the multiple avenues, providers, and programs that have helped these youth attain the inputs in the logic model, and to achieve short-term and intermediate success. These personal glimpses of three diverse pathways provide a preview of the breadth of effective programs and interventions designed to help young people progress toward college- and career-readiness and access, as demonstrated by the AYPF logic model. (See **Figure 1** on page 14).

Figure 1: AYPF Logic Model for College- and Career-Readiness and Success

Foundation for Learning and Growth

Knowledge, Skills, Abilities
- Academic Knowledge
- Academic Success Behaviors
- Technical Knowledge and Skills
- Communication Skills
- Problem-Solving
- Critical Thinking Skills
- Social Skills and Teamwork
- Goal-Setting
- College Knowledge
- Career Knowledge
- Self-Advocacy Skills

Personal Resources
- Physical/Mental Health and Welfare
- Resilience
- Self-Esteem
- Motivation
- Independence
- Personal and Civic Responsibility
- Financial Resources for Postsecondary Education

Short-Term Outcomes: Secondary Level

Academic Outcomes
- School Performance/Achievement
- Progression
- Advanced Course-Taking; College Admissions Testing
- High School Diploma or GED

Planning for College and Careers
- Applications and Financial Aid Process
- College and Career Knowledge
- Aspirations

Personal Resources
- Health/Wellness
- Student Engagement
- Reduced Risky Behaviors
- Self-Efficacy
- Leadership and Recognition

Intermediate Outcomes: Postsecondary Level

Academic Outcomes
- Enrollment in Postsecondary Education
- Achievement
- Progression
- Persistence
- Degree Completion

Career-Related Outcomes
- Employment Status
- Earnings
- Occupational Degree/Industry Credential

Personal Resources
- Health/Wellness
- Student Engagement
- Reduced Risky Behaviors
- Self-Efficacy
- Independence
- Financial Responsibility

Long-Term Outcomes

Career Success
- Family-Sustaining Wage
- Career Ladders and Opportunities for Growth

Civic Engagement
- Connection to Social Fabric
- Responsibility to Others
- Participation in Democratic Process

Capacity for Lifelong Learning
- Ability to Return to Education/Training for Professional Advancement

The AYPF Logic Model

This section includes a description of the multiple components that comprise the AYPF Logic Model, including the Foundation for Learning and Growth, the expected short-term, intermediate, and long-term outcomes of comprehensive college- and career-readiness programs, and a description of the types of providers and services that play a role in helping young people achieve these outcomes. For a visual representation of this model, see **Figure 1**.

Foundation for Learning and Growth

In order to be prepared for college and career success, in accordance with AYPF's comprehensive definition of readiness, youth at both the secondary and postsecondary levels need a foundation of Knowledge, Skills, and Abilities, as well as a wealth of Personal Resources. The programs included in the compendium all address aspects of these important educational, professional, and personal characteristics. Following is a description of the various skills and attributes that lead to success.

Knowledge, Skills, and Abilities (KSA)

The KSA category contains the fundamental types of academic, career-related, and contextual learning skills that are critical to educational and professional advancement. All young people need a strong base of **academic knowledge**. At the secondary level, this knowledge can be promoted through a rigorous core curriculum at all levels, along with opportunities for students to reinforce mastery and review key concepts. Although content knowledge is deepened and refined at the postsecondary level, students may also need continued opportunities to review and apply basic principles and skills. Academic knowledge must be combined with **academic success behaviors**, such as study skills and other learning habits that allow youth to meet the demands of postsecondary education. These strategies can be taught and practiced in the classroom and through expanded learning opportunities, as well as in "college success" classes at the postsecondary level.

Today's youth also need to develop **technical knowledge and skills**. Information technology skills are now basic requirements for virtually all occupations, and well-prepared young people use technology to access, consume, and present a vast amount of material. In order to be prepared for occupational and technical certifications or degrees, youth also need technical skills and abilities in broad career clusters. Good oral and written **communication skills** are needed by every citizen today, regardless of whether one becomes a health information technician, database administrator, or attorney, and the ability to express ideas articulately and precisely serves as a signal of preparation and professionalism. Students should have the opportunity to develop, practice and refine their **problem-solving** abilities and **critical thinking skills**, as these higher-order cognitive strategies are essential assets in an innovation-based economy. **Social skills and teamwork** involve the ability to work effectively with diverse groups of people toward a common goal.

In order to personalize academic and career-related learning, and to place it in the context of one's future plans, youth of all ages must engage in a process of **goal-setting**. Students at the secondary level must develop **college-knowledge**, including the information needed to navigate the college planning, admission, and selection processes, as well as **career knowledge**, such as awareness of various occupational fields and career pathways, exposure to the working environment and components of different jobs, and an understanding of future labor market prospects. Beyond high school, navigating the world of postsecondary education and vocational training requires the **self-advocacy skills** necessary to make one's way in an environment that requires greater independence and self-direction.

Personal Resources

Young people also need to develop a crucial foundation of **personal resources**. The goals of college- and career-readiness cannot be achieved without attention to young people's **physical and emotional needs**, ranging from health to housing and safety. During adolescence, youth must build the resilience to confront challenges and develop the positive **self-esteem** and **self-efficacy** necessary to stay on track toward their goals. Young adults also need opportunities to develop the maturity and **independence** to assume personal responsibility for their actions and make positive decisions, as well as to understand their role in a broader social context. Finally, postsecondary education and training require substantial investments of **financial resources**, and youth at the secondary and postsecondary levels need to determine how they will support their education, whether through scholarships, financial aid, paid work experience, and/or parental support.

Short-Term Outcomes—Secondary Level

AYPF posits that if young people receive various supports to develop this Foundation for Learning and Growth, they will have a greater likelihood of achieving certain short-term outcomes at the secondary school level. The programs included in this compendium serving middle or high school students have demonstrated effectiveness in helping youth achieve success in at least one of these outcome areas.

For middle and high school students, there are several indicators of important **academic outcomes**. These outcomes include, but are not limited to: passing one's classes, maintaining good grades, accruing credits, being promoted on-time, enrolling in advanced courses, and ultimately obtaining a high school diploma or GED.

There are also various ways to measure outcomes related to **planning for college and careers**. Some outcomes, such as the completion of applications for financial aid, are easy to observe, while other important outcomes include changes in students' college knowledge and career aspirations.

Finally, important measures of **personal resources**, for students at the precollege level, include reduced risky behaviors, improved health and wellness, increased student engagement and motivation, increased leadership and recognition for success, and heightened self-efficacy.

Intermediate Outcomes—Postsecondary Level

Moving along the pathway to success, key intermediate outcomes at the postsecondary level for students who successfully navigate high school have been identified. Successful completion of the components of college- and career-readiness at the high school level greatly improves youth's prospects for positive outcomes in postsecondary education, vocational training and employment, and personal development during early adulthood. The postsecondary level programs included in this compendium have demonstrated effectiveness in helping youth achieve success in at least one of these outcome areas.

Postsecondary education academic outcomes involve not only enrolling in college, but also persisting, progressing, and eventually graduating with a postsecondary degree or certificate. Measurable outcomes along this pathway also include passing placement exams and progressing beyond remedial courses, accruing credits, achieving good grades, passing one's classes, persisting from semester to semester, and retaining good academic standing.

Career-related outcomes include finding and maintaining employment and improving one's earnings after high school. This category also includes successfully completing postsecondary vocational training programs or apprenticeships, and earning industry-recognized credentials or degrees.

Important measures of personal resources during early adulthood include many of the same elements that are important during middle and high school, such as health and wellness, self-efficacy, and engagement in education. At this level, important indicators of maturity also include measures of independence and financial responsibility.

Long-term Outcomes

As referenced above, the long-term goals of the AYPF logic model are for all youth to achieve **career success, civic engagement,** and the **capacity for lifelong learning**. AYPF defines career success as employment that pays a family-sustaining wage, fulfills one's professional aspirations, and offers career ladders and opportunities for growth. Civic engagement, conceptualized broadly, allows an individual to feel connected to a larger social fabric and to develop a sense of responsibility to others, and empowers people to participate in the democratic process. The capacity for lifelong learning is the key to professional advancement and allows a person to return to education and training to gain new skills or prepare for a career change. Having gone through the experiences of preparing for postsecondary education, progressing through increasing levels of educational rigor, and developing learning skills, adults should feel competent to navigate the education and training universe on their own. The majority of program evaluations in the compendium do not demonstrate effectiveness in terms of long-term outcomes, as most are not designed to follow students for a long period of time, nor do they measure their performance in these items.

Building the Foundation for Learning and Growth: Providers, Supports, and Programs

As demonstrated by the vignettes at the beginning of this chapter, youth need a continuum of supports to develop their knowledge, skills, abilities, and personal resources at each level of the educational and developmental pipeline. **Figure 2** (page 18) illustrates the critical interactions between providers, supports,

and programs that help youth to build and sustain the Foundation for Learning and Growth and enable them to achieve the positive outcomes included in the logic model.

Important providers of education and youth services range across the public and private spheres, and include the numerous individuals, organizations, and schools that have the power to positively impact a young person's trajectory. Common types of providers, which are portrayed at the top of **Figure 2**, include families, schools, social service and medical providers, community-based organizations (CBOs), employers, private providers of academic support and enrichment, and ultimately, employers and institutions of higher education (IHEs). These important agents offer youth the types of supports and programs that are included in **Figure 2**. The web of providers and supports should ideally be differentiated based on each student's assets, needs, interests, and goals.

The background context of an adolescent's life, especially with regard to her family or caregivers, clearly impacts her development of personal resources. Many households ensure that young people are safe, healthy, and emotionally supported, and many parents are able to provide financial assistance with the costs of college. Some students also receive the majority of their academic support and assistance with goal-setting from role models in their own families who set high expectations and instill in them the motivation and self-efficacy needed to pursue higher education.
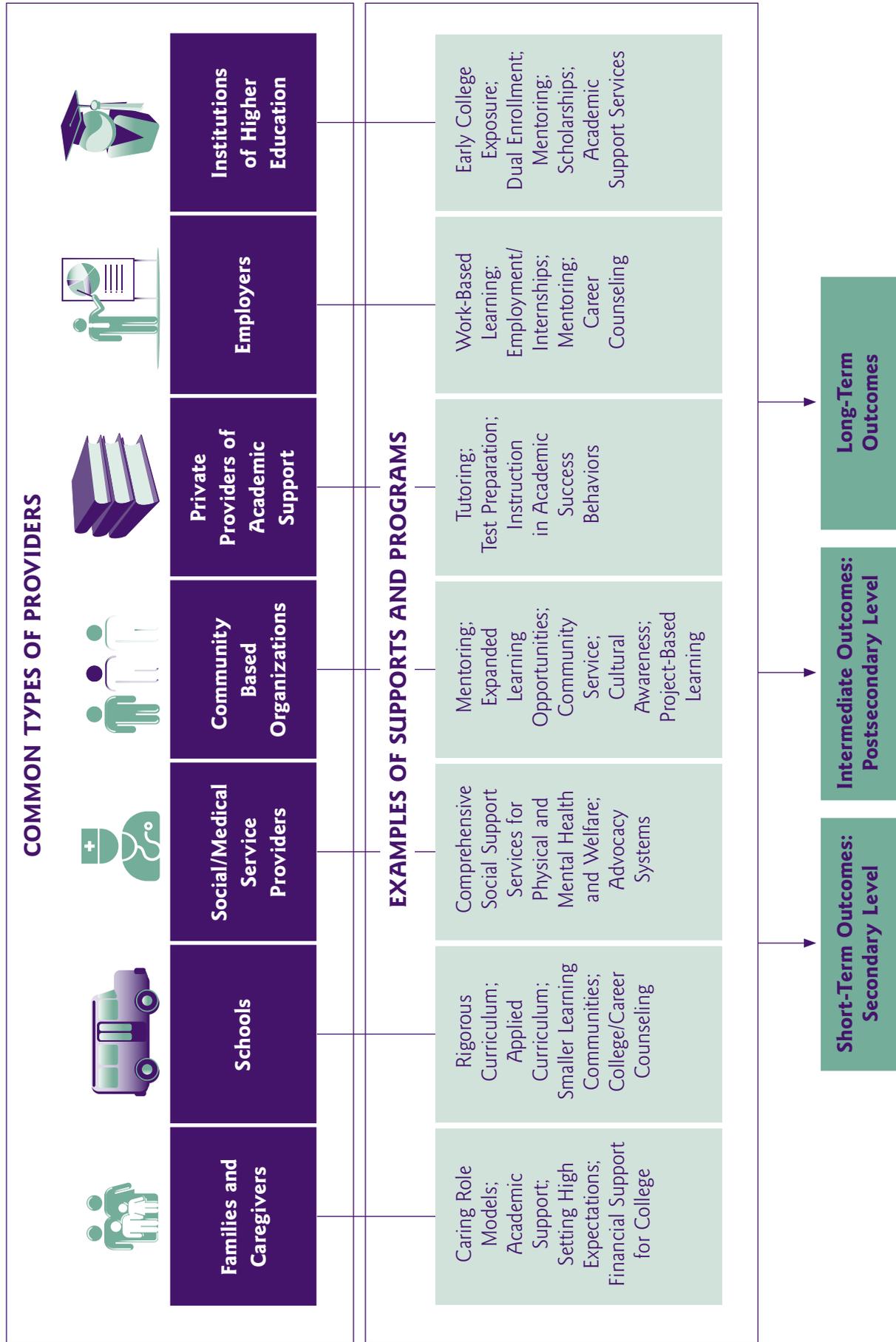
On an institutional level, schools have the greatest potential to foster the college- and career-readiness of all young people. In order to fulfill this mission, many effective programs provide a rigorous academic curriculum, personalize the learning environment through smaller learning communities, and ensure that all students receive college and career counseling. Schools cannot operate in a vacuum, however, and a comprehensive approach to student success acknowledges that many young people benefit from the assistance of other providers in their communities. Social and medical service providers assist families in ensuring that their personal, medical, and financial needs are met, and CBOs provide expanded learning opportunities that help young people build important skills such as teamwork, problem-solving, and critical thinking skills. For students from low-income communities and other groups that are underrepresented in higher education, CBOs contribute to the development of a college-going identity by offering mentoring, college application assistance, and scholarships. Some families rely on private providers of academic support, such as tutors and test-preparation programs, to help their children succeed.

Employers play a critical role in helping young people prepare for the next step, by providing opportunities for youth to explore career fields and develop long-term goals. Examples of important services include work-based learning opportunities, internships, mentoring, and career counseling. Finally, the role of IHEs cannot be overstated. Promising initiatives aim to connect the secondary and postsecondary learning environments, providing students with early exposure to college and enhancing academic and social support in the postsecondary transition. Such programs include dual enrollment opportunities, mentoring by current college students, and guarantees of financial assistance.

Figure 2 demonstrates the vast number of agents that contribute to the college- and career-readiness of each young person and the complex web of needed services and interventions. The diagram lists examples of the services commonly offered by various providers, but many providers can and do offer an extremely wide range of supports to young people. Because of the complexity of the process, collaboration between providers and across systems is crucial to helping youth navigate the pathway to career success, civic engagement, and the capacity for lifelong learning.

Figure 2: Building the Foundation for Learning and Growth

COMMON TYPES OF PROVIDERS

| Families and Caregivers | Schools | Social/Medical Service Providers | Community Based Organizations | Private Providers of Academic Support | Employers | Institutions of Higher Education |

EXAMPLES OF SUPPORTS AND PROGRAMS

| Caring Role Models; Academic Support; Setting High Expectations; Financial Support for College | Rigorous Curriculum; Applied Curriculum; Smaller Learning Communities; College/Career Counseling | Comprehensive Social Support Services for Physical and Mental Health and Welfare; Advocacy Systems | Mentoring; Expanded Learning Opportunities; Community Service; Cultural Awareness; Project-Based Learning | Tutoring; Test Preparation; Instruction in Academic Success Behaviors | Work-Based Learning; Employment/ Internships; Mentoring; Career Counseling | Early College Exposure; Dual Enrollment; Mentoring; Scholarships; Academic Support Services |

Short-Term Outcomes: Secondary Level

Intermediate Outcomes: Postsecondary Level

Long-Term Outcomes

Introducing the Types of Programs in the Compendium

The 23 programs profiled in this compendium represent the wide range of programs, schools, and educational models that support students' progress along the pathway presented by the AYPF logic model. These interventions serve diverse student populations through a range of learning environments, and the models are designed to target differing objectives and goals. In one way or another, they all help young people progress toward the ultimate goals of career success, civic engagement, and the capacity for lifelong learning.

Two of the programs in the compendium serve exclusively middle school students, with an emphasis on early preparation for college and careers.

Eight programs span the middle and high school levels. Some of these programs are comprehensive school reform or integrated student service models serving Grades K-12, though this compendium focuses on evaluations of their interventions at the secondary level. Other programs are college readiness and access initiatives or expanded learning opportunities that provide academic and social support that begin at the middle school level and continue through high school.

Ten programs serve only high school students. These programs also run the gamut from dual enrollment opportunities that simultaneously offer high school and college credit to afterschool programs focused on career exploration and the college admission process. Some constitute structural reforms while others offer new models of instruction and assessment, and their target populations range from high-achieving, low-income students to youth who have dropped out of school.

Finally, the compendium includes three programs operating exclusively at the postsecondary level. These programs demonstrate the role of initiatives designed to improve college retention and completion outcomes and serve to highlight the importance of the emerging issue of college success.

Methodology and Research Notes

This chapter describes the process by which AYPF identified program evaluations for inclusion in this compendium. It also presents a discussion of the challenges of data collection and program evaluation in the education and youth-service fields, along with steps that can be taken to improve evaluation research. The chapter closes with an explanation of the structure used to present the information in the program profiles.

Methodology

In Spring 2008, AYPF began an extensive search process to identify scientifically rigorous and third-party evaluations of programs and practices supporting college- and career-readiness for all youth. An extensive literature review enabled AYPF to outline pertinent research and evaluations on educational achievement and attainment gaps, barriers to postsecondary education, secondary school reform initiatives, and emerging approaches to college- and career-readiness for the 21st century.

To help identify evaluations, AYPF contacted a vast number of universities, research centers, and policy institutes that focus on school improvement, youth development, and college- and career-readiness. AYPF also tapped into its network of experts in the education and youth policy fields, including Achieve, the Alliance for Excellent Education, Education Trust, Jobs for the Future, MDRC, National Association of Secondary School Principals, National Youth Employment Coalition, and Pathways to College. An Advisory Group of national experts was convened to help determine the program selection criteria, identify potential evaluations to be included, and contribute to the policy recommendations (the list of Advisory Group members appears at the end of this publication).

AYPF looked for comparative, external, or third-party evaluations of programs that aimed to help youth progress along a pathway to postsecondary success, from middle school into college, in accordance with its logic model. Thus, the scope of potential programs for inclusion was quite broad, spanning the fields of comprehensive school reform, career and technical education, expanded learning opportunities, college access, dual enrollment, and postsecondary student services. Despite searching for evaluations across a wide spectrum of programs, only limited numbers of high-quality evaluations were found, for various reasons, which are cited below.

The scientific rigor of a program evaluation is primarily determined by its research design and the sample that is used. Studies that use a random assignment research design have long been considered the "gold standard" for high-quality program evaluation. When study participants are randomly assigned to treatment and control groups, all systemic, preprogram differences between the two samples disappear, and any differences in outcomes can be attributed to the impact of the program. Conducting randomized experiments with youth poses particularly challenging ethical issues, however, and is often not feasible. Researchers must be able to ensure that the control group is not denied crucial services or intentionally given an inferior education. A few notable large-scale, random assignment studies have been conducted in situations in which there are many more applicants to a program than available slots, and placement in the program is determined through a lottery process. Such evaluations provide strong, causal evidence of a model's effectiveness.

As an alternative to random assignment, many strong evaluations use a quasi-experimental design, with closely matched comparison groups, in order to control for as many initial differences between the program and comparison groups as possible. Although strong comparison group evaluations may control for a large number of variables, including participants' gender, race, ethnicity, age, prior academic achievement, family income, and parents' education levels, they still contain an inherent selection bias. Unmeasurable factors, such as the motivation to enroll in a particular program or school, may influence the outcomes. However, these studies can demonstrate a strong correlation between participation in the program and a particular outcome.

AYPF sought to include the most recent and high-quality research available, and all of the programs in the compendium have published an evalua-

tion in the last five years. In consultation with members of the Advisory Group and an external research consultant, the rigor of the research design was assessed, as well as the program's fit with the compendium's logic model. An effort was made to include a diversity of program models and target populations. AYPF conducted an 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 the material in the evaluations.

As a result of the evaluation review process, AYPF identified 23 programs for inclusion. All of the these evaluations had a control or comparison group design, allowing researchers to examine the outcomes of the program participants relative to similar students or schools. Seven evaluations used an experimental, random assignment design, and the remainder used a quasi-experimental design with comparison groups. These studies used a treatment group, comparison group, and multiple measures to compare quantitative outcomes, such as attendance, test scores, course grades, credits earned, college going-rates, financial aid application rates, and school suspension rates, for participants and nonparticipants. Some research designs relied on statistical matching procedures to ensure that the treatment and comparison groups were equivalent across a large number of variables, and some used particularly large samples. It is important to bear in mind,

however, that the greatest confidence can be placed in findings that emerge from studies where random assignment was used to create treatment and control groups.

Some of the programs have longitudinal evaluations that followed former program participants for a number of years, while other studies examined short-term outcomes immediately following a one-semester or one-year intervention. A number of studies measured findings at the student level, allowing researchers to disaggregate data based on individual characteristics, while others only collected school-level data.

Although the included evaluations represent a range of methodologies, they all provide strong examples of the best research available today regarding what works for youth. It is important to note that the field of education research is constantly expanding and evolving, and that this compendium's list of programs with demonstrated evidence of effectiveness represents a snapshot in time. AYPF recognizes that there are many other important and successful programs that have not been included in this volume, and that they may not yet have had the opportunity to engage in a rigorous, external program evaluation.

Challenges with Data Collection and Evaluation

There are various valid reasons why there are limited numbers of evidence-based evaluations of programs and practices related to improving college-and-career readiness. Many education and youth-serving programs lack the resources to contract third-party researchers to conduct independent evaluations, and many programs do not budget funding for evaluations. They may not have the capacity to develop or formulate evaluative research, given pressing time demands and limited staff. Some smaller and newer initiatives have observed exemplary results, but they are often unable to causally attribute their participants' success to the intervention because they have not yet undertaken a formal evaluation or have only one or two years' worth of data, which may not be enough to draw any conclusions.

Many programs are also unable to collect or use the full range of data (qualitative and quantitative) that are necessary for high-quality evaluations of their effectiveness. It is usually easier for programs to collect qualitative data, which provide important feedback from participants and provide an understanding of successful program elements and charac-

General Criteria for the Inclusion of Programs in the Compendium:

- The program serves youth in middle school, high school, postsecondary education, or career-related training.

- The program is considered to be a strong fit with the compendium's logic model.

- There is an independent (third-party) evaluation.

- An evaluation was published within the last five years (2004 or later).

- The research design includes a control or comparison group of similar youth who did not participate in the program.

teristics. Despite the value of qualitative data, programs also need to collect quantitative data, which provide more objective indicators of participant outcomes over a period of time. However, collecting quantitative data can be time consuming and expensive. Another challenge is that some programs do not disaggregate their data based on student demographics such as race and gender, and therefore are unable to determine their effectiveness in reducing achievement gaps between different groups of students.

The dearth of longitudinal data systems that track students through the transition from high school into postsecondary education and employment also limits the amount of information available. The K-12 and postsecondary education systems operate as separate silos, with little ability to link student records between the levels. The best-known exception is Florida's K-20 data warehouse, where all records from the state's public educational institutions are housed and which features the ability to track individual students through all systems with a unique student identifier. Through the American Recovery and Reinvestment Act (ARRA), the US Department of Education has provided incentives for all states to demonstrate progress toward establishing data systems tracking students from prekindergarten to college and careers. In many cases, however, it will be several years before such data is available for longitudinal research.

Programs that strive to prepare students for the workforce face particular challenges in assessing their effectiveness. Administrative records seldom link individual youth with employment outcomes, limiting the data on career-related outcomes. It can be very difficult to track youth after their relationship with the program ends, and many post-program surveys have low response rates. Additionally, the definitions of participants in occupationally-oriented programs can be inconsistent or unclear. States use different definitions of career and technical education (CTE), and some databases do not classify students by their high school program, meaning that identifying students as CTE concentrators, for example, is not possible.

The type of assessments and indicators that are available also limit the data collected by practitioners and researchers. A large number of the evaluations in this compendium reported data from state achievement test scores, likely because this information is the easiest to obtain and compare. Many of the programs in this volume also promote the develop-ment of critical thinking skills, social and emotional development, and academic success behaviors, but they generally lack valid and reliable assessments to determine whether youth are actually gaining these skills. In the absence of other reliable assessments, programs may track outcomes that are less aligned with what they are hoping to achieve. Fortunately, several national organizations are developing non-cognitive measures of college-readiness that reflect the nonacademic dimensions of postsecondary success that will be of use in assessing effectiveness in this area.

Finally, a focus on accountability and quantitative achievement gains in education should not lead programs to stop collecting qualitative data. A relatively small number of the evaluations in this compendium used qualitative data to investigate the characteristics of the programs' implementation that contributed to their effectiveness. AYPF recognizes the importance of collecting this data and encourages programs to increase their efforts and capacity to collect and analyze both quantitative and qualitative data.

Improving Evaluation Research

Throughout this compendium, the limited availability of high-quality research on programs supporting college- and career-readiness is noted. The lack of data collection and rigorous evaluation limits the knowledge base around effective practices, hinders improvement and innovation, and constrains the policymaking process. Because data and evaluation are so critical to identifying what works for youth, AYPF suggests the following steps be taken to improve educational research:

■ A comprehensive, national research agenda on education and youth issues should be developed so as to (a) determine which strategies and policies have resulted in the most benefit, for whom, and at what cost, (b) determine what types of research and evaluation are most useful to policymakers and practitioners, and (c) provide guidance to practitioners on how to initiate and use program evaluation for ongoing program improvement.

■ Funders, both public and private, should require and set aside funding for high-quality program evaluation as part of any grant and utilize and share findings to improve policy and practices. Funders should also help program providers learn

more about the importance and possible uses of data, and how to conduct quality evaluations.

■ 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 to hold programs accountable to serve students with special needs and close achievement gaps.

■ Longitudinal data collection that follows students through Grades K-12, postsecondary education, the workplace, across states, and across all types of programs is needed. AYPF commends the states that are moving to create such longitudinal systems. It is particularly important that data collection initiatives include systems for tracking the long-term labor market outcomes of youth, in addition to their educational attainment.

■ Research initiatives should include cost-benefit, cost-effectiveness, or return-on-investment analyses whenever possible. Such analyses provide important and compelling information to policymakers and key stakeholders who weigh competing priorities for investment, and these data have the potential to demonstrate both the personal and public benefits of college- and career-readiness interventions.

■ Policies should encourage and support the collection of both quantitative and qualitative data. Although quantitative data is often the ultimate factor in making decisions, without qualitative data, it is often difficult to understand why a program is effective or successful in serving certain youth.

■ Valid and reliable assessments designed to measure the nonacademic elements of college- and career-readiness, including noncognitive abilities such as critical thinking, should be developed. The federal government can lead this effort as a way to ensure consistency, and to reduce duplication of effort and cost.

■ Policymakers should encourage the development and use of program quality indicators as a part of program evaluation to encourage continuous program improvement.

Program Profile Format

AYPF designed this compendium to serve dual purposes: to demonstrate to policymakers the value of programs promoting college- and career-readiness for all youth and the need for policies that facilitate their creation and sustainability, and to provide information to practitioners on best practices in the field. There are 23 profiled programs in this compendium. Each profile is designed to give the reader an understanding of the program, to highlight its results, and to pinpoint the elements that appear to have led to its success.

Each profile of an evaluated program contains:

■ An overview of the program.

■ Analysis of the elements that may have contributed to the program's success. (See the Elements of Success chapter of this volume for a more detailed description of the 10 common categories of programmatic and structural elements that occurred most frequently across the included programs.)

■ AYPF's Policy Takeaways, which are key points related to the program that AYPF believes can inform policy. (See the Policy Recommendations chapter at the conclusion of the compendium for an overarching analysis of the implications for policy across the programs.)

■ Overview of key findings.

■ Findings in detail.

■ Program details: description of the program population and eligibility and key program components.

■ Overview of the evaluation(s).

■ Description of the evaluation population.

■ Information on the evaluation methodology.

■ Funding sources for both the evaluation and the program and information about program costs (when available).

■ Contact information for both the program and the researcher.

PART II

Elements of Success

Program Profiles

Elements of Success

Although the programs included in this compendium vary considerably, targeting diverse student populations through a range of learning environments, a number of common themes emerge in these profiles that may contribute to the programs' effectiveness in improving educational, career-related, and developmental outcomes. AYPF has identified 10 Elements of Success, which are derived from the 23 included evaluations, as well as from detailed information provided by program leaders and researchers. The Elements of Success are grouped into two broad categories: Programmatic Elements of Success, which include factors related to the content and interactions that characterize young people's experiences in the programs, and Structural and System-Focused Elements of Success, which include factors related to the context and environment in which the programs operate. Within these categories, the Elements of Success have been grouped into several thematic areas. Although the meta-analysis has found that these common factors are *correlated* with the effective programs featured in this publication, the research does not demonstrate that these specific factors have *caused* successful student outcomes.

Several recent analyses of secondary schools and programs serving low-income and minority youth have identified the key factors of "rigor, relevance, and relationships" that characterize high-performing initiatives. These factors have been widely touted as the new "3Rs"[48] of effective schools. Many of the evaluations in this compendium support previous findings about the "3Rs" of successful programs, but also illuminate other practices cited less frequently, but which may contribute to positive outcomes, such as youth-centered programming and initiatives that develop college knowledge.

It is worth noting that a few of the Elements of Success were repeatedly cited across the majority of the program evaluations. In particular, the areas of Rigor and Academic Support (cited 18 times), Relationships (cited 17 times), and Partnerships and Cross-Systems Collaboration (cited 13 times) appear to be important shared aspects of many effective programs promoting college- and career-readiness and success. This chapter highlights the 10 Elements of Success that emerged from the analysis of the featured programs, listed in order of the frequency with which each Element appeared across the evaluations. Following the discussion of the Elements of Success are short descriptions of three Programs to Watch, which illustrate promising approaches to one or more Elements of Success but were not included as full profiles due to limitations in their research base.

Programmatic Elements of Success

AYPF's analysis of the evaluations uncovered six programmatic Elements of Success that are shared by effective programs. These elements pertain to the thematic areas of Rigor and Academic Support, Relationships, College Knowledge and Access, Relevance, Youth-Centered Programs, and Effective Instruction. Descriptions of the Elements are provided below, along with a bulleted list of the specific terms used by practitioners and researchers that pertain to each Element. The discussion of each theme includes references to some of the programs that exemplify these Elements in diverse ways.

Programmatic Elements of Success
- Rigor and Academic Support
- Relationships
- College Knowledge and Access
- Relevance
- Youth-Centered Programs
- Effective Instruction

Structural Elements of Success
- Partnerships and Cross-Systems Collaboration
- Strategic Use of Time
- Leadership and Autonomy
- Effective Assessment and Use of Data

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[48] The "3Rs" of education traditionally referred to the basic skills of "reading, writing, and arithmetic."

Rigor and Academic Support

Terms used in the evaluations to describe Rigor and Academic Support include:

■ Rigorous curriculum

■ Culture of high expectations

■ Instruction in academic success behaviors

■ Tutoring and academic support services

■ Accelerated learning

Of the 23 programs AYPF reviewed, 18 explicitly cited an Element of Success related to Rigor and Academic Support. In order to build the knowledge base and academic skills necessary for college and career success, youth need challenging learning experiences, opportunities to practice academic success behaviors, and support to develop and increase their knowledge. Most of the programs that exemplify these Elements of Success provide a rigorous curriculum and ensure that instructional staff are prepared to support students participating in more demanding classes. KIPP has become well-known for its culture of high expectations and demanding academic program for middle school students, which includes large amounts of homework and reinforces positive academic behavior through a system of incentives and consequences. AVID encourages average- and lower-achieving students to participate in advanced, college-preparatory courses, and also includes an elective course that teaches a set of learning strategies and study techniques that students can apply across the curriculum. Upward Bound and Upward Bound Math-Science provide enrichment courses in core academic subjects through intensive residential summer programs.

Several of the programs that target lower-performing students emphasize a philosophy of accelerated learning or even "acceleration instead of remediation." These programs reflect the theory that students who are under-credited will benefit more from an intensive, challenging program that quickly gets them on track with the courses required for college, rather than placing them in a long-term remedial setting. Early College High Schools allow even low-performing students the chance to earn significant college credits through dual enrollment.

At the college level, the Opening Doors programs at Chaffey College and Kingsborough Community College also provide struggling students or those at risk of college failure with sheltered instruction in academic success behaviors. These "college success" courses focus on topics such as time management and study skills, and the programs also increase participants' access to the colleges' tutoring programs and resource centers.

Relationships

Terms used in the evaluations that relate to Relationships include:

■ Mentors and role models (peer and adult)

■ Personal relationships

■ Smaller learning communities

■ Advisory/advocacy systems

■ Teambuilding

■ Safe, supportive climate

■ Family involvement

Relationships were also mentioned frequently as core components of the programs in the compendium, as 17 programs exemplified an Element of Success in this area. Relationships with caring, competent adults and supportive peer networks are critical to youth engagement in education, and they facilitate the positive youth development opportunities necessary for successful transitions through middle and high school and into postsecondary education. The personalization of the school or program environment serves to motivate students, allows for earlier identification of problems and targeted support for social or academic challenges, provides positive adult role models, and facilitates the relationships between the school community and the students' families and caregivers. Supportive environments also facilitate cooperative and positive peer relationships, and young adult mentors from similar communities and backgrounds can serve as particularly strong examples of postsecondary success.

Due to the accumulation of evidence supporting the benefits of personalized school environments, smaller learning communities (SLCs) have been incorporated as a common element of many comprehensive school reform models, including First Things First and Talent Development. Many newer, small

schools, such as KIPP, Early College High Schools, and Diploma Plus schools, have intentionally limited enrollment to a few hundred students per grade. First Things First features a family advocate system, and Project GRAD includes an annual Walk for Success, in which school staff visit the home of every 9th-grade student to introduce the scholarship opportunity, provide early information about the college planning process, and encourage parents' commitment to the program.

National Guard Youth ChalleNGe acknowledges the impact of peer relationships on youth behavior and aspirations, and places a particularly strong emphasis on teambuilding through its structure of "platoons" and "squads." The residential experience strives to remove youth from societal distractions and to connect them with positive adult and peer role models. The postresidential community mentoring program helps youth to maintain their focus on their goals.

Personalization also contributes to student success at the postsecondary level. Digital Bridge Academy and the Opening Doors Learning Communities program at Kingsborough Community College represent cohort models that promote teambuilding, cooperative learning, and personal relationships with college faculty and staff.

College Knowledge and Access

Terms used in the evaluations related to College Knowledge and Access include:

- Early college exposure

- Physical program location on a college campus

- Earning college credits

- Increased college counseling

- Scholarships

- Financial aid assistance

Youth need early exposure to the world of college in order to develop a college-going identity and understand how the structures, opportunities, and demands of higher education differ from high school. It is also critical for young people to be able to turn to adults who can answer their questions about college, guide them through the admission process, and help them find ways to finance their education.

Twelve programs in the compendium demonstrated an Element of Success related to College Knowledge and Access.

Federal college access programs such as Talent Search help low-income students overcome informational and financial barriers to college. Talent Search projects offer workshops on financial aid and obtaining scholarships, increasing participants' likelihood of applying for federal financial aid. Washington State Achievers provides a strong example of a privately-funded program that provides early college outreach, increased college counseling, and the opportunity to earn a full college scholarship. The scholarship program uses an innovative selection process that includes assessments of noncognitive skills such as leadership and goal-setting, making the opportunity accessible for students whose grades are lower than those required for typical "merit" scholarships.

Several of the programs in the compendium acknowledge the importance of starting as early as middle school to develop college knowledge. GEAR UP features college campus visits beginning in the 7th grade, and Citizen Schools incorporates college tours and early college information into its 8th-Grade Academy. KIPP creates a college-going culture in part by decorating its schools with college banners and paraphernalia.

At the high school level, a number of programs involve partnerships between high schools and institutions of higher education to expose students to college coursework and orient them to the structure and expectations of these classes. Dual enrollment classes such as those offered in Florida and New York City allow students to earn high school and college credit simultaneously. Early College High Schools offer students from underrepresented groups the chance to earn an associate's degree or one to two years of college credit while still in high school. Diploma Plus provides dual enrollment pathways to connect former high school dropouts with postsecondary education. Some programs provide a particularly authentic college experience. The Upward Bound programs feature residential summer learning experiences, in which students live in college dorms and take classes from college faculty.

Relevance

Terms used in the evaluations that relate to Relevance include:

- Work-based learning

- Project-based learning

- Applied curriculum

- Financial incentives

- Connections to employment/internships

Nine program evaluations exemplified an Element of Success related to Relevance. Learning opportunities that offer clear, real-world applications allow youth to engage more deeply in their education, develop important employer-desired skills, enhance their technical abilities, and reinforce and supplement theoretical knowledge. Relevant programming can also engage students at risk of dropping out of high school by better tailoring their education and out-of-school activities to their interests, needs, and future economic advancement. The concept of relevance can be applied to activities that make academics more meaningful, as well as to programs that are relevant to the nonacademic aspects of young people's lives. The evaluations in the compendium demonstrate a variety of ways to provide relevant learning opportunities in multiple settings and contexts, and these programs have academic, career-related, and developmental benefits.

School-based initiatives that illuminate the real-world importance of the subjects learned in high school can enhance the relevance of academics. Career Academies provide an example of how schools can be restructured to emphasize the connections between the curriculum and students' long-term goals. Students choose to belong to an Academy focused on their preferred career field, and they take an integrated academic and occupational program of study based on the context of the career theme. Enhanced Math in CTE builds academic skills through contextual examples arising from CTE exercises.

"Life relevance" is observed in programs that take place beyond the school day or outside of the core curriculum and that provide young people with opportunities to gain work experience, explore a variety of activities and career fields, and serve their communities. After School Matters emphasizes workforce and youth development, providing low-income high school students with paid apprenticeships in the arts, sports, technology, and communications. Hillside Work-Scholarship Connection places youth at risk of dropping out in part-time jobs with local employers who have committed to mentoring participants, and the students who hold jobs have been found to maintain higher grades and be more likely to graduate. The financial incentives provided by such programs help to motivate students to participate regularly in these structured expanded learning opportunities and allow students to enjoy the tangible rewards of their efforts.

Youth-Centered Programs

Terms used in the evaluations related to Youth-Centered Programs include:

- Comprehensive social support services

- Individualized services

- Youth voice/decision-making

- Cultural/community awareness

- Civic engagement/community service

Programs should acknowledge their participants' unique assets, interests, and backgrounds, as well as the many out-of-school factors influencing each student's performance and well-being. Programs that recognize and honor students' cultures and communities have the potential to motivate youth and build self-esteem. Youth-centered programming also allows older students to make choices and to feel as if they have a voice in the leadership and decision-making processes of the schools and programs that they attend, in order to support their increasing need for independence and self-sufficiency. Nine evaluations specifically referenced an Element of Success related to Youth-Centered Programs.

Communities in Schools provides a strong example of an integrated student services model that connects students to a wide range of psycho-social, health, and academic service providers, based upon their individual needs. The entire student body benefits from a range of prevention and support services, such as afterschool programs and community health centers. Moreover, students with particular risk factors receive individualized, sustained services, such as substance abuse interventions and mental health counseling.

Citizen Schools draws upon local resources and promotes "community exploration" through the study of social justice issues, neighborhood visits, and cultural fieldtrips. Diploma Plus provides opportunities for increasing responsibilities and autonomy as students move through the program phases, with

an emphasis on civic engagement. Each program site involves a group of student leaders in school governance, and students in the Plus Phase design and complete a community action project. National Guard Youth ChalleNGe structures its program around the comprehensive principles of positive youth development, with the core curriculum covering themes ranging from physical fitness and health to responsible citizenship, community service, and life-skills training.

At the postsecondary level, Digital Bridge Academy features a project-based course in which participants conduct research on community needs and social justice issues, drawing on their own life experiences. Another core course in the Bridge Semester, the Team Self-Management Course, strengthens decision-making skills and fosters personal responsibility.

Effective Instruction

Terms used in the evaluations related to Effective Instruction include:

- Embedded professional development

- Team-teaching

- Professional learning communities

- Common planning time

- Low student-teacher ratios

Six programs in the compendium emphasized an Element of Success related to Effective Instruction. Ongoing professional growth for educators is critical to the success of school reform models, new school initiatives, and college-readiness programs. Implementing new instructional methods, changing school culture, and reorganizing school structures and schedules all depend on professional development and faculty support. Teachers require explicit opportunities to learn from their colleagues and allotted time to work together in order to make the curriculum more coherent for students. Lower student-teacher ratios facilitate effective teaching by enhancing classroom management and personalization, and allowing teachers to differentiate instruction.

Talent Development uses professional development to ensure that teachers are equipped to implement and maintain its reforms, with a particular emphasis on effective teaching and student support

during the 9th grade. Teachers in the Ninth Grade Success Academies receive extensive course-specific professional development and weekly curriculum coaching, and they have the opportunity to attend annual conferences for all schools in the network. AVID provides Summer Institutes for teacher and administrator teams from each school; participants are trained to lead professional development on AVID's philosophy and pedagogical techniques for their entire school community throughout the year. Enhanced Math in CTE relies on summer professional development that allows pairs of math and CTE teachers to collaborate in the development of CTE lesson plans with applied math content; the program also promotes ongoing common planning time for the math teachers to support their CTE colleagues. First Things First also incorporates common planning time for SLC teams and strives to limit student-teacher ratios for English and math classes. Upward Bound Math-Science offers a lower student-staff ratio than many other college access programs.

Structural and System-Focused Elements of Success

Effective programs serving youth at all levels of the pathway to college and career success benefit from an ongoing focus on building capacity, creating effective structures, and leveraging the resources of multiple institutions and sectors. AYPF's analysis of the program evaluations found that the four themes of Partnerships and Cross-Systems Collaboration; Strategic Use of Time; Leadership and Autonomy; and Effective Assessment and Use of Data, in that order, recurred as dominant structural elements of these programs.

Partnerships and Cross-Systems Collaboration

Terms used in the evaluations related to Partnerships and Cross-Systems Collaboration include:

- Institutional and community partnerships

- Secondary-postsecondary partnerships

- Employer partnerships

- Alignment between high school and postsecondary requirements

Thirteen evaluations directly mention an Element of Success related to Partnerships and Cross-Systems

Collaboration, making this the most frequently cited structural and system-focused component of the included programs and a key ingredient for initiatives that aim to move students along the pathway to college- and career-readiness. Effective partnerships between educational institutions and across sectors help young people bridge the gaps between the vastly different worlds of middle school, high school, post-secondary education, and the workplace. Colleges and universities play a key role in such initiatives, as their participation helps the K-12 system better align its curriculum with the level of preparation needed for success in higher education, provide accurate information about the admission and financial aid process, and offer authentic opportunities for students to develop college knowledge. Collaboration with other youth- and family-serving institutions in the community also allows programs to leverage existing resources and promote a continuum of care for young people, as demonstrated by the Communities in Schools model.

GEAR UP incentivizes collaboration by providing grants to partnerships between local school districts, institutions of higher education, and at least two other organizations, which include community organizations and businesses. College Now, the New York City program featured in the dual enrollment evaluation, reflects extensive collaboration between the New York City Public Schools and the City University of New York (CUNY). Most College Now classes are taught on high school campuses by faculty members who have been certified as adjunct instructors by CUNY. Florida exemplifies a state that has made significant progress in aligning high school and postsecondary curricula through the creation of a common course numbering system. More than 500 courses that can be used for dual (high school and college) credit in public institutions have been catalogued, providing a clear signal to students and educators about the level of rigor that constitutes college work.

Employer partnerships are critical to ensuring that high school courses with a career emphasis use a curriculum that is relevant to employer and labor market needs, and they also enable programs to offer work-based learning opportunities. Career Academies depend on employer partnerships as crucial components, and they often incorporate job-shadowing and apprenticeships in local businesses. After School Matters relies on partnerships between the City of Chicago, the Chicago Public Schools, the parks department and public libraries, and other community organizations that host apprenticeship opportunities.

Strategic Use of Time

Terms used in the evaluations related to Strategic Use of Time include:

- Block scheduling

- Alternative scheduling

- Longer school day and year

- Expanded learning opportunities

Twelve program evaluations referenced Elements of Success related to the Strategic Use of Time. Effective programs rely on structural changes that include reorganizing and expanding the time that young people spend in supervised learning environments, and they acknowledge the importance of the activities that youth engage in beyond the hours of the traditional school day. Many school reform models and programs call into question the effectiveness of the traditional high school schedule that involves seven or eight periods, proposing that many students need additional time in core subjects, such as math and English. Block scheduling with longer periods can also be used to increase opportunities for project-based learning and the real-world application of CTE skills. Expanding the amount of time that students remain with a particular group of teachers facilitates continuity of care and personalizes the school environment. Many programs and school models include additional academic support in the afterschool hours and on weekends, and expanded learning opportunities (ELOs) also have the potential to provide participants with important youth development experiences, such as internships, employment, civic engagement, and creative activities in the arts.

Both Talent Development and First Things First use block scheduling to provide students with double doses (typically 90-minute blocks) of core academic subjects. This structure allows Talent Development to offer a full year's worth of remedial coursework during the first semester, followed by a year's worth of grade-level, college preparatory courses in the second semester. Talent Development also offers an alternative schedule for its dropout recovery program, the Twilight Academy, with classes typically offered later in the day to accommodate students' work and personal schedules and to make learning

more accessible.

A defining characteristic of the KIPP model is an extended school day and year. The average school day lasts approximately nine hours, and all schools in the network provide half-day Saturday school on alternate weekends and at least three weeks of mandatory summer school. The extra time is viewed as a critical strategy for preparing students for the rigor of college-preparatory, high-quality high schools. Communities in Schools and GEAR UP are examples of school-based initiatives that also include academic support programs and college preparatory activities in the out-of-school-time hours.

Expanded learning opportunities, such as After School Matters and Citizen Schools, allow youth to explore unique learning environments beyond the school walls and develop skills not typically emphasized in academic courses. Both of these programs rely on partnerships with the public schools, reflecting systems in which expanded learning opportunities and school-based initiatives are mutually supportive and each provides a unique set of educational experiences.

Leadership and Autonomy

Terms used in the evaluations that relate to Leadership and Autonomy include:

- Strong/effective leadership of reform effort

- Extensive selection and training of leaders

- School-level autonomy

- District-wide/community-wide commitment to reform

- Active, long-term commitment by technical assistance providers

The implementation of systemic reforms that promote college- and career-readiness requires effective and sustained leadership. Several of the evaluations speak to the importance of strong and committed leaders at the school and district levels. Some program models specifically aim to influence school governance or to impact the selection and training of leaders, while others involve a particularly active role for technical assistance providers. Different school systems and models award leaders varying degrees of authority over human resources, budgets, scheduling, and instruction. Charter schools, in particular, typi-

cally provide principals with considerable autonomy. The diverse programs in the compendium demonstrate the potential of effective leaders to act as change agents, allowing youth-serving institutions to rethink the best ways to ensure college- and career-readiness. Eight evaluations emphasized an Element of Success related to Leadership and Autonomy.

The KIPP model exemplifies the considerable autonomy of leaders of charter schools and incorporates an extensive selection and professional development process for these administrators. New principals participate in a one-year fellowship program, which involves business and education courses at New York University. The Fellows that open new schools complete a long-term residency in which they shadow the leader of a high-performing KIPP school. Once leaders complete this process, they are fully responsible for hiring staff and establishing the curriculum for their schools. Principals of new schools may be able to avoid some of the internal roadblocks to change that affect existing schools by bringing on a team committed to the same vision and structure. As an example of a new public school that is allowed an extra degree of autonomy, Baltimore Talent Development High School is one of the City's "innovation high schools," which allows the principal a greater degree of authority over staff selection and professional development.

The First Things First evaluation attributed the model's high level of success in Kansas City, Kansas to the sustained commitment of district leaders, as well as to the level of involvement of outside technical assistance providers. Kansas City leaders maintained consistent, long-term support for First Things First as the district-wide reform strategy, which translated into the buy-in of principals at the school level. The Institute for Research and Reform in Education (IRRE) provided intensive, hands-on technical assistance during the early implementation at this site.

Effective Assessment and Use of Data

Terms used in the evaluations related to Effective Assessment and Use of Data include:

- Alternative assessments

- Performance-based assessments

- Continuous opportunities for student improvement

■ Data-driven instruction and decision-making

Although only five program evaluations explicitly referenced Effective Assessment and Use of Data, this Element plays a critical role in guiding instruction and ensuring high-quality programming. Innovative approaches to assessing student achievement have the potential to recognize skills, elements of knowledge, and indicators of improvement that are often missed by traditional assessment systems. Advancements in data collection and analysis offer teachers opportunities to monitor student progress on an ongoing basis and to target instruction and interventions to areas in which students are struggling. Data also provide a common language for all stakeholders, including teachers, principals, district leaders, students, and parents, to accurately and honestly assess areas that need improvement and to observe achievement gaps. Many school reform efforts have focused on enhancing the ability to link outcome data to teacher and school practices, allowing educators to gain a better understanding of predictors of student success. Data collection and program evaluation also inform decision-making and allow programs to continuously refine and improve their design. Program staff should be trained to use the findings of such evaluations to implement changes and improvements.

As an example of an alternative school model that utilizes nontraditional assessments, Diploma Plus emphasizes a competency-based approach to promotion, in which students progress through phases instead of grade levels. Participants complete portfolios and final projects to demonstrate their readiness to progress to the next phase. Combining data on student performance with a focus on organizational improvement, First Things First schools utilize a shared data management and analysis software program to evaluate each site's progress toward implementation of the model's core components. The program allows teachers and principals to link data from classroom observations to student outcome data in order to examine the impact of instructional changes.

The KIPP Foundation collects, analyzes, and publishes a large amount of internal data from all KIPP schools through its annual KIPP Report Card, and a new initiative tracks both academic and non-academic indicators of school health to specific practices in teaching and leadership. As an example of a program that has demonstrated a strong commitment to both formative and summative evaluation, Communities in Schools (CIS) launched a network-wide, mixed method evaluation that aimed to examine the model's impact, as well as to identify areas that could be improved. CIS contracted ICF International to develop the CIS National Evaluation in order to address a complex set of questions at multiple levels. The large amount of data collected through this evaluation allows CIS to make evidence-based decisions regarding their future direction and strategy.

Closing

Despite the breadth and diversity of programs supporting college- and career-readiness and success, careful analysis demonstrates that successful programs share a number of programmatic and structural features. The profiled programs exemplify strategically designed approaches to providing rigorous, supportive, and relevant learning environments rich in positive relationships, applicable college knowledge, and youth-centered programming. They also represent structural and systemic innovations, as many of these programs rethink traditional approaches to the use of time and data, and benefit from effective leadership and strong partnerships.

Educational administrators and leaders of youth-serving programs may wish to pay particular attention to the 10 Elements of Success highlighted in this compendium, and intentionally address these programmatic and structural components as they implement and evaluate their own initiatives.

Programs to Watch

Beyond the 23 programs included in this compendium, there are many more initiatives that help youth prepare for the future. AYPF reviewed a number of other programs that demonstrated some aspects of the logic model as well as innovative approaches to one or more of the Elements of Success. Three of these initiatives have been highlighted as "Programs to Watch." These programs do not have a comparative, external evaluation (in some cases because they are relatively new), but they offer important implications for policy and practice.

Admission Possible—
College Knowledge and Access

Admission Possible is a nonprofit college access organization that provides college planning assistance, along with academic and social support, to low-income students in the metropolitan area of Minneapolis and St. Paul, Minnesota, as well as in Milwaukee, Wisconsin. The afterschool program targets low-income high school juniors and seniors at 17 partner schools, serving a particularly large population of students from immigrant communities, including Hmong,[49] Asian, African, and Latino communities. Admission Possible offers a good example of a community-based program that provides a comprehensive approach to college knowledge and access.

Admission Possible aims to prepare students with motivation and talent to competitively apply for admission to four-year colleges by providing highly personalized support. The program focuses on four core activities: test preparation for the SAT/ACT college admission exams; intensive support in preparing college applications; help in obtaining financial aid; and guidance in the transition to college. Students participate in approximately 320 hours of afterschool programming during the 11th and 12th grades. The majority of the program staff members, or "coaches," are AmeriCorps members, and most are recent college graduates. Each coach leads a cohort of approximately 30–40 students, which is divided into smaller groups of 10–15 to provide opportunities for small group mentoring and facilitate personal relationships with participants.

This model of employing young, recent college graduates to mentor youth as they prepare for the transition to college may be a particularly effective and affordable way to provide more students from disadvantaged communities the intensive support needed to keep up with the college-planning process. Admission Possible graduates have a strong track record; an independent evaluation found that 91 percent of the class of 2005 enrolled in college the following fall, with more than 60 percent earning competitive scholarships.[50]

Virtual Enterprises Program—
Relevance

Virtual Enterprise Program (VE) teaches high school students about business through the opportunity to create and manage a virtual firm. Each class of students develops a business plan as a group, and it trades and competes with other "firms" (programs) across the United States and internationally. There are approximately 450 VE firms nationwide. This summary features the VE elective program in the New York City Public Schools, which includes 53 high schools.

VE is structured to provide students with realistic exposure to the business world. The VE classroom resembles an office, and students are divided into "departments," including Administration, Accounting, Sales and Marketing, Design, and Human Resources. Student tasks include creating a business plan and annual report, evaluating employees, developing a company website, managing payroll, implementing an accounting system, and creating a sales catalogue. The highlights of the VE experience are competitions with other local and national firms. Annual Citywide Business Plan Competitions and International Trade Fairs take place at the World Financial Center and involve as facilitators and judges employer partners, including Deloitte and Touche, Apple, Inc., *USA Today*, and HSBC Bank. The program also offers student internships, as well as opportunities for dual enrollment in related courses at six New York City colleges that partner with the program.

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49 The Hmong are an ethnic group from the mountainous regions of Southeast Asia, including Vietnam, Laos, Thailand and Cambodia.

50 McLain, L. (2006). *Admission Possible Evaluation Results*. Saint Paul, MN: Wilder Research. For more information see www.admissionpossible.org or contact Traci Kirtley, Chief Operating Officer, 450 North Syndicate Street, Suite 200, St. Paul, MN 55104; traci@admissionpossible.org

Programs to Watch (cont.)

VE demonstrates an innovative use of technology that provides youth with opportunities to learn employer-desired skills. A qualitative evaluation of 10 VE programs in New York City found that 84 percent of the participants believed that they can use the skills learned in VE for future employment, and more than 70 percent reported increased problem-solving, time management, and teamwork skills.[51]

Young Women's Leadership Charter School—
Effective Assessment and Use of Data

The Young Women's Leadership Charter School (YWLCS) is a small, public charter school for girls in Chicago that provides a college-preparatory curriculum focused on math, science, and technology. The school serves approximately 350 students in Grades 7-12, with a student body that is predominately African American and Latina.

YWLCS has developed an innovative model of student assessment based on proficiency, known as EASE: Equity and Achievement in a Standards-Based Environment. The model holds that an emphasis on opportunities for improvement and a positive focus on student achievement, along with clear learning objectives, will keep students engaged in school and ensure that they gain college-ready skills. Instead of receiving letter grades, student assessments are based upon the completion of learning objectives for each course, with continuous opportunities for students to improve their proficiency ratings through additional work and remediation in a particular area. The school's EASE web interface allows teachers, students, and parents to receive real-time data on a student's performance and to access an individualized listing of areas needing improvement. Teachers target afterschool and Saturday enrichment classes to the learning objectives in which many students have not yet achieved proficiency, and summer school courses are differentiated based on the specific areas in which a student needs improvement.[52]

YWLCS has higher attendance rates, graduation rates, and test scores than the neighborhood public high schools that its students would have otherwise attended, according to a Chicago Public Schools report on the performance of charter schools, and YWLCS graduates enroll in college at substantially higher rates than the district average.[53]

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[51] Hughes, K. & Golann, J.W. (2007). *When the Virtual Becomes Real: Student Learning in the Virtual Enterprises Program*. New York, NY: Institute on Education and the Economy, Teachers College, Columbia University. For more information about Virtual Enterprises, see http://www.veinternational.org/ or contact Iris Blanc, Director, Virtual Enterprises, International, c/o Martin Luther King High School, 122 Amsterdam Avenue, New York, NY 10023; iblanc@schools.nyc.gov.

[52] For more information about this assessment model, see Farrington, C. A. and Small, M.H. (2008, August). *A New Model of Student Assessment for the 21st Century*. Washington, DC: American Youth Policy Forum.

[53] Chicago Public Schools Office of New Schools, *Chicago Public Schools Charter Schools Performance for 2006–2007*. Chicago, IL: Author. For more information about YWLCS, see http://www.ywlcs.org or contact Co-Directors Michelle Russell, mcrussel@ywlcs.org, or Chandra Sledge, cdsledge@ywlcs.org, Young Women's Leadership Charter School, 2641 S. Calumet Ave., Chicago, IL 60616.

Program Profiles

After School Matters

Population Served	High school students from 63 public schools, with some offerings for students up to age 21. Approximately 11,000 youth participate each semester, and 7,000 participate in the summer.
Program Location	Chicago, Illinois
Type of Evaluation	Quasi-experimental study with student-level findings; participants were compared with nonparticipants from the same schools, and the evaluators controlled for student demographics and academic history.
Findings	Improved attendance and course-passing rates. Students with higher levels of participation had higher graduation rates and lower dropout rates than nonparticipants.
Elements of Success	■ Adult mentors ■ Work-based learning ■ Connections to internships ■ Financial incentives ■ Individualized programming ■ Institutional and community partnerships ■ Expanded learning opportunities

Program Overview

After School Matters (ASM) is a Chicago-based nonprofit organization that provides high school students with a variety of opportunities for work-based and project-based learning through paid internships in the arts, technology, sports, communications, and other fields. The mission of ASM is to create a network of out-of-school-time opportunities for teenage youth in underserved communities. The nonprofit organization partners with the City of Chicago, the Chicago Public Schools (CPS), the Chicago Park District, the Chicago Public Library, and multiple community-based organizations (CBOs).

ASM was founded in 2000, as the expansion of a successful arts-based job-training program for youth called gallery37. Chicago Public Schools requested ASM to work with youth in about 25 high schools with very low graduation rates in order to provide intense support services and help reduce dropout rates. ASM is also starting to target their services to schools with exceptionally low attendance rates.

ASM's work is based on the belief that by providing opportunities to youth to develop career skills and pursue their unique interests, the program will increase engagement in school and the community, positively impact participants' future goals, and build their social capital.

Key Findings

Overall, students who participated in ASM missed fewer days of school and failed fewer courses than similar classmates. Increased length and intensity of ASM participation were also associated with higher graduation rates and lower dropout rates.

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AYPF's Policy Takeaways

Community-Wide Partnerships: ASM provides a model of cross-systems collaboration, linking the public school system with many other citywide agencies and community-based organizations. It leverages multiple sources of public and private funding. Policymakers should consider ways to promote and expand such partnerships.

Scalability: ASM is an example of a program that has been able to reach a large number of youth across many schools in one city. Additional support for programs like this one, including the cost of stipends, could expand these efforts to reach even more young people at risk of dropout or school failure.

Duration and Intensity of Participation: The findings suggest that it is important for students to remain in the program throughout high school, as the positive effects on attendance and grades diminish after students leave ASM. Policymakers and administrators should consider strategies to provide incentives for long-term participation in expanded learning opportunities like ASM by building their capacity and increasing the range and diversity of program options they provide.[54]

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General Findings

- ASM Participants had higher attendance rates. Students who participated in ASM at the "Very High" level had the lowest number of school absences.

- Students who participated at the Very High level failed a significantly lower percentage of their core courses (10 percent) than similar Nonparticipants (16 percent).[55]

- Participants had higher graduation rates and lower dropout rates. The longer students participated, either by semesters or by days per semester, the more likely they were to graduate, and the less likely they were to drop out.

- Students with Very High participation levels were 2.7 times more likely to graduate than Nonparticipants;[56] students with High participation levels were 2.2 times more likely to graduate than Nonparticipants; students with Moderate participation levels were 1.6 times more likely to graduate than Nonparticipants, and students with Low participation levels were 2.2 times more likely to graduate than Nonparticipants.[57] The number of semesters of participation correlated positively with graduation.

- Similarly, students with Low, High, and Very High participation levels had significantly lower odds of dropping out of high school.[58]

- The positive effects of ASM participation appeared to diminish after students left the program. Within two semesters after leaving the program, former participants' rates of course failure and attendance were the same as those of Nonparticipants.

Program Details

Program Population

- Currently, ASM operates in 63 public high schools and more than 100 CBOs, serving about 11,000 youth each semester (spring and fall) and 7,000 students during the summer through 600 programs.

- All high school students in CPS are eligible to participate. Some offerings are also open to youth up to age 21, particularly for students with special needs or youth who are disconnected from school or work.

- Participants must complete applications and interviews.

- During the academic year, students must attend school on the same day in order to participate in an afterschool program.

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[54] This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

[55] Significance levels are not indicated. It is important to note that only 4 percent of ASM Participants were Very High Participators.

[56] Findings are statistically significant at the .001 level.

[57] Findings are statistically significant at the .001 level, at the .05 level, and .001 level, respectively.

[58] Findings are statistically significant at the .01 level with an odds ratio of .46, .41, and .30, respectively.

Program Components

■ ASM's programs include gallery37, tech37, science37, sports37, and words37, which offer paid apprenticeships in the arts, technology, science, sports, and communications.

■ During the academic year, apprenticeships take place after school for three days per week, for approximately three hours per session. Fall and spring apprenticeships last for 10 weeks each, while the summer program lasts for six weeks. Many students participate for multiple semesters. The apprenticeships are hosted at the schools, CBOs, and ASM's downtown campus.

■ The apprentices are taught by paid professionals. There are approximately two instructors per 25 youth.

■ ASM emphasizes teamwork, leadership, creativity, and job-readiness skills, with a particular focus on qualities such as punctuality and responsibility.

■ There are three tiers of apprenticeships, based on the ages of the participants:
  ❏ Pre-Apprenticeships teach basic job-readiness skills, and participants explore many career fields instead of committing to one apprenticeship. Pre-apprentices receive gift cards instead of stipends.
  ❏ Standard Apprenticeships are offered in the fields of arts, technology, sports, and communications, and each participant is paid a stipend of $450.
  ❏ Advanced Apprenticeships are for youth who have participated in the program for a longer period of time or have advanced skills in the apprenticeship field, and the stipends for these apprenticeships are slightly higher.

Cost/Funding

■ ASM receives 30 percent of its funding from its public partners, such as the CPS and the Chicago Public Library.

■ 51 percent of funding comes from "government" sources, which include grants from the City of Chicago and the State of Illinois.

■ 14 percent of funding comes from corporate

grants and fundraising, and 4 percent comes from foundation grants.

■ ASM provided funding for the Chapin Hall evaluation.

Evaluation of After School Matters

Evaluation Overview

The Chapin Hall Center for Children at the University of Chicago conducted a quasi-experimental study to examine the impact of ASM on school attachment and academic performance. The study compared the outcomes of students who participated in ASM (Participants) with those who applied to ASM and did not participate (Applicants) and those who did not apply and did not participate (Nonparticipants). The study tracked the short-term outcomes of attendance and grades during 2003, as well as the long-term outcomes of high school completion and dropout for a smaller cohort of students who began ASM in 2001. The researchers also disaggregated results based on the intensity of students' participation in ASM.

Evaluation Population

■ The study population included all 20,370 high school students attending the 24 public high schools operating ASM programs in Fall 2003.

■ The Participant group included 1,289 students. The group of Applicants (who applied to ASM but did not participate) included 1,982 students. The comparison group of Nonparticipants included 17,099 students.

■ The study also tracked the high school completion outcomes of the first cohort of students who had the opportunity to apply to ASM, from the 12 schools that operated ASM programs in Fall 2001. This subsample included 3,411 students.
  ❏ Of the 3,411 students in the subsample, 26 percent were participants, and the remaining students were either Applicants or Nonparticipants.
  ❏ The researchers noted that the original 2001 cohort of 3,411 students decreased to 2,854 by the end of the study, due to student transfers, incarceration, death, and other factors.
  ❏ Research staff at ASM noted the cohort comparison groups of participants, applicants, and nonparticipants may be subject to selection bias

due to student motivational levels; however, ASM staff emphasized that this was the first step in a quantitative analysis for ASM, and ASM is currently conducting a random assignment study that will eliminate selection bias.

Evaluation Methodology

- The treatment group (ASM Participants) was compared against the groups of students who applied to the program and did not participate (Applicants) and students who never applied to ASM and never participated (Nonparticipants).

- The researchers controlled for students' demographics, prior school attendance rates and course failures, middle school grades, and test scores.

- Data sources included ASM participation records for the 24 schools operating ASM programs during the three semesters from Fall 2002 through Fall 2003, as well as school records on attendance and course failures for Spring 2003 and Fall 2003.

- Graduation rates and dropout rates for the class of 2005 were collected from CPS for the smaller subsample of 12 schools.

- Results were disaggregated based on participation intensity levels of Low, Moderate, High, and Very High Participation, based on the number of days that students attended their apprenticeships. The researchers also disaggregated findings based on the total number of semesters that students participated in ASM (of a total possible eight semesters for the subsample).

Contact Information

Program Contact
Ray Legler, PhD
Director of Research and Evaluation
After School Matters
66 East Randolph Street, 4th Floor
Chicago, IL 60601
312-742-8502
Raymond.Legler@cityofchicago.org
www.afterschoolmatters.org

Research Contact
Bob Goerge
Chapin Hall at the University of Chicago
1313 East 60th Street
Chicago, IL 60637
773-753-5900
rgoerge@chapinhall.org

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Advancement Via Individual Determination (AVID)

Population Served	Students in Grades 4–12. AVID serves more than 4,000 schools in 45 states and 15 countries.
Program Location	Nationwide program. Evaluations took place in Texas.
Type of Evaluation	Analyses of school-level comparisons between 10 AVID and 10 non-AVID high schools, as well as student-level comparisons of matched AVID, GEAR UP, and control group students at two schools.
Findings	Improved scores on end-of-course exams and state assessments; increased likelihood of enrolling in advanced courses and completing a college-level curriculum; increased college knowledge.[59]
Elements of Success	■ Rigorous curriculum ■ Instruction in academic success behaviors ■ Tutoring and academic support services ■ Increased college counseling ■ Embedded professional development ■ Strong/effective leadership of reform effort

Program Overview

AVID is a college-readiness program designed to provide students from underrepresented groups with the tools to succeed in college-preparatory courses and enroll in four-year colleges. AVID takes a comprehensive approach that combines many components of student-centered outreach programs with systemic curriculum improvement and professional development. In other words, AVID integrates student-centered and school-centered strategies. AVID can be adapted to serve Grades 4-12.

AVID offers a set of pedagogical tools that can be implemented by teachers across all disciplines, as well as transferable study strategies for students. A hallmark of the model is the AVID elective class, in which students learn specific academic success behaviors, such as study techniques and critical thinking skills, and are provided with the tools necessary for managing the college entrance process. AVID students also enroll in their schools' AP and honors courses.

The model is based on the theory that all students can succeed in rigorous classes if they are given extensive academic and social support. By raising the number of students who complete college entrance course requirements, AVID aims to increase the enrollment of underserved students in higher education.

AVID was founded in 1980 in San Diego, and is currently being implemented in more than 4,000 schools in 45 states and 15 countries. Schools must adopt 11 essential program elements to be certified as an AVID site.

Key Findings

Overall, AVID participants had higher scores on end-of-course exams and state assessment tests, and were more likely to be on-track to complete a college-preparatory curriculum than nonparticipants at the same schools. AVID was associated with higher rates of enrollment in advanced courses, as well as higher levels of college knowledge. AVID schools improved their performance ratings at a greater rate than non-AVID schools, and more students in AVID schools took AP or IB exams than students in the comparison schools.

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[59] "College knowledge" refers to the contextual knowledge needed to understand the college planning, admission and selection process.

The findings in this section are drawn primarily from three evaluations by researchers at the University of Texas-Pan American, representing some of the most recent research on AVID. Several previous studies of AVID, primarily conducted in California and Texas in the late 1990s, have also demonstrated significant, positive results with regard to the college enrollment and college retention of AVID students. Key highlights from these previous studies will also be included at the end of this section.

Student-Level Findings

- AVID students outperformed their classmates at the same schools, as well as state averages, on end-of-course (EOC) exams in 9th-grade algebra and biology in 2000–02.[61]

- AVID students were more likely to pass the reading and math portions of the state assessment test than their peers at the same schools, and they outperformed statewide averages in 2000–02.

- Three years after program implementation, in 2002, AVID participants were more likely to be on-track to complete a college-preparatory curriculum than nonparticipants. 97 percent of AVID students were completing the high school courses necessary for admission to Texas colleges and universities by adhering to either the Recommended or Distinguished Graduation Plans, compared with only 62 percent of their peers at the same schools.

- When compared with students in the GEAR UP program[62] and comparison group students who did not participate in either AVID or GEAR UP, those who were in AVID had significantly higher rates of enrollment in advanced courses than either of the other groups.[63]

- Both AVID and GEAR UP students reported higher levels of college knowledge and higher educational aspirations than the students in the comparison group, although the differences were not statistically significant.

School-Level Findings

- All 10 AVID schools in the study improved their school accountability ratings during the period of 1999–2002. The improvements in their ratings outpaced the improvements seen at comparison

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60 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

61 The exception was the 2000 biology EOC exam, on which AVID students did not perform as well as other students in their high schools or in the state.

62 GEAR UP is a federally-funded program that supports states and partnerships that provide college outreach and information to entire cohorts of low-income students. See the profile of GEAR UP in this compendium for more information.

63 The difference is statistically significant at the .01 level.

schools.[64] AVID was not associated with an effect on district-level ratings.

- Although the AVID schools originally had lower percentages of students enrolled in advanced courses than the comparison schools (16 percent compared with 21 percent), they closed this gap (to 19 percent for both groups) by 2002.

- AVID schools also had higher rates of participation in AP and IB exams. In 2002, an average of 20 percent of students at AVID schools took AP or IB exams, compared with 15 percent in comparison schools.

Highlighted Findings from Earlier Research

- A longitudinal survey of 70 AVID graduates from California found high rates of continuous college enrollment in the first two to three years following high school (81 percent). More than 75 percent of survey respondents were enrolled in four-year colleges, which was three times higher than the state average.[65]

- In a study of AVID graduates from the San Diego Unified School District, Latino AVID graduates enrolled in postsecondary education at twice the national average rate, and African American AVID graduates enrolled at 1.5 times the national average.[66]

Program Details

Program Population

- AVID typically targets students with middle-range academic performance (with grades in the B, C, and D ranges), average to high test scores, and college-going aspirations.

- The majority of AVID students are low-income and potential first-generation college students.

Program Components

- The AVID Elective Course: Students participate in the AVID elective course for one period each day. The course uses the Writing, Inquiry, Collaboration, and Reading model, designed to increase students' active engagement with college-level material. Students learn trademark AVID study strategies such as Cornell Note-Taking. In addition to these enrichment and study skills, the course provides motivational activities that attempt to foster positive relationships with teachers, tutors, and peers.

- Rigorous Course-Taking: AVID students enroll in at least one Pre-AP, AP, IB, honors, dual enrollment, or other advanced course each year in middle and high school.

- Academic and Social Support: Students typically receive regular tutoring from college tutors, who also serve as role models for participants.

- Extensive Professional Development: Teacher and administrator teams from each AVID school participate in AVID Summer Institutes, held in various sites across the country, to learn how to implement AVID philosophy and techniques throughout their school. Additional professional development sessions focused on AVID pedagogy are provided regularly at the school, district, and regional levels.

- Leadership: AVID Site Coordinators lead the implementation of AVID structures and pedagogy at each school. They are responsible for coordinating student selection, the college preparation curriculum, tutoring, professional development, fundraising, and parental involvement.

- Parental Involvement: Parents sign a contract to support the AVID program requirements and attend parent meetings.

Cost/Funding

- The schools included in the Texas evaluations received federal funding to implement AVID through competitive Comprehensive School Reform (CSR) grants prior to the enactment of the No Child Left Behind Act (NCLB). After CSR funding ended, the

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64 On the Texas Accountability System's scale of 0 to 3, the average AVID school rating rose from 0.7 to 1.6; the average comparison school's rating rose from 1.0 to 1.1.
65 Guthrie & Guthrie, 2000.
66 Mehan & Villanueva, et al., 1999.

program was supported through local and state funds.

Evaluation of AVID

Evaluation Overview

Researchers at the University of Texas - Pan American have conducted several recent studies of the impact of AVID on student and school outcomes. A 2004 evaluation examined the impact of program participation on student achievement and course-taking in 10 Texas high schools. The researchers conducted descriptive analyses with a large data set, including one year of baseline data from 1999 and three years of data following AVID implementation. The outcomes of AVID students were compared with nonparticipants in the same high schools, as well as with state averages. The researchers also examined school-level outcomes including improvements in the schools' ratings on Texas Accountability System indicators.

The 2006 evaluation constituted an expansion of the 2004 study, using the same data from the 10 AVID high schools, and incorporated a comparison group of similar high schools and districts that did not implement AVID. The focal point of analysis was school-level, and the researchers analyzed AVID's effect on school and district performance.

A 2007 study investigated the impact of both AVID and GEAR UP on the college-readiness and educational aspirations of students in the 10th grade at two high schools in Texas' Rio Grande Valley region. The study was mixed-method and quasi-experimental, with data analysis at the student level.

Evaluation Population

2004 and 2006 Studies

- The study population included 1,291 AVID students from 10 high schools in five school districts, the majority of whom were in the 9th grade when AVID was implemented.

- AVID participants were 51 percent Hispanic, 25 percent African American, and 19 percent White.

- Three-fourths of AVID students were economically disadvantaged, and 60 percent were female.

- AVID students were disproportionately English language learners, at a rate of 52 percent, compared to the state average of 14 percent.

- 14 percent of participants were students with disabilities.

- 4 percent of participants were classified as Gifted and Talented, compared with 10 percent of all students in their schools.

2007 Study

- The full study population included 142 students in the 10th grade at two public high schools in a single school district in the Rio Grande Valley. One of the schools only had the AVID program, and the other school had both GEAR UP and AVID programs operating concurrently for three years. The schools were similar in size, demographics, and achievement profile.

- The AVID-only group consisted of 40 students from the high school that only implemented AVID; the comparison group consisted of 40 non-participants from the same school; the GEAR UP group included 40 students from the high school that offered both programs; and the GEAR UP/AVID group included 22 students from the school that offered both programs.

- All of the study participants at both high schools were Hispanic, and the majority of participants were female.

Evaluation Methodology

2004 Study

- Each school completed standardized AVID data collection forms each year, providing information on student demographics, attendance rates, test scores, course enrollment, and graduation plans for both AVID and non-AVID students.

- The researchers also examined Texas Accountability System ratings from 1999 and 2002 for each of the schools included in the study.

2006 Study

■ This study expanded on the methodology of the 2004 report by incorporating 10 comparison high schools in five districts that were similar to the AVID schools. Comparison sites were selected based on geographic proximity, school size, demographics, and accountability ratings, respectively.

2007 Study

■ The evaluation compared four groups of students in the 10th grade: those enrolled in AVID only, those in GEAR UP only, those enrolled in both programs, and a comparison group of those enrolled in neither program.

■ In order to indentify the sample of 142 students, the evaluators first randomly selected 40 AVID students at the AVID-only high school. The evaluators then constructed the additional groups based on the demographics of this primary group. The AVID-only students were individually matched with 40 non-AVID comparison students from the same school, as well as 40 GEAR UP students from the other high school, based on gender, 8th-grade course-taking, and 9th-grade academic performance.

■ All of the 22 sophomores who participated in both AVID and GEAR UP were also included in the study, constituting the GEAR UP/AVID group.

■ Survey and focus group data examined students' educational aspirations, expectations, college knowledge, participation in college activities, and the number of people students spoke with about college requirements and financial aid.

■ The researchers measured academic achievement by comparing first semester 10th-grade math grades, using students' first semester 9th-grade math grades as baseline data. Information about academic achievement was gathered from student records. The study also analyzed enrollment in advanced courses.

Contact Information

Program Contact
Dennis A. Johnston, PhD
National Director of Research and Evaluation
AVID Center, San Diego
9246 Lightwave Avenue
Suite 200
San Diego, CA 92123
858-380-4787
djohnston@avidcenter.org

Research Contact
Karen Watt
Associate Professor/Director of AVID Special
Research Projects Office
Department of Educational Leadership
The University of Texas Pan American
College of Education 2.504
1201 West University Drive
Edinburg, TX 78539
956-316-7072
watt@utpa.edu

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Career Academies

Population Served	High school students. There are more than 2,500 Career Academies nationwide, typically existing within larger high schools.
Program Location	National model. The evaluation took place in California, the District of Columbia, Florida, Maryland and Pennsylvania.
Type of Evaluation	Longitudinal experiment with random assignment of students to program and control groups. Outcomes measured at the student level.
Findings	Increased completion of the required credits for high school graduation; increased postsecondary employment rates and earnings. Increase in positive youth development activities at the high school level; increase in family formation and establishing independent households by eight years after expected high school graduation.
Elements of Success	■ Smaller learning communities ■ Adult mentors ■ Work-based learning ■ Applied and contextual curriculum ■ Employer partnerships

Program Overview

Career Academies are smaller learning communities (SLCs) organized around a career theme, usually existing within larger high schools. The Academies integrate academic and vocational curricula using the context of the career theme and usually provide work-based learning opportunities with employers and community partners. Career Academies aim to keep more students engaged in learning to increase graduation rates and to prepare students for success after high school.

The three main structural features of a Career Academy—employer partnerships, SLCs, and combined academic and vocational curricula—are intended to enhance the rigor and relevance of the high school curriculum by providing enriched learning, career awareness, and interpersonal supports.

There are more than 2,500 Career Academies nationwide, and the model has been used as a core component of many comprehensive school reform and redesign initiatives. Career Academies originated in the 1970s, and they were initially used as dropout prevention strategies aimed to prepare disadvantaged youth for the workforce. Changing perspectives on career and technical education (CTE) in the late 1980s brought an increased emphasis on Career Academies as a vehicle for both college preparation and career awareness, rather than direct job skill training, and the target population has expanded to include all students.

Key Findings

At the high school level, Career Academies increased all students' likelihood of completing the required credits for graduation and increased high-risk students' likelihood of staying in school and completing a core academic curriculum. Career Academy students were more likely to have participated in positive youth development activities. Across the full sample, Career Academies did not ultimately impact high school graduation or dropout rates.

At the postsecondary level, Career Academies produced a significant, sustained increase in former participants' earnings and overall months and hours of employment. These labor market impacts were particularly concentrated among young men and youth who had been in the high-risk subgroup. The former Academy participants also had higher rates of family formation and living independently, as opposed to with parents, by eight years after their expected high school graduation.

AYPF's Policy Takeaways

Long-Term Labor Market Benefits: This study provides strong evidence that Career Academies produce long-term financial benefits by improving postsecondary labor market prospects. The findings indicate that potential benefits are particularly high for young men and those at high-risk of dropping out of high school.

Family Formation: An unexpected positive outcome of this evaluation is the finding that participation in a Career Academy increases the likelihood that young adults will be independent from their parents, will marry, and will be custodial parents.

Benefits for the Most At-Risk Students. Participation in a Career Academy has the potential to raise the earnings of young men, particularly males at risk of dropping out, without any decrease in educational outcomes. Given that this population faces many challenges in terms of labor market attachment, Career Academies should be considered a key strategy to increase the financial independence of young males.[67]

High School Impacts

■ Across the full sample, Career Academy students were 6 percentage points more likely to complete the required credits for high school graduation.[68] The Academies did not ultimately have an impact on high school graduation or dropout rates, however.

■ High-risk students[69] in Career Academies demonstrated increased engagement and educational attainment during high school.
  ❏ The Academies doubled the rate at which high-risk students completed a core academic curriculum, raising this completion rate to 32 percent, versus 16 percent of the control group.

  ❏ Academy students in the high-risk subgroup were 14 percentage points more likely to complete the required credits for high school graduation.
  ❏ Academies reduced the dropout rate for high-risk students by 11 percentage points.

■ Academy students were more likely to have participated in a "positive youth development" activity in the prior year (such as volunteering, holding leadership roles, or receiving an award).

■ The Academies did not have a significant impact on reading and math achievement test scores.[70]

■ There was high attrition from Academies, as only 58 percent of those who were originally assigned to the Academy group stayed in the program through high school. This figure includes the 17 percent of the treatment group that never actually participated in the program.

■ Follow-up reports found that Career Academies did not have a significant impact on ultimate high school completion rates, based on receipt of a high school diploma or GED.
  ❏ The completion rates for both Academy and control group students were higher than the national averages, with approximately 84 percent of students in both groups earning a high school diploma and 10–12 percent earning a GED.

Labor Market Outcomes

■ The Academy students had higher average monthly earnings during the eight-year follow-up period, which were sustained across each year.
  ❏ The Academies raised participants' income by an average of $132 per month during the first four years after expected high school graduation, and this impact increased to an average benefit of $216 per month during Years 5–8 of follow-up.[71]

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67 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

68 Findings in this section are statistically significant at the .01 level unless otherwise noted.

69 The students in the sample were divided into three subgroups based on risk factors associated with dropping out of high school. More information on the specific factors used to make this designation is provided in the Methodology section.

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70 This result is based on a smaller subsample of 490 students, to whom the researchers administered standardized math and reading assessments.

71 The differences in this section are statistically significant at the .01 level unless otherwise noted.

❏ Over the eight years of follow-up after high school, the former Academy students earned an average of 11 percent more than the control group students.

■ The former Academy students were more likely to work in a field they studied in high school (39 percent) than comparison students (31 percent).

■ The impacts on earnings were concentrated among young men.
   ❏ Males from the Academy group earned 17 percent more, on average, than the control group across the eight years.
   ❏ The Academies also produced significant benefits for men in the number of months they were employed, the amount of hours worked per week, and hourly wages.

■ Young women from the Academies also had higher earnings than the control group, but the differences were not statistically significant.

■ Participation in the Academies had a particularly strong impact on youth in the high-risk subgroup, increasing the earnings of youth in this group by 17 percent.

Postsecondary Educational Outcomes[72]

■ The Academies did not have an overall impact on postsecondary enrollment or attainment.

■ Approximately 50 percent of both the experimental and control groups earned postsecondary credentials. This rate was nearly twice the national average.[73]

■ These trends were the same for male and female students.

Impacts on Family Formation and Independent Households[74]

■ Career Academies increased the likelihood that young adults would be custodial parents by 7 percentage points and increased the likelihood that they would live independently with children and a spouse or partner by 6 percentage points.[75]

■ The Academies decreased the likelihood that study participants would continue to live with their parents by 4.5 percentage points.[76]

■ The impacts on family formation were particularly strong for young men: their marriage rates increased by 9 percentage points,[77] and their rates of custodial parenting increased by 12 percentage points.[78]

Program Details

Program Population

■ There are more than 2,500 Career Academy programs across the United States, including both single programs and SLCs within large high schools offering multiple Academies.

■ The high schools included in the MDRC evaluation were located in the following districts: Baltimore City (Maryland), East Side Union (San Jose, California), Miami-Dade (Florida), Pittsburgh (Pennsylvania), Santa Ana (California), Socorro (Texas), Pajarro Valley (Watsonville, California), and Washington, DC.

■ These schools enrolled predominately Latino and African American populations.

■ The Academies served a range of students, including those at risk of dropping out as well as students with average or high achievement.

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[72] All findings in this section were observed at the eight-year follow-up data collection point.

[73] The national average rate of postsecondary completion was based on eight-year post-high school follow-up data from the National Education Longitudinal Study (NELS), 1988-2000. The comparison sample consisted of all students from urban, public, non-selective high schools in the NELS data, and the estimate was regression-adjusted to reflect a sample of students with the same background characteristics as the evaluation's control-group sample.

[74] All findings in this section were observed at the eight-year follow-up data collection point and occurred during the time that participants were approximately 22-26 years old.

[75] The difference is statistically significant at the .05 level.

[76] The difference is statistically significant at the .10 level.

[77] Ibid.

[78] The difference is statistically significant at the .01 level.

Program Components

The specific structures, themes, and elements of Career Academies vary widely, but their common, core components include:

- School-within-a-school organization: students take several classes each day with peers and teachers belonging to the same Academy. The Academies featured in the MDRC studies typically serve 150–200 students each. Academy courses are often block-scheduled during one half of the school day.

- Academic and vocational curricula focused on a career theme: students in the Academy typically take several academic courses and at least one vocational course associated with their Academy each year. The career themes typically cover industry sectors, such as Allied Health, rather than specific occupations.

- Employer partnerships: local employers provide work-based learning opportunities, such as internships, and career awareness and development activities, such as job-shadowing, field trips, mentorship, and guest speakers.

Cost/Funding

- Career Academies have been funded through multiple initiatives and networks. The California Department of Education provided funding for the development of 200 Partnership Academies in the late 1990s. The National Academy Foundation has received support from American Express and Citigroup.

- Most Career Academies are supported by regular public education funds, as well as federal Smaller Learning Communities and Comprehensive School Reform grants.

- The MDRC evaluation was funded with support from the US Department of Education and the US Department of Labor, along with 18 private foundations and organizations.

Evaluation of Career Academies

Evaluation Overview

The Career Academies Evaluation was a longitudinal, experimental study conducted by MDRC that spanned more than 11 years of data collection. This study examined the short- and long-term outcomes of a cohort of students from Career Academies and control groups from nine different high schools across the country. The evaluators randomly assigned applicants to Career Academies to either treatment (Career Academy) or control (non-Academy) groups at each school. The seventh and final report in this series (2008) analyzes the impact of Career Academy participation on former students' transitions to adulthood, after following students for eight years after expected high school graduation, and 11–12 years after participants entered Career Academies.

Evaluation Population

- The original sample included 1,764 students from nine schools. By the final data collection point, 1,428 study participants responded to the survey, representing 81 percent of the full sample.

- The majority of study participants were female (56 percent) and students of color. The sample was 56 percent Latino, 30 percent African American, 7 percent Asian, and 6 percent White.

- Fewer than 30 percent of study participants had a parent with any postsecondary education.

- A quarter of the participants' families received public assistance (welfare or food stamps).

- The majority of participants scored below the 50th percentile on 8th-grade assessment tests in math and reading.

- At the start of the study, 36 percent of the sample members had a GPA of 3.1 or higher; 38 percent had a 2.1–3.0 GPA; and 26 percent had a GPA of 2.0 or lower.

- All of the original youth in the study were tracked through follow-up, including those who dropped out of high school.

- At the time of the last report, most participants were about 26 years old.

■ All of the schools included in the study had implemented Academies for at least two years prior to the beginning of data collection. The target high schools were chosen to represent the diversity of Career Academy programs as well as the full implementation of the model's core components. They were drawn from most of the major networks of Academies, including the California Partnership Academies and the National Academy Foundation. The Academies in the study may not be representative of the full set of programs operating under the model nationally.

Evaluation Methodology

■ As each of the Academies in the study attracted more eligible students than they could enroll, eligible 9th-grade applicants were randomly assigned by a lottery process to the Academy (experimental) group and the non-Academy (control) group. Approximately 45 percent of the applicant pool was placed in the control group.

■ The sample was divided into three subgroups based on risk factors associated with dropping out of high school. The risk factors were selected based on both previous research and the findings from the study's control group, and included 8th-grade attendance rates and grades, prior grade retention, and having a sibling who had dropped out of school. The researchers grouped each student at the beginning of the study based on his or her estimated probability of dropping out, with specific weights assigned to each risk factor. The weights were empirically derived from the dropout rates in the control group.
  ❏ 25 percent of both Academy and control students were considered at "high risk" of dropping out.
  ❏ 50 percent were "medium risk." These students were not as likely to drop out, but they were likely to have low engagement in high school.
  ❏ 25 percent were "low-risk," meaning that they were more likely to be on track for graduation.

■ Quantitative data were obtained from high school transcripts, test scores, and surveys administered during high school and at three follow-up points after high school. The last survey was administered approximately 96 months after anticipated high school graduation.

■ Statistical regression analyses controlled for pre-existing differences in student backgrounds as well as the different high schools attended by participants.

■ The researchers examined the differences between experimental and control group outcomes at each data collection point, as well as the differences in outcomes for subgroups based on race, gender, and risk status.

Discussion

The sites included in this study had all reached a minimum threshold level of implementation of the Career Academies model. However, the researchers note that as Career Academies have been widely adopted, some programs have relied on only one or two of the model's individual components. *The researchers recommend that until further research examines the specific effects of each component, practitioners wishing to replicate the positive impacts observed in this study should implement the model with all three components in place.*

Contact Information

Research Contact
Corinne Herlihy
Deputy Director, K-12 Education
MDRC
16 East 34th Street
19th Floor
New York, NY 10016
212-340-8894
Corinne.herlihy@mdrc.org

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Citizen Schools

Population Served	Students in Grades 6-8 at participating middle schools. The program exists on 44 school campuses in 21 communities and serves approximately 4,500 students.
Program Location	California, Massachusetts, New Jersey, New Mexico, New York, North Carolina, and Texas. Evaluation took place in Boston, Massachusetts.
Type of Evaluation	Quasi-experimental, longitudinal study with a matched comparison group and outcomes measured at the student level.
Findings	Improved middle school attendance and academic achievement. Higher rates of selection and persistence in a high-quality high school; improved high school attendance and academic achievement, particularly in math. Improved rates of on-time promotion to the 10th grade; higher rates of on-time graduation than district averages.
Elements of Success	■ Tutoring and academic support services ■ Personal relationships ■ Early college exposure ■ Project-based learning ■ Cultural/community awareness ■ Institutional and community partnerships ■ Expanded learning opportunities

Program Overview

Citizen Schools (CS) provides educational enrichment, career exposure, and early preparation for high school and college through a structured extended day program in public middle schools. CS programs complement classroom learning by engaging students in experiential learning projects led by adult citizen volunteers and supported by a staff of professional educators.

The CS theory of change holds that an intensive afterschool experience during the middle grades, combined with enrollment in a high-quality high school, leads to increased academic success and engagement with school. By promoting active participation in the community, providing more time for learning, and enhancing connections to supportive adult mentors in a variety of roles, CS aims to enhance the relevance of the school experience and build a culture of achievement. CS was founded in Boston in 1995.

Key Findings

At the middle school level, participation in CS was associated with increased attendance rates, on-time promotion rates, and academic achievement in math and English language arts. Former participants in CS also outperformed similar nonparticipants at the high school level on many similar indicators; they were more likely to enroll and persist in a high-quality high school, had higher attendance rates at every grade level, and were more likely to pass their math classes at every grade level. English language arts outcomes were less consistent, though former participants outperformed nonparticipants on various indicators in the 9th, 10th, and 12th grades. Former participants had higher rates of on-time promotion to the 10th grade, and the outcomes of the first study cohort show that former participants had higher on-time graduation rates than the district average. Increased exposure to CS was associated with improved outcomes.

AYPF's Policy Takeaways

Exposure to College, Careers, and the Wider World: CS provides middle school students with the opportunity to visit college classes, explore structured apprenticeships across a range of careers, develop positive relationships with adult mentors in various fields, learn about their communities, and be exposed to new activities to broaden their horizons. This early exposure to new opportunities can help youth to set goals and raise their motivation to succeed in high school and beyond. Policymakers should recognize the importance of starting early to help students develop college and career aspirations and increase the opportunities for students to benefit from the wide range of resources in their communities.

Integrating School-Based and Out-of-School Learning: CS aims to complement and reinforce academic subjects with experiential and project-based learning opportunities outside the school walls and beyond the school day. At some schools, the last period of the day is used to integrate the traditional school schedule with CS programming, involving both regular teachers and CS teachers, and creating a more seamless transition between the two types of instruction. Policymakers can support such partnerships and alignment by ensuring that legislative frameworks and funding streams do not restrict collaboration.[79]

Outcomes from Grades 6–7[80]

- CS participation was associated with increased attendance rates for all 6–7th-grade students during their first year in the program.[81]

- First-year CS participants in Grades 6–7 were more likely to be promoted to the next grade than matched comparison students.[82]

Outcomes from Grade 8[83]

- CS 8th-Grade Academy participants had significantly higher 8th-grade attendance rates (92 percent) than nonparticipants (86 percent).[84]

- CS participants were 10 percentage points more likely to pass their 8th-grade English classes.[85]

- CS students' Massachusetts Comprehensive Assessment System (MCAS) scores were lower than district averages in 8th grade.

High School Selection and Persistence Outcomes[86]

- Former CS 8th-Grade Academy participants were more than twice as likely as nonparticipants to enroll in high-quality high schools. 59 percent chose high-quality high schools, compared with 28 percent of the nonparticipant group.[87]

- Former CS participants were significantly more likely to persist in a high-quality high school from Grades 9–11. Of the students who enrolled in a high-quality high school in 9th grade, 72 percent of the former participants remained in a high-quality school through the 11th grade, compared with only 41 percent of the nonparticipants.[88]

High School Attendance and Suspension Rates

- Former CS participants had significantly higher attendance rates in Grades 9–12 than the comparison group.[89] In the 12th grade, former CS participants had a 90 percent attendance rate, compared with 85 percent for nonparticipants.

- Across the full sample, there was not a statistically significant difference in high school suspension rates between former CS participants and nonparticipants.

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[79] This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

[80] This section summarizes findings from Phases I-IV of the evaluation.

[81] The differences are statistically significant at the .01 level.

[82] The difference is statistically significant at the .01 level for those with High levels of program exposure, and at the .05 level for those with Low exposure. The threshold for High program exposure was an attendance level of 60 percent; those below this level were designated as having Low program exposure.

[83] The findings reported in this section are drawn primarily from the 2008 report.

[84] The difference is statistically significant at the .01 level.

[85] Ibid.

[86] The findings reported in this section are drawn from the 2009 report unless otherwise noted.

[87] The difference is statistically significant at the .001 level.

[88] The difference is statistically significant at the .01 level.

[89] The difference is statistically significant at the .01 level for 9th-grade attendance, the .05 level for 10th-grade attendance, and the .01 level for 11th- and 12th-grade attendance.

■ The former CS participants with high levels of program exposure had significantly lower suspension rates in the 9th grade (4 percent) than matched comparison students (11 percent).[90]

High School Math Outcomes

■ Former CS participants had significantly higher pass rates in their math courses throughout each grade level in high school.[91] In the 12th grade, former participants had a pass rate of 85 percent, while nonparticipants had a pass rate of 70 percent, for a difference of 15 percentage points.

■ Former participants were significantly more likely to earn As and Bs in math in the 9th and 12th grades than nonparticipants.[92]

■ Former participants were 7 percentage points more likely to pass the math portion of the 10th-grade MCAS test than nonparticipants, and 13 percentage points more likely to score "proficient" or "advanced."

■ The former CS participants closed the achievement gap with district averages on the mathematics portion of the 10th-grade MCAS.

High School English Language Arts Outcomes

■ At the 9th-grade level, former participants passed their English classes at a higher rate than nonparticipants, by a difference of 13 percentage points.[93]

■ In the 10th grade, former CS participants earned As or Bs in English at a significantly higher rate than nonparticipants.[94]

■ Eleventh-grade former participants did not outperform nonparticipants in English.

■ At the 12th-grade level, former participants were more likely to pass their English classes and more likely to earn As or Bs in English.[95]

■ Former CS participants had higher proficiency rates on the 10th-grade English language arts MCAS test.

High School Graduation Outcomes

■ Former CS participants had significantly higher rates of on-time promotion to the 10th grade.[96] They also had higher rates of on-time promotion to the 11th and 12th grades, but the findings were not statistically significant.

■ Upon entering the 10th grade, former CS participants were more likely to be on-track for graduation than nonparticipants.[97] 63 percent of participants were on-track to graduate, compared with 51 percent of nonparticipants.

■ The four-year graduation rate for the cohort of CS students who were in 8th grade in 2002–03 was 75 percent. The district-wide four-year graduation rate was 58 percent.

Program Details

Program Population

■ CS serves students in the 6–8th grades in traditional public schools and public charter schools. All students in the participating middle schools are eligible for CS.

■ CS serves approximately 4,500 students at 40 school campuses, and engages 3,800 adult volunteers each year. The organization plans to serve 60 campuses by 2012.[98]

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90 This finding is from the 2008 report. The difference is statistically significant at the .05 level.
91 The difference is statistically significant at the .001 level for 9th grade, the .01 level for 10th grade, and the .001 level for 11th and 12th grades.
92 The difference is statistically significant at the .05 level.
93 The difference is statistically significant at the .01 level.
94 Ibid.

95 Ibid.
96 Ibid.
97 The researchers used an on-track indicator based on the indicator developed by Allensworth and Easton (2005, 2007) to determine a student's likelihood of graduating from high school. Students were considered "on track" if they were promoted to the 10th grade on time and did not fail a core math or English language arts class in the 9th grade. This indicator was found to correctly predict graduation rates 71 percent of the time.
98 American Youth Policy Forum, 2009.

- The CS program exists in 21 communities in California, Massachusetts, New Jersey, New Mexico, New York, North Carolina, and Texas.

- According to Policy Studies Associates, CS recruits students at risk of academic failure.

Program Components

- Expanded Learning Opportunity: CS expands learning time by 40 percent through its extended day program and adds approximately 400 hours of structured learning time to the academic year.

- Teaching Force: Many CS teachers are paid AmeriCorps volunteers who make a two-year commitment to the program.

- Apprenticeships: Students participate in experiential learning projects led by volunteer community members from civic institutions, community groups, and the business sector. The apprenticeships take place twice per week, and each apprenticeship lasts for one semester. They culminate in public "Wow!" presentations, in which participants demonstrate a final product from their apprenticeships.

- Academic Support: Students participate in 60–90 minutes of supervised homework help each day.

- Community Exploration: Youth are exposed to the world outside the classroom and challenged to think in new ways. On-campus explorations include dancing classes and hunger awareness campaigns; off-campus explorations include visits to universities, neighborhoods, museums, and nature centers.

- The 6th-grade School Navigation Curriculum: Each week begins with a 60-minute program designed to teach study skills, including organization and how to ask for help.

- The 7th-Grade Success Highways Curriculum: 7th-grade students participate in a weekly motivation- and confidence-building curriculum that incorporates assessments, classrooms activities, and social interactions.

- The 8th-Grade Academy: The final phase of the program assists students with choosing, applying to, and preparing for high-quality high schools and provides early college information. The program includes family events and high school fairs. Students also participate in college visits, where they attend classes and social events. Each 8th-grade student is also assigned a writing coach, who is typically a local lawyer volunteering his or her time.

- Alumni Program: CS supports students during the high school transition by providing them with additional resources on college- and career-readiness and maintaining a connection to their peers and adult mentors.

- Integration with the Regular School Day: at many sites, the last period of the school day involves both regular public school teachers and CS teachers. This integration helps to align the in-school and out-of-school curricula and support both sets of teachers.

Cost/Funding

- CS is primarily funded by private donations from foundations and corporations. Atlantic Philanthropies and the Edna McConnell Clark Foundation are its current major donors.

- CS has also received federal grants, including funding from the 21st Century Community Learning Centers and Supplemental Education Services programs.

- The evaluation was funded by CS.

Evaluation of Citizen Schools

Evaluation Overview

Policy Studies Associates is conducting a quasi-experimental, longitudinal evaluation of the long-term impact of CS on participants' academic success and engagement with school. The treatment group of CS participants in the Boston area has been tracked since their 8th-grade year, along with a matched comparison group of nonparticipants from Boston Public Schools (BPS). Data collection began with the cohort of students who were in the 8th-grade in 2001–02, and the study included five cohorts of 8th-grade students, through the cohort that was in 8th grade in 2005–06.

Reports from Phases V and VI of the evaluation (2008 and 2009) represent the full sample of five cohorts, and include data from the 2006–07 school year. Results are disaggregated by the level of students' exposure to the program. The 2009 report was the first to incorporate analyses of persistence in a high-quality high school as well as four-year graduation rates for the cohort that was in the 8th grade in 2002–03. The final report, projected for 2010, will add graduation outcomes for the cohort that was in 8th grade in 2003–04.

Evaluation Population

- The study population included five cohorts of CS participants who took part in the CS 8th-Grade Academy during the 2001–02 through 2005–06 school years. The participants attended one of three BPS charter middle schools.

- The full sample included 448 CS participants and an approximately equal number of comparison students.

- 94 percent of the CS participants were students of color, including 68 percent African American students. 85 percent were eligible for Free and Reduced Price Lunch (FRPL). Compared with all BPS students, they were disproportionately low-income, students of color with below-average 4th-grade standardized test scores.

- 23 percent of CS students were enrolled in special education.

Evaluation Methodology

- The quasi-experimental study used a comparison group of similar BPS students who did not participate in Citizen Schools. The comparison students were matched with the treatment group based on gender, race, grade in school, FRPL eligibility, 4th-grade test scores, bilingual education status, and special education status. The nonparticipants may have been enrolled in other afterschool or out-of-school-time programs.

- The participants were categorized based on their level of participation intensity, with the threshold between the High and Low levels of program exposure set at a 60 percent attendance level. 45 percent of the treatment group participated at the High level for two or more years.

- Beginning in Phase V, the evaluators added a comparison between CS participants' results and district-wide results on the MCAS test, controlling for participants' prior achievement by taking into account the percent of the program group that scored at the proficient level on the 4th-grade assessment.

- Data sources included school records and CS program data.

- Test scores, grades, and attendance rates were used as pretests and posttests, and were recorded when students started the program, and then in an ongoing manner as they progressed through middle and high school. Students who left the BPS school system at any time were not assessed after leaving.

- CS classified BPS high schools as high-quality, middle-quality, and low-quality based on test scores; attendance, dropout, and graduation rates; college-preparatory and advanced course offerings; and other resources available at the schools.[99]

Contact Information

Program Contact
Eric Schwarz
President & CEO
Citizen Schools
308 Congress Street, 5th Floor
Boston, MA 02210
617-695-2300 ext. 102
EricSchwarz@citizenschools.org

Research Contact
Juliet Vile
Policy Studies Associates, Inc.
Suite 400
1718 Connecticut Avenue, NW
Washington, DC 20009
202-939-5326
jvile@policystudies.com

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[99] Only 3 percent of the sample attended high schools in 9th grade that were not rated by CS. These students were excluded from the analysis of high school selection.

Elizabeth Reisner
Policy Studies Associates, Inc.
Suite 400
1718 Connecticut Avenue, NW
Washington, DC 20009
202-939-5323
ereisner@policystudies.com

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Additional Resources

http://www.citizenschools.org
http://www.policystudies.com/studies/youth/Citizen%20Schools.html

Communities In Schools (CIS)

Population Served	Students in Grades K–12. The model serves approximately 3,300 schools. The evaluation includes students in the middle and high school grades.
Program Location	The program is in 27 states and the District of Columbia.
Type of Evaluation	Quasi-experimental, longitudinal study comparing CIS and matched non-CIS schools. Outcomes measured at the school level.
Findings	CIS sites had higher attendance and graduation rates and lower dropout rates. The schools that implemented the most components of the model increased math achievement scores.
Elements of Success	■ Tutoring and academic support services ■ Personal relationships ■ Family involvement ■ Comprehensive social support services ■ Individualized services ■ Institutional and community partnerships ■ Expanded learning opportunities ■ Strong/effective leadership of reform effort ■ Data-driven decision-making

Program Overview

Communities in Schools (CIS) is an integrated student services model that features coordinated partnerships between public schools and local, community-based organizations addressing students' multiple psycho-social, health-related, and academic needs. As characterized by program evaluators from ICF International, "CIS is best described as a 'process' of engaging schools and students, and filling gaps in need." CIS typically serves as a hub for the provision of services targeting the whole school community and individual students, by both bringing nonprofit organizations onto the school campus and collaborating closely with outside partners. The types of programs and services provided vary depending on a school's identified needs and a community's assets. Ultimately, CIS strives to "help young people successfully learn, stay in school, and prepare for life."

CIS was founded on the premise that environmental, psycho-social, and health issues are critical to student success, as evidenced by its "Five Basics," or key principles. CIS posits that every child needs: "a one-on-one relationship with a caring adult, a safe place to learn and grow, a healthy start and a healthy future, a marketable skill to use upon graduation, and a chance to give back to peers and the community."

The CIS Model is an integrated student services approach that takes into account the multiple barriers faced by youth at risk of dropping out. Using a single point of contact or school-based site coordinator, CIS brings outside organizations into the school environment, simplifying the process of accessing and coordinating services.

The CIS network includes approximately 3,300 schools in 27 states and the District of Columbia, and serves 1.3 million students.

Key Findings

CIS sites made greater progress in reducing dropout rates and raising on-time graduation and attendance rates than comparison schools. The schools that implemented the most components of the CIS model increased academic performance in math and had the greatest improvements in graduation rates. The positive impact on graduation and attendance rates was most pronounced in urban schools serving communities of color. Schools serving predominately Latino students and those in rural areas saw the greatest gains in academic achievement.

AYPF's Policy Takeaways

Comprehensive Supports: CIS creates an integrated system of support services centered at the school site to help meet varied needs. Policymakers need to promote such comprehensive efforts to target the multiple factors affecting young peoples' readiness to learn.

Partnerships and Intermediaries: CIS acts as a convener of many diverse services and organizations that play an integral role in the lives of youth and their families, in order to facilitate access and promote positive youth development. Policymakers should recognize the important role of intermediaries in ensuring effective, efficient cross-systems collaboration, and provide funding for their sustained involvement, as well as flexibility across funding streams to allow for greater collaboration.[100]

Dropout, Graduation, and Attendance Rates

- CIS schools were more successful at reducing their dropout rates than comparison schools.[101]

- Sites that were considered "high implementers" of the CIS model had 3.6 percent lower dropout rates than their matched comparison schools.

- CIS schools had a net positive effect of 1.7 percent on on-time graduation rates.[102]

- High-implementing CIS schools increased their graduation rates by 5 percentage points more than comparison schools.[103]

- CIS high schools increased attendance at a slightly greater rate than non-CIS schools.

Academic Outcomes

- High-implementing CIS high schools increased the proportion of students who scored proficient in math on their states' assessment tests at greater rates than comparison schools, with a particularly strong, significant effect at the elementary and middle school levels.

- CIS was not associated with significant improvements in reading performance across the full sample. High-implementing CIS middle schools, however, had a significant positive effect on reading performance; reading scores at these schools rose while they declined at comparison schools.[104]

- CIS schools did not significantly improve average SAT scores, and SAT test-taking remained lower at CIS schools than comparison sites.[105]

Differences Among CIS Schools

- CIS' positive impact on graduation rates and attendance was most pronounced in urban schools and those serving predominately students of color or a diverse student body, while rural and predominately White schools underperformed relative to their comparison sites.
  - ❏ Urban schools and diverse schools were also more likely to be "high implementers" of the CIS model, compared to rural schools and predominately White schools.

- Schools with student bodies that were predominately Latino saw the greatest improvements in math and reading performance. These schools were also more likely to be "high implementers" and to provide both Level 1 (broad interventions for all students) and Level 2 (targeted, sustained interventions to a smaller number of students) services.

- Rural sites saw the greatest improvements in academic achievement, and they also had more extensive academic interventions.

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[100] This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

[101] Statistically significant at the .022 level. The study used promoting power as a proxy for reducing dropout rates. Promoting power compares the number of seniors enrolled in a high school to the number of freshmen four years earlier in a 9–12 high school.

[102] The study used the Cumulative Promotion Index as a standardized measure for graduation rates, which represents on-time promotion through each grade of high school and to a regular diploma. Graduation rate data was available for schools in only five of the seven states included in the quasi-experimental study.

[103] Statistically significant at the .01 level.

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[104] The difference is statistically significant at the .05 level.

[105] Average SAT scores consist of data from five states, and SAT test-taking numbers are from four states.

■ Schools that provided more Level 1 services had greater school-level improvements than sites providing primarily Level 2 services.

Program Details

Program Population

■ CIS makes asset-building prevention services available to all of the students in a school and provides targeted and sustained intervention services to a subset of students with identified risk factors.

■ CIS school demographics vary, with average student populations ranging from 61 percent African American in Georgia to 61 percent Hispanic in Texas and 50 percent White in Florida and Michigan. Across the CIS network, about half of the students are African American, more than one-quarter are Hispanic, and one-fifth are White.

Program Components

■ The process of implementing the CIS Model involves student and school Needs Assessments, which identify critical areas for interventions, as well as Community Assets Assessments, which highlight existing community resources and solicit partners.

■ CIS schools feature both widely accessible prevention and support services for the entire student body (Level 1 services) and targeted and sustained individual interventions for particular students facing a variety of academic and nonacademic factors increasing their risk of dropping out (Level 2 services).

■ Level 2 students have individualized case plans, which CIS staff use to oversee the provision of services.

■ Many CIS activities and services are coordinated as out-of-school-time interventions, including mentoring, tutoring, afterschool programs, family events, service learning, and sports and recreation. CIS reports that 73 percent of its affiliates provide afterschool or before-school programs, and 90 percent provide tutoring and mentoring. At the high school level, CIS services often include credit recovery, test preparation, college preparation, and job training.

■ Interventions for the whole family include family counseling and continuing education for parents.

■ Health, dental, vision, and mental health services are provided through community health centers, which may be located in the schools themselves. Some CIS schools have on-site childcare, home visits, and other assistance for teenage parents.

■ Behavioral interventions include gang prevention, substance abuse intervention, and leadership development.

■ CIS refers students to outside agencies for additional support services, and common partners include Big Brothers Big Sisters, Boy Scouts, Girl Scouts, and the Department of Children and Family Services.

■ Data-driven decision-making: CIS contracted ICF International to develop the CIS National Evaluation in order to address a complex set of questions at the organizational, school, and student levels. The data collected through this evaluation are intended to allow CIS to make evidence-based decisions regarding their future direction and strategy.

Cost/Funding

■ CIS reports that the average cost per student is $164 per year.

■ CIS affiliates rely heavily on services provided by volunteers and community partners.

■ Funding for the evaluation was provided by The Atlantic Philanthropies.

Evaluation of CIS

Evaluation Overview

CIS contracted ICF International to develop the CIS National Evaluation in order to address a complex set of questions at the organizational, school, and student levels. The most recent report (2008) featured a quasi-experimental, longitudinal study that compared CIS secondary schools to matched, non-CIS schools and examined the impact of CIS on attendance, grades, dropout, discipline issues, promotion, and graduation, and sought to determine whether outcomes differ based on the type of services offered or program setting. The information in this

profile was drawn primarily from the quasi-experimental study.

The Case Study component of the evaluation provided an in-depth look at promising practices at 22 schools from eight affiliates considered to be "high implementers" of the CIS Model. The Natural Variation study of 368 schools and the Implementation study of data from 1,766 schools provided more information with regard to the CIS process and the capacity of CIS local affiliates. The final phase in the evaluation, a randomized, controlled study with a smaller group of schools, is currently in progress.

Evaluation Population

- The quasi-experimental study included public schools from seven states which represent 78 percent of the schools in the CIS Network: Florida, Georgia, Texas, Michigan, North Carolina, Pennsylvania, and Washington. Magnet or charter schools were excluded, as were schools for which a comparison match was not identified.

- The final sample consisted of 602 CIS schools, which included 158 middle schools and 123 high schools.

- The year of CIS implementation at the different sites varied between 1999–2000 and 2002–03.

Evaluation Methodology

- The quasi-experimental study analyzed school-level baseline data prior to CIS implementation, as well as data for three follow-up years after implementation.

- Researchers matched CIS schools with non-CIS comparison schools based on the characteristics of attendance rates, size, demographics, special needs population, prior performance on state assessment tests, and dropout rates. Statistical analyses adjusted for remaining differences between schools.

- The study included four cohorts of CIS schools, based upon their year of program implementation. The schools were also sorted into subgroups based upon their location (urban, rural, and suburban) and school type (elementary, middle, and high school) as well as their predominant racial demographic group. Schools were considered to belong to the "diverse" subgroup if no race represented more than 38 percent of the study body.

- The researchers compared achievement and attendance outcomes across all CIS schools and matched comparison schools; the high school comparisons also included dropout rates, graduation rates, SAT participation, and SAT scores.

- The evaluators differentiated some program outcomes by Level 1 program services (less intensive interventions provided to all students) and Level 2 services (long-term interventions for specific students).

- The Typology study drew upon data from surveys administered to all site coordinators and school administrators. The researchers received 1,894 survey responses. The responses from this survey helped to develop a typology of CIS programs, which informed the structure of the quasi-experimental study and examined the relationship between program components, school context, and outcomes.

- Based on the results of the typology study, schools with the greatest fidelity to the CIS Model were classified as "high implementers," and others were classified as "partial implementers."

Discussion

The researchers noted that school-level changes were difficult to assess and achieve, given that the students in a CIS school ideally receive differentiated services.

Contact Information

Program Contact
Susan Siegel
Vice President for Research, Evaluation, and Learning Management
Communities In Schools, Inc.
277 S. Washington Street, Suite 210
Alexandria, VA 22314
703-518-2548
SiegelS@cisnet.org

Research Contact
Yvette H. Lamb, EdD
Principal
Human Services and Community Development
ICF International
10530 Rosehaven Street, Suite 400
Fairfax, VA 22030
703-383-3351
ylamb@icfi.com

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Digital Bridge Academy

Population Served	Community college students in Santa Cruz County, California. Participants are considered at risk of college failure. Approximately 25-29 students participate each semester.
Program Location	Santa Cruz County, California
Type of Evaluation	Multivariate, retrospective analysis of student-level outcomes, with a statistically matched comparison group of peers who did not participate, as well as a mixed-method evaluation including qualitative student surveys.
Findings	Improved credit accrual and persistence; increased self-efficacy. Participants in the Accelerated Digital Bridge Academy program had higher rates of passing credit-bearing English courses.
Elements of Success	■ Rigorous curriculum ■ Accelerated learning ■ Smaller learning communities ■ Project-based learning ■ Cultural/community awareness ■ Civic engagement

Program Overview

The Digital Bridge Academy (DBA) is a full-time, one-semester community college program focused on academic acceleration, college success skills, and preparation for knowledge-based careers. The program was founded at Cabrillo College in 2003 in an effort to improve the college retention and success of students who enter postsecondary education with lower levels of preparation and face multiple barriers to college success. Participants enroll full-time during the program semester and take all of their classes together as a cohort. The program prepares students for multiple careers including science, technology, engineering, and math (STEM) careers in high-demand, well-paying industries as a pathway to economic advancement.

The "Accelerated" version of DBA was offered during the first three semesters of the program, and included a college credit-bearing English course, even for students who were assessed at the remedial level, effectively skipping the remedial English sequence. This version of the program was subsequently discontinued because of state regulations.

DBA is based upon the philosophy that a supportive, engaging, and accelerated program can build students' sense of self-efficacy, enhance their academic skills, and allow them to get on track toward degree completion. The program's theory of self-efficacy holds that students' beliefs and expectations about their own capabilities affect their motivation, academic success, and career choices. The DBA pedagogy emphasizes responsibility, self-exploration, and persistence.

The DBA model has been expanded to other campuses as an approach to student-centered college redesign. The program leaders provide technical assistance and professional development to other colleges seeking to improve their success rates with their most vulnerable students.

Key Findings

Community College Research Center (CCRC)

DBA students earned more college credits over two years and had higher one-semester and two-semester persistence rates than comparison students. Participants also had higher rates of full-time enrollment in the first post-program semester. The "Accelerated" DBA program was associated with a positive impact on transfer credits and rates of passing associate-level and transfer-level English courses.

Higher Education Evaluation and Research Group (HEERG)

DBA students believed they were significantly more likely to graduate with a degree after participating in the program, and they reported increases in indicators of self-efficacy.

AYPF's Policy Takeaways

Personalization of the College Environment: The DBA model provides students with the opportunity to take all of their classes with a small cohort during the program semester, and the curriculum emphasizes teambuilding and personal accountability. While school improvement initiatives at the secondary school level commonly feature smaller learning communities, DBA suggests that community college students may also benefit from structural reforms to increase the personalization of the postsecondary environment. Policymakers should provide support to colleges to implement programs that offer greater individualized supports and peer learning communities.

Human Capital Investments at Postsecondary Level: Efforts to replicate the DBA model have emphasized the central role of professional development for college faculty. Creating more supportive, student-centered college environments may require significant investments in the training and capacity-building of instructors and administrators. Policymakers should support professional development initiatives aimed at improving student retention and success rates at public institutions of higher education.[106]

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106 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

Findings from the CCRC Evaluation (2009)

- Students in the Accelerated DBA program earned 21 more college credits within two years than the comparison group, and students in the non-Accelerated program earned nine more credits.[107]

- Participants in the Accelerated DBA group earned an average of four more transfer credits (those that are transferrable to a bachelor's degree program) than the comparison group.[108] The non-Accelerated DBA program was not associated with an increase in transfer credits.

- DBA students were more likely to persist to the next semester than comparison students, with an increase of 16 percentage points for students in the Accelerated DBA program and 7 percentage points for students in the non-Accelerated DBA program.[109]

- DBA was also associated with higher rates of persistence to a third term.[110]

- DBA students were significantly more likely to enroll full-time in the first post-program semester than the comparison group.[111]

- DBA students had higher rates of passing an associate-level English course within two years (54 percent) than the comparison group (33 percent). This difference was driven by the participants in the Accelerated DBA program, who were 40 percentage points more likely to pass this course than the comparison group.[112]

- Participants in the Accelerated DBA program were also 31 percentage points more likely to pass a transfer-level English course within two years than the comparison group.

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107 The differences are statistically significant at the .01 level.
108 The difference is statistically significant at the .05 level.
109 The differences are statistically significant at the .01 level, with a standard error of 2 percentage points, and the confidence intervals do not overlap.
110 The evaluators cannot be certain that the Accelerated DBA participants outperformed the non-Accelerated DBA participants on this measure, as the confidence intervals overlap. The differences are statistically significant at the .01 level.
111 The difference is statistically significant at the .01 level.
112 Ibid.

- Overall, the positive effects on English achievement were only observed for participants in the Accelerated DBA program.

- DBA participants did not have higher average GPAs than the comparison group.

Findings from the HEERG Evaluation (2005)

- 77 percent of students in the first two DBA cohorts believed they were "more likely to graduate with an associate's degree" after having participated in DBA.

- At the end of the third week of the Bridge Semester, the majority of participants in the first two cohorts reported increases in indicators of self-efficacy, including Readiness to Learn, Caring About School, Punctuality, Respect, and Responsibility for their Own Life Choices (as measured by Likert scale responses in student surveys).

- At the end of the Bridge Semester, 85 percent of participants indicated increased responsibility for their life choices as compared to before the program.

Program Details

Program Population

- Cabrillo College is a two-year college located in Santa Cruz County, California that serves a predominately suburban population. Its Watsonville Center (where DBA existed exclusively for its first five years) serves a predominately rural population.

- The DBA model now also serves students in inner city Oakland, Salinas, and Livermore, California. In Livermore, the DBA Program predominantly serves learning disabled students.

- Each DBA cohort includes approximately 25-29 students. The program has served approximately 500 students since its inception in 2003.[113]

- The only formal program eligibility criteria are scoring at a minimum 7th-grade reading level on Cabrillo's placement assessment and committing

to full-time enrollment. Some students in the program do not have a high school diploma or GED.

- Some students have earned prior college credits at the developmental level or are returning to college after long absences.

- 100 percent of DBA students are considered at risk of college failure, and 50-83 percent are considered "high-risk."[114] The target population includes foster care and ex-offender youth, as well as young parents.

- Approximately 90 percent of DBA students are Latino, African American, or Asian/Pacific Islander.

- 60 percent of program participants are English-as-a-second-language (ESL) students, and 53 percent have parents in migrant occupations. 65 percent of participants are first-generation college-goers.[115]

Program Components

- The Foundation Course: students complete a full-day program for the first two weeks of the semester. The curriculum emphasizes self-efficacy, teamwork, communication skills, experiential learning, and understanding working and learning styles. The class confers three credits toward an associate's degree.

- The Bridge Semester: for the remainder of the semester (13 weeks), students enroll as a cohort in six courses specifically designed for the program, including the Team Self-Management Course. They receive 12-16 credits for these courses.
  - ❏ The core of the Bridge Semester is a project-based course in which students conduct primary research on a local social justice issue.
  - ❏ The Team Self-Management Course focuses on the cultural components of college success, with an emphasis on decision-making skills.
  - ❏ Other Bridge Semester courses include English, information technology, numeracy, and career planning courses.

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113 American Youth Policy Forum, 2008.

114 At-risk indicators included being a first-generation college student, being an ESL student, or testing two levels below transfer-level. Examples of high-risk indicators included having a criminal record or a history of substance abuse.

115 American Youth Policy Forum, 2008.

❏ DBA faculty work as a team to integrate course content and skills across the Bridge semester courses and to track student progress.

■ Following the Bridge Semester, students may continue to enroll in optional DBA seminars or the Integrated Science program that will be piloted in Fall 2009.

■ The Behavior System incorporates incentives and consequences for appropriate behavior for college and career success, such as punctuality and paying attention.

■ Paid internships for continuing DBA students provide some participants with the chance to recruit and orient new cohorts to the DBA program.

■ Acceleration: In the initial version of the program, the Bridge Semester curriculum included a college-level English course. This approach allowed remedial students to take college-level courses toward an associate's degree, effectively skipping the remedial sequence. After the first three cohorts of the program, the college-level English course was dropped because of state regulations stating that students who were assessed at a particular level should not be placed in a course that is more advanced than that level. The initial program that offered the college-level English course is referred to as "Accelerated DBA" in the CCRC evaluation.

Funding/Cost

■ Tuition for the program semester is $320 and is based on Cabrillo College's tuition fees. Students are encouraged to apply for financial aid, scholarships, and fee waivers.

■ The DBA program was designed to be sustainable using regular college funding. All support services are integrated through the curriculum. Additional costs involve program start-up, which includes training, recruiting, and admitting the first cohort of students.

■ DBA has received more than $3 million through grants from the National Science Foundation (NSF), the Hewlett Foundation, the James Irvine Foundation, the David and Lucille Packard Foundation, and the Walter S. Johnson Foundation.

■ The evaluations of student outcomes were funded through NSF, James Irvine Foundation, and Hewlett Foundation grants.

Evaluation of Digital Bridge Academy

Evaluation Overview

CCRC Evaluation (2009): CCRC at Teacher's College at Columbia University and Cabrillo College's Office of Institutional Research conducted a quantitative, multivariate analysis of the outcomes of the first nine cohorts of DBA participants, who participated in the program between Fall 2003 and Fall 2007. The study used the college's administrative records to retrospectively analyze students' persistence, credit accrual, rates of full-time enrollment, and rates of passing critical classes. The evaluators used a comparison group of non-DBA students who attended Cabrillo College during the same semester, and they used statistical analyses to control for a variety of demographic and background characteristics of participants.

HEERG Evaluations (2005 and 2007): HEERG conducted mixed-method, interim evaluations of student outcomes. Data sources included administrative and counseling records, as well as student surveys administered at the beginning and end of the Bridge Semester. The 2005 evaluation examined early outcomes for the first two cohorts of students to participate in the Foundation Course and Bridge Semester, in Fall 2003 and Spring 2004. The evaluation measured participants' average grades, retention, credit accumulation, and self-efficacy ratings, and the study did not include a comparison group.

The 2007 evaluation included the first five cohorts of DBA participants, tracking outcomes during the DBA semester as well as follow-up semesters. This evaluation included a comparison between the outcomes of DBA students and average Cabrillo College students. The study did not control for the differences in background characteristics and educational attainment in the DBA and comparison groups.

Note: *As the CCRC (2009) evaluation measured many of the same quantitative outcomes as the HEERG evaluations, with a larger sample and controls for many demographic and background variables, this profile draws primarily on the findings of the CCRC study. The 2005 HEERG evaluations incorporated student surveys, however, and the quali-*

tative and quantitative findings of these surveys are reported in this profile.

Evaluation Population

CCRC Evaluation

- The program group included all 208 DBA students who participated in the first nine cohorts of the program, between Fall 2003 and Fall 2007. Of these students, 66 participated in the "Accelerated" version of the program, which included a college-level English course and was offered in the Fall 2003, Spring 2004, and Fall 2004 semesters. The remaining 142 students participated in the non-Accelerated version.

- The comparison group consisted of 11,578 non-DBA students who attended Cabrillo College and took an English placement test during one of the years of the study.[116] Comparison students were assigned to a study cohort based on the most recent semester that they had taken the English placement test.

- Compared with nonparticipants, DBA students were disproportionately from low-income zip codes (87 percent versus 27 percent) and Latino (83 percent versus 32 percent). They were also more likely to lack a high school diploma (21 percent versus 12 percent). The mean age was 23 for DBA students and 21 for the comparison group.

- Approximately one-quarter of the DBA students were parents of dependent children. 22 percent had a history of substance abuse, and 20 percent reported that they had gang experience.

HEERG Evaluation

- The 2007 evaluation included five cohorts of participants who entered the program between Fall 2003 and Fall 2005. The cohort sizes ranged from 14 to 29 students, for a full study population of 107 students.

- The 2005 evaluation included a total population of 43 students.

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[116] The researchers selected this comparison group as a proxy for degree-seeking students, as the English placement test was required of all students wishing to pursue credits leading to a degree or transfer.

Evaluation Methodology

CCRC Evaluation

- The evaluation used a retrospective analysis of administrative records from Cabrillo's research data warehouse, including demographic and transcript data, to analyze students' persistence, credit accrual, rates of full time enrollment, and rates of passing critical classes.

- Descriptive statistics were used to compare the outcomes of the following groups of students: the comparison (non-DBA) group, the entire program group, the accelerated DBA cohorts, and the non-Accelerated DBA cohorts.

- The evaluators also used statistical regression analyses to control for multiple characteristics of study participants: age, gender, ethnic background, high school or GED completion, low-income zip code residency, English language proficiency level, previous ESL courses experience, previous college experience, and prior college academic support program participation.

- Study participants were not randomly assigned to treatment and control groups, resulting in selection bias. The evaluators note that the findings likely understated the actual effects of participation in DBA, because the program recruited students who were particularly at risk of college failure, and because the study design did not control for a number of risk indicators.

HEERG Evaluation

- Data sources included Cabrillo College student transcripts, applications to the DBA program, Cabrillo College counseling records, Foundation Course feedback forms, and two student surveys, which were administered in the beginning and end of the Bridge Semester. The surveys asked students to rate improvements in their behavior, as based on the "21 Traits of Highly Successful People."

- The evaluator assessed self-efficacy as a composite concept, made up of quantitative academic indicators (including GPA, first-semester retention, credit-bearing course load, and second-semester persistence), as well as qualitative indicators.

Contact Information

Program Contact
Diego Navarro
Founder, Instructor, and Program Director
Digital Bridge Academy
Cabrillo College
6500 Soquel Drive
Aptos, CA 95003
831-477-3340
diego@cabrillo.edu

Research Contact
Davis Jenkins
Senior Research Associate
Teachers College, Columbia University
525 West 120th Street
Box 174
New York, NY 10027
212-678-3091
davisjenkins@gmail.com

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Diploma Plus

Population Served	High school students who have dropped out or are at risk of dropping out. 3,260 students were served in 2008-09.
Program Location	Evaluations in New York, Massachusetts, Rhode Island, and California. DP schools were in five states in 2008-09, with expansion in progress in four additional states.
Type of Evaluation	Mixed-method evaluation of student records, surveys, and case studies; comparative analyses of school-level outcomes for DP schools and other alternative high schools in New York City.
Findings	Increased graduation rates; increased student engagement; higher achievement test scores and retention rates than similar schools.
Elements of Success	■ Culture of high expectations ■ Smaller learning communities ■ Early college exposure ■ Earning college credits ■ Project-based learning ■ Civic engagement ■ Embedded professional development ■ Secondary-postsecondary partnerships ■ Employer partners

Program Overview

Diploma Plus (DP) schools are small alternative high schools that integrate dropout recovery and prevention programs with college- and career-readiness initiatives. As stated by the program's mission statement, Diploma Plus seeks to create small high schools that "incorporate a supportive school culture, a performance-based approach, future focus, and effective supports in order to increase opportunities for students who have dropped out or are at risk of dropping out of high school so that they have the ability to graduate college- and career-ready." Instead of traditional grade levels, DP students move through three "phases" of the curriculum, with the final phase serving as a link between high school and postsecondary education.

DP was developed by the Commonwealth Corporation's Center for Youth Development and Education (CYDE) as a response to the lack of rigorous, alternative high school options, and was first implemented as a pilot program in two Boston schools in 1996. The model is now part of the Bill & Melinda Gates Foundation Alternative High Schools Initiative, which has supported its expansion to new regions. In 2009, Diploma Plus formed its own non-profit organization as a result of national growth.

The model is based upon the belief that nontraditional, student-centered learning environments can raise student achievement, enhance motivation, and place more young people on the path to postsecondary education and career success. DP also seeks to inform policy change by raising the quality and rigor of alternative education options beyond its network.

Key Findings

Diploma Plus students' program completion and graduation rates were higher than the average rates for alternative high school programs. In New York, DP schools had higher retention rates and Regents exam passing rates than other similar schools. Participants reported higher rates of engagement, effort, and interest in their DP classes than in their previous schools, and reported that the program helped them plan for postsecondary success.

AYPF's Policy Takeaways

Linking Alternative Education and Postsecondary Pathways: Diploma Plus offers a model for increasing the rigor and relevance of the alternative education and dropout recovery fields and helping students who have been unsuccessful in regular high school to prepare for postsecondary education. Policymakers should support programs that intentionally help disconnected or off-track students to make the transition into college and career pathways, with an emphasis on the long-term success and financial independence of these students.

Alternative Assessments and Competency-Based Promotion: Instead of grade-level promotion based on seat-time requirements, Diploma Plus students move through the phases of the program by demonstrating completion of each level's core competencies through portfolio assessments and final projects. Policymakers should allow alternative schools the flexibility to develop alternative assessments that can be used to determine promotion and program completion, linked to college readiness, in order to accelerate progress while also holding students accountable for mastering key concepts and skills.[117]

Findings from New York City

- In 2007–08, 81 percent of the students in the Plus Phase graduated.

- 86 percent of these graduates planned to attend college.

- DP schools' average passing rate for the English Regents exam was 83 percent, and the average math passing rate was 89 percent.

- In 2005–06, DP schools' passing rates on Regents exams exceeded the average rates of transfer[118] (alternative) schools in the city. The DP schools'

passing rate on the English exam was 86 percent, compared to a 62 percent average for similar schools. The Math A (regular mathematics) passing rate was 83 percent, compared to a 75 percent average.

- In 2007–08, the DP schools' retention rate after one year was 89 percent.

- In 2005–06, DP schools had a 78 percent retention rate, compared to a 65 percent average at other transfer schools.[119]

- According to data from one DP school, Harlem Renaissance High School, DP students' attendance significantly improved after enrolling in a DP school.[120]

Findings from the Brigham Nahas (2005) Study

- Students reported higher rates of engagement in DP than in their previous schools, based on measures of attendance, effort, interest, and completion of assignments. They also reported performing better than in their previous schools, as well as feeling safer and more supported and respected by teachers.

- Nearly 90 percent of students reported that DP was helping them plan and prepare for life after high school.

- Of the students taking college classes during the Plus Phase, all reported that the college experience was very important to them and most described their courses in highly positive terms.

- From the full sample, 62 percent completed the program during the study period. This is substantially higher than the 21 percent average rate of alternative high school completion, based on a national review of dropout prevention programs.[121]

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117 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

118 "Transfer schools" refer to those that formerly belonged to District 79. Until 2007–08, District 79 encompassed all New York City high schools designed to serve overage and under-credited students, including the DP schools.

119 This analysis was based on the Multiple Pathways Strategy report from the New York City Department of Education, 2006. The findings were based on students who were enrolled between 2001 and 2005, and at age 16 had earned fewer than eight credits.

120 This finding is based on a report by the Harlem Renaissance High School filed with the Commonwealth Corporation, 2006–2007.

121 Dynarski & Gleason, 2002. In Brigham Nahas Research Associates, 2005.

❏ Within this group of those who completed the program, 33 percent graduated having completed all of the Plus Phase requirements, 26 percent graduated without completing the Plus Phase, and 3 percent completed the program but did not pass the state high school exit exam.

■ A survey of students expected to graduate in 2004 found that 78 percent of respondents planned to enter postsecondary education immediately after graduation, while 18 percent planned to continue their education after taking some time off from school.

■ For the Plus Phase students taking college courses, 81 percent passed at least one course.

Program Details

Program Population

■ In 2008–09, DP operated in 23 schools in Massachusetts, Rhode Island, New York, Indiana, and California, serving 3,260 students; an additional seven schools in Newark, New Jersey; Baltimore, Maryland; Nashville, Tennessee; and New York, New York planned to open in 2009–10.

■ DP schools range in size from 120–320 students.

■ Nationwide, 42 percent of DP students are African American, 40 percent are Latino, 14 percent are Caucasian, 1 percent are Multi-Racial or Other, and 3 percent are Asian/Pacific Islander.

■ 85 percent of students are eligible for Free and Reduced Price Lunch (FRPL).

■ Targeted students are 15–17 years old when they enter DP and are able to commit to three to four years in the DP program. Students are typically overage for their grade level, under-credited for on-time promotion, unsuccessful in middle or high school, or desire an alternative high school experience.

■ 12 percent of DP students are English language learners (ELLs).

■ DP schools typically have larger numbers of students with disabilities than their district averages.

Program Components

■ The three "phases" of the curriculum are the Foundation Phase, the Presentation Phase, and the Plus Phase. All of the phases emphasize project-based learning. Entering students are placed in either the Foundation Phase or Presentation Phase, depending on their skill level.

■ The Plus Phase serves as a bridge between the high school and postsecondary levels, and students take college courses, design and complete a community action project, conduct internships, and produce final projects. A "senior seminar" focuses on postsecondary planning and reflection.

■ The performance-based approach is standards-aligned. It features portfolio assessments and competency-based report cards and promotion. Students must demonstrate proficiency in several core "competencies" and publicly defend a portfolio of their work to be promoted, regardless of seat time.

■ DP emphasizes service learning through community action projects, and the program aims to strengthen young people's connections to their communities and impart civic participation and leadership skills.

■ Schools implement advisory systems, and must provide opportunities for family involvement.

■ The schools must have formal partnerships with an institution of higher education, as well as a staff position responsible for postsecondary transitions.

■ DP provides annual technical assistance to each school and uses several instruments, such as the Model Implementation Rubric, to assess sites' progress in implementing and maintaining fidelity to the program's core elements.

■ Professional development provided by DP includes on-site coaching, with curriculum guidance for implementing the advisory course and performance-based systems. School principals and instructional leadership teams participate in Summer Leadership Institutes.

■ The process of DP implementation reflects shared leadership and youth voice. Each school has a Student Achievement Support team that provides a student perspective on school governance and decision-making.

■ DP partners with local school districts or charter organizations to implement the model in existing or new schools. DP selects new school sites and principals, secures necessary district agreements and per-student funding, opens schools, and supports school staff in key areas of DP. In a few cases, DP programs are affiliated with community-based organizations that operate independently from school districts but are unable to grant diplomas. DP also has one Transition Senior Year program, housed on a community college campus, which focuses on the postsecondary transition.

Cost/Funding

■ DP estimates the initial average cost per school at $136,400. As the model expands to scale, the cost of each new school should decrease to $96,000. The long-term annual cost is estimated at $384 per pupil.

■ Major funders of DP have included the Bill & Melinda Gates Foundation, the Carnegie Corporation of New York, the Charles Stewart Mott Foundation, the W.K. Kellogg Foundation, the James Irvine Foundation, the Nicholson Foundation, the Tiger Foundation, Jane's Trust, and the Lumina-McCabe Foundation.

■ The Brigham Nahas evaluation was funded by the Charles Stewart Mott Foundation and the W.K. Kellogg Foundation.

Evaluation of Diploma Plus

Evaluation Overviews
New York City (2007; 2008): Outcomes from New York City's five schools that belong to the Diploma Plus network were compared with the overall data from New York "transfer schools," or those serving overage and under-credited students, as well as with overall district averages. Data sources included school records from 2004–08.

Brigham Nahas Research Associates (2005): This evaluation sought to examine the implementation

and outcomes of DP for various target populations. The mixed-method research included data from student records from 2001–04, along with surveys and case studies conducted during the 2003–04 school year. The study does not include a comparison with non-DP schools.

Evaluation Population

New York City

■ The 2008 report included 844 students, which represented the full population of students in New York City's five DP high schools in Spring 2008.

■ The population was 60 percent African American, 35 percent Latino, 4 percent Caucasian, and less than 1 percent Asian and American Indian/Alaska Native.

■ 75 percent of students were FRPL-eligible.[122]

■ 3 percent of students were ELLs.

Brigham Nahas

■ The full sample consisted of 1,180 students enrolled in one of eight DP programs during Fall 2001 through Spring 2004. 39 percent were in one small school serving ELLs, 29 percent were in one of three community-based programs, 19 percent were in an additional small high school, and 14 percent were in one of three transition senior year programs located on college campuses.

■ Students at the school for ELLs were slightly older, with an average age of nearly 21.

■ Students self-reported their ethnicity as 29 percent Other, 25 percent Latino, 25 percent African American, 17 percent White, and 5 percent Asian/Pacific Islander.

■ One-third of students were working at the time they began the program, and 14 percent were either parents or were pregnant.

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122 Data on FRPL-eligibility and ELL status were from the previous school year.

■ A CYDE-administered survey was completed by 135 students in Fall 2003, and a follow-up survey was completed by 92 students in Spring 2004.

■ A graduate transition survey of students who said they expected to graduate in 2004 was completed by 197 students across the DP network in 2004.

Evaluation Methodology

New York City

■ Data sources included reports from the New York City Department of Education and school records.

■ The researchers compared data from DP schools with overall performance from New York City transfer schools, or those that formerly belonged to District 79. Until 2007–08, District 79 encompassed all New York City high schools designed to serve students who are overage and under-credited for their grade level, which included the DP schools.

Brigham Nahas

■ Data sources included CYDE student record data from eight DP programs, a longitudinal survey of new students from six programs, a graduate transition survey, and in-depth case studies of three programs in Massachusetts. The three case study programs consisted of a DP small school, a community-based program, and a transition senior year program.

■ Surveys were administered in Fall 2003 and Spring 2004 to the same group of students.

■ The case studies included interviews and focus groups with approximately 100 students across the three schools, along with teacher and administrator interviews.

■ An end-of-year graduate transition survey was also administered by CYDE to all program completers across the network.

Contact Information

Program Contact
William Diehl
Executive Director
Diploma Plus, Inc.
Diploma Plus
89 South Street Suite 803
Boston, MA 02111
617-443-0050
wdiehl@diplomaplus.net

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Dual Enrollment in Two States: Florida and New York City

Target Population	High school students. Approximately 34,000 students participate in dual enrollment each year in Florida, and 19,000 participate in the College Now dual enrollment program in New York City.
Program Location	Florida and New York City
Type of Evaluation	Comparative, retrospective study using large, longitudinal data sets to examine student-level outcomes.
Findings	In Florida, dual enrollment was associated with increased high school graduation rates, college enrollment rates, persistence in college, and credit accrual. In New York City, dual enrollment was associated with increased likelihood of pursuing a bachelor's degree and higher first-year college GPAs.
Elements of Success	■ Rigorous curriculum ■ Early college exposure ■ Earning college credits ■ Alignment between high school and postsecondary requirements ■ Secondary-postsecondary partnerships

Program Overview

Dual enrollment (DE) provides high school students with the opportunity to take college courses while still in high school, and often to gain dual credit at both the high school and college levels for these courses. Although DE originated as a strategy to enhance the high school experience of high-achieving students, there has been a growing emphasis on DE as a college access strategy for students from groups historically underrepresented in higher education. Increasingly, dual enrollment is viewed as a means for raising the academic rigor of high school curricula, more closely aligning K-12 education with postsecondary education requirements, reducing the need for remediation, and providing students with college knowledge. Dual enrollment is also considered a means to reduce the cost of a college education, by reducing the time it takes to earn a college degree.[123] Currently 42 states have policies that govern dual enrollment programs.[124]

Dual enrollment has become an increasingly popular mode of instruction for career and technical education (CTE) programs, reflecting a broader movement to integrate CTE courses with college preparation and provide students with more options for pathways to postsecondary education and living-wage jobs. New York City and Florida State, the subjects of these evaluations, both have large, well-established dual enrollment programs that include CTE offerings.

Florida has some of the most expansive DE legislation in the country, allowing all students who meet eligibility criteria to dually enroll and requiring school districts to enter into partnerships with local community colleges. Florida has also developed a unique regulatory framework for DE.

The City University of New York's (CUNY) College Now program is the largest urban district dual enrollment program in the country, and it is free to all New York City public high school students. Every two- and four-year college in the CUNY system participates in the program, with a standardized application process. College Now's goal is to help students meet high school graduation requirements and to ensure that graduating students are ready to do college-level work.

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[123] Karp & Calcagno, et al., 2007.
[124] Western Interstate Commission for Higher Education, 2006. In Karp, Calcagno, Hughes, et al., 2007.

Key Findings

CCRC Study: Participation in dual enrollment in Florida was associated with increased likelihood of high school graduation, enrollment in postsecondary education, persistence in college, college grades, and the accumulation of college credits. CTE students experienced the same advantages from dual enrollment as non-CTE students. Dual enrollment had a particularly strong effect on postsecondary enrollment for males and low-income students. The study found similar results for the New York City College Now program, though less consistently than in Florida. New York City CTE students who had dually enrolled were more likely to pursue a bachelor's degree, had higher first-year college GPAs, and accumulated more college credits than their peers.

CUNY Study: Former College Now students had higher first-year college GPAs and faster credit accumulation than the general population of entering college students. Participation in College Now was also associated with increased persistence to a third semester in college.

Findings from Florida (CCRC Study)

- DE participants were more likely to have graduated from high school than similar peers who did not participate. They were 4.3 percent more likely to earn a high school diploma than similar nonparticipants.[125]

- DE participants were 17 percent more likely to enroll in college.

- Former DE participants who enrolled in postsecondary education were 4.5 percent more likely to persist in college to a second semester than were nonparticipants.

- First-year college GPAs were 0.21 points higher, on average, for students who had dually enrolled than for their peers who did not dually enroll.

AYPF's Policy Takeaways

Improved Performance for CTE Students in Postsecondary Education: The findings of the CCRC evaluation suggest that dual enrollment is an effective strategy for increasing the college enrollment and success rates of CTE students, as well as certain low-income and lower-performing students. Policymakers should consider dual enrollment as an important initiative to promote postsecondary readiness for all students, not just higher-performing students pursuing degrees in academic fields.

Access to College-Level Courses: Florida dual enrollment policy requires all students meeting eligibility criteria to be offered dual enrollment courses, though the state sets a minimum GPA requirement for students participating in both academic and CTE dual enrollment courses. This threshold may have implications for the ability to serve students historically underrepresented in higher education. College Now offers programs for students at many different levels of achievement, and those who are not ready for credit-bearing classes are able to take developmental or other preparatory courses, often on college campuses and sometimes with a career focus. If policymakers intend to use dual enrollment as a strategy to expand access to higher education to students from underrepresented groups, they should insure that eligibility and admissions requirements do not restrict participation.

Tracking Student Progress: Florida is a leading example of a state that has established a longitudinal data system that is able to individually track students through all levels of the educational pipeline and into the labor market. This type of data allows policymakers to analyze the impact of initiatives like dual enrollment, and to hold all levels of education accountable for continuous improvement. With the federal emphasis on the development of longitudinal data systems as one of the primary principles of education accountability, policymakers can look to examples like Florida to learn more about the benefits of a comprehensive student unit record system.[126]

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125 Findings in this section are statistically significant at the .01 level unless otherwise noted.

126 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

■ Three years after high school graduation, former DE participants who enrolled in postsecondary education had cumulative college GPAs that were 0.2 points higher than comparison students, with CTE students who dually enrolled achieving GPAs 0.24 points higher than their non-DE CTE peers.

■ The former DE CTE students had earned 15 more college credits than similar CTE students who did not dually enroll by three years after high school graduation.

■ The *number* of DE courses taken during high school had little impact on short-term or long-term outcomes.

■ The effect of DE on enrollment in postsecondary education was particularly strong for males and low-income students.

■ DE had a particularly strong impact on the college GPAs of low-income students and those with lower high school achievement, but this trend was not generally observed in the CTE subsample.

Findings from New York City

CCRC Study

■ Former College Now participants from vocational high schools were 9.7 percent more likely to pursue a bachelor's degree (as opposed to an associate's degree) than similar students from vocational high schools who did not participate in College Now.[127]

■ Former participants had higher first-term GPAs, by 0.133 points, than nonparticipants.[128]

■ The impact on GPAs differed by the intensity of participation in the College Now program. The GPAs of students who took two or more College Now courses were almost 20 percent higher than those of the comparison group.

■ College Now did not have a statistically significant effect on persistence to a second term in college,

full-time college enrollment, or persistence to a second year.

■ After three and one-half years of college, former College Now participants had earned significantly more credits, with an average difference of 10.6 credits, than other, similar, former CTE students.

■ The number of College Now courses taken during high school was positively associated with some postsecondary outcomes. Participants who had taken two or more College Now classes achieved higher cumulative GPAs after four semesters and earned more total credits after 3.5 years.

CUNY Study

■ Across the full population of entering CUNY students, former College Now students earned an average of 0.6 more college credits in their first year than nonparticipants. The effect was greatest for students pursuing an associate's degree, who earned 0.77 additional credits in the first year.

■ Former College Now students in bachelor's degree programs had first-year college GPAs that were 0.07 points higher than their peers. The effect on the GPAs of students in associate degree program was also positive but not statistically significant.

■ College Now increased participants' probability of persistence to a third semester in college by 4.6 percent. This finding differs from the CCRC findings regarding CTE students.

Program Details

Program Population

Florida

■ More than 34,000 students participate in DE each year. More than 32,000 of these students take classes associated with a two-year community college.[129]

■ DE students are more likely to be female and White than the overall student population.[130]

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127 Findings in this section are statistically significant at the .01 level unless otherwise noted.
128 The difference is statistically significant at the .10 level.

129 American Youth Policy Forum, 2008.
130 Karp & Calcagno, et al., 2007.

- DE in Florida typically targets higher-achieving students. Eligibility requirements state that students must have a 3.0 GPA to take general education courses leading to a college degree or have a 2.0 GPA to take courses that lead to a technical certificate. Students must also pass the college placement test in the subject matter area.

New York City

- In 2006–07, there were 18,912 students enrolled in College Now college-credit courses, excluding summer programs. Participation in College Now programs increased 70 percent between 2001 and 2004.

- In 2007, more than one-third of all CUNY entering freshmen from New York City high schools had participated in some component of the College Now program. The percentages of College Now alumni at the different CUNY institutions ranged from 12 to 31 percent.

- Eligibility varies based on the type of College Now course, and can be based on standardized test scores or GPA.

Program Components

Florida

- The Commissioner of Education approves new courses for dual enrollment, which is structured by a statewide course numbering system. There are nearly 500 courses that are approved for dual credit in state public high schools and institutions of higher education.[131]

- Colleges and public school districts establish formal DE articulation agreements.

- 80 percent of DE classes occur on college campuses, and 20 percent at high schools. The colleges are typically two-year community colleges.[132]

- Books and materials must be similar or the same as those provided in all college courses, and faculty must be certified to teach college-level classes. All end-of-course exams are approved by the community college.

- Professional development must be provided to high school staff, developed in collaboration with the postsecondary institution.

- The colleges advise DE students on course-selection and planning.

New York City

- Most DE courses in the College Now program are taught on high school campuses by high school faculty certified as college adjuncts. Some sites host classes specifically for College Now students on the college campus. Other students take courses on the college campus with full immersion with undergraduate students.

- College Now includes interventions to build academic skills for students who are not yet college-ready. At some of the CUNY colleges, high school students are allowed access to the same non-credit bearing remedial courses as college students.

- "Foundation courses" are thematic, discipline-based high school courses offered to prepare students in the 10th and 11th grades for college courses.

- College Now also offers summer programs in special topics, such as health, science, and arts careers.

Cost/Funding

Florida

- According to state law, community college tuition and fees are waived for DE students.

- DE courses are financed by state funds allocated to each school district based on enrollment. The colleges do not receive additional state funds to finance dual enrollment.

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131 Information in this section is based on American Youth Policy Forum, 2008 unless otherwise noted.
132 Lerner & Brand, 2008.

New York City

- College Now is funded by CUNY, and tuition and fees are waived for DE courses.

- The CCRC report was funded through the support of a grant from the US Department of Education's Office of Vocational and Adult Education.

Evaluation of Dual Enrollment

Evaluation Overview
Community College Research Center (CCRC): Using large, longitudinal data sets contained in administrative records, this comparative study published by the National Research Center for Career and Technical Education (NRCCTE) examined the short- and long-term effects of DE participation on student outcomes in Florida and New York City, for all students as well as for CTE students in particular. Both data sets allowed researchers to track individual student records for two to three and one-half years of postsecondary education. The outcomes of CTE concentrators who dually enrolled were compared with the outcomes of similar CTE students who did not dually enroll, and the study also disaggregated results by student characteristics, high school academic achievement, and the number of DE courses taken.

CUNY Study: This quantitative, longitudinal evaluation used CUNY administrative records to compare the outcomes of former College Now students with similar college students who had not participated in DE. The evaluation specifically examined the effects of College Now participation on first year college credits earned, first year college GPA, and persistence to a third semester in college. This evaluation did not distinguish CTE students from non-CTE students, though many of the findings regarding the overall population of former College Now participants were similar to the CCRC findings for the population of College Now participants who attended vocational high schools.

Evaluation Population

Florida (CCRC Study)

- The study population consisted of 299,685 students. The state's comprehensive student unit record system contained data for all students who graduated from public high schools in 2001 and

2002 and then enrolled in state public colleges and universities.

- As Florida data does not identify students as CTE concentrators, the researchers chose to use the National Center for Education Statistics' definition of CTE participants and classify CTE students as those who completed at least three credits in the Specific Labor Market Preparation area (a focused career area such as technology or health care).

- The DE students in the study population were 62 percent female, 76 percent White, 11 percent African American, and 8 percent Hispanic. 23 percent were eligible for Free and Reduced Price Lunch (FRPL) in middle school (which is lower than the state average of 45 percent FRPL-eligible students).

- CTE students who participated in dual enrollment were more demographically and academically similar to other dual enrollees than they were to the general population of CTE students who did not dually enroll.

New York City

CCRC Study

- The study population included 2,303 students, all of whom had attended one of New York City's 19 vocational high schools (meaning that all students participated in CTE programs) and subsequently enrolled in CUNY in 2001 or 2002.

- Participants in College Now were defined as students who took at least one College Now course during high school, whether for college credit or remediation.

- College Now participants from these schools were more likely to be female (58 percent, compared to 51 percent), African American (57 percent, compared to 40 percent), or Asian (8 percent, compared to 5 percent) than their peers at CUNY who had also graduated from vocational high schools but did not participate in College Now.

- College Now participants had higher average college admission scores (a composite score of multiple sources of achievement data) than their peers.

- Most College Now students took only one DE class.

CUNY Study

- The study population included all 13,248 students who enrolled in CUNY associate's or bachelor's degree programs in Fall 2003 and had graduated from a New York City public high school within the previous 15 months. Former College Now participants were compared with nonparticipants.

Evaluation Methodology

Florida (CCRC Study)

- The researchers used statistical analyses to examine the effect of DE on outcome variables such as graduation from high school, enrollment in college, credit accumulation, grade point average, and persistence into a second year of college.

- The study compared all DE participants in the state with similar non-DE peers.

- The analyses controlled for student demographics (race, age, gender, socioeconomic status, and English language learner status) and prior academic achievement (high school grades and test scores), as well as school-level controls such as the school's racial composition, median household income in the neighborhood, and school ranking.

- The researchers specifically examined the outcomes of CTE students in an effort to control for potential differences between DE and non-DE students in motivation, career aspiration, and high school experience. Within the CTE sample, both the treatment and comparison groups had elected to participate in technically-oriented education. However, the researchers recognize that this design could not control for all potential selection bias.

- The data allowed the researchers to examine short-term outcomes, such as high school graduation rates and college enrollment, and to disaggregate results based on the number of DE courses taken, student characteristics, and high school achievement.[133]

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[133] The researchers could not track students who went to college out of state or to private schools; actual college enrollment rates were probably higher than they appeared in the data set.

New York City

CCRC Study

- The New York City sample was obtained by linking data from College Now records for participating students from the City's 19 vocational high schools and CUNY's Office of Institutional Research data on student applications and college records.

CUNY Study

- The New York City data sources were similar to those of the CCRC study, linking College Now data and CUNY student records.

- In the analysis of outcomes, the author considered only the credits and GPA earned while at CUNY, eliminating credits from AP and other precollege credits.

Contact Information

Program Contact
Eric Hofmann
CUNY—College Now
101 W. 31st Street, 14th Floor
New York, NY 10001
646-344-7305
Eric.Hofmann@mail.cuny.edu

Research Contact
Melinda Mechur Karp
Senior Research Associate
Institute on Education and the Economy/Community College Research Center
Teachers College
Columbia University
525 West 120th Street
Box 174
New York, NY 10027
Mechur@exchange.tc.columbia.edu

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Early College High Schools

Population Served	High school students; some Early College High Schools also include the middle grades. The model targets students from underrepresented groups and serves approximately 43,000 students.
Program Location	Nationwide; Early College High Schools currently operate in 24 states and the District of Columbia.
Type of Evaluation	The Early College High School Initiative Evaluation is a mixed-method study including comparisons of school-level outcomes with district averages and student-level outcomes with national averages. The study of North Carolina's Early College High School Initiative is a longitudinal, experimental study analyzing differences in student-level outcomes between randomly assigned treatment and control groups.
Findings	Early College High Schools had higher achievement test scores and expected graduation rates than district averages, and ECHS graduates were more likely to plan to enroll directly in college than national averages. Early results from the North Carolina experimental study found that ECHS students were more likely to be on track in a college preparatory course of study than control group students.
Elements of Success	■ Rigorous curriculum ■ Instruction in academic success behaviors ■ Accelerated learning ■ Culture of high expectations ■ Tutoring and academic support services ■ Smaller learning communities ■ Early college exposure ■ Earning college credits ■ Secondary-postsecondary partnerships

Program Overview

Early College High Schools (ECHS) are small schools that aim to directly connect all students with a college experience and allow them to earn high school and college credits simultaneously. They offer all students the chance to earn both a high school diploma and an associate's degree, or comparable college credit, by integrating the high school and college experiences and offering extra academic and social support. The ECHS model is based upon the theory that a rigorous curriculum and the incentive of earning college credits will enhance the aspirations, readiness, and college enrollment of students who are traditionally underrepresented in postsecondary institutions.

The Bill & Melinda Gates Foundation's Early College High School Initiative (ECHSI) was launched in 2002, with the goal of developing new ECHSs for students from groups that are historically underrepresented in higher education. The initiative provides funding to 13 intermediary organizations to convene various partners, such as school districts, institutions of higher education (IHEs), and community-based organizations, to launch ECHSs. Jobs for the Future (JFF) serves as the overarching intermediary organization. As of 2008-09, the ECHSI has started or redesigned 197 schools in 24 states and the District of Columbia. The initiative plans to have approximately 250 schools in operation by 2011.

Particularly rapid expansion of the early college high school model has been undertaken by the Learn and Earn Early College High School Initiative in North Carolina. A product of House Bill 1473, signed by Governor Mike Easley in 2004, this program strives to address the state's workforce needs and reduce the dropout rate. It has been jointly administered by the North Carolina New Schools

Project[134] and the North Carolina Department of Public Instruction. The initiative aims to establish 75 new ECHSs across the state of North Carolina.

Key Findings

The ECHSI evaluation found that the network's schools outperformed district averages on assessment tests and expected on-time graduation rates. The most positive outcomes, with regard to academic achievement, attendance, and on-time promotion rates were associated with ECHSs located on college campuses. ECHS graduates planned to enroll in college at a higher rate than national average enrollment rates, and they were particularly more likely to plan to enroll in two-year colleges.

The SERVE Center study found that 9th-grade students at two North Carolina ECHSs progressed in a college preparatory curriculum at higher rates than the control group.

This profile draws upon information from both the National Evaluation of the ECHSI, conducted by the American Institutes for Research (AIR) and SRI International (2009), as well as an experimental study of North Carolina's Early College High School Initiative conducted by the SERVE Center at the University of North Carolina at Greensboro.

Findings from the ECHSI Evaluation

- In 2007–08, ECHSs outperformed district averages on their states' English language arts (ELA) and mathematics assessments by 7 percentage points in each subject area. 74 percent of ECHS students scored proficient in ELA, and 67 percent were proficient in math.[135]

AYPF's Policy Takeaways

Shared Responsibility for College-Readiness: The ECHS model rests on the assumption that the K-12 education system and institutions of higher education both play a vital role in providing youth from underrepresented groups with the academic preparation and social supports needed to succeed in postsecondary education. Policymakers should promote alignment and collaboration between the secondary and postsecondary systems through discretionary grant programs that incentivize partnerships allowing high school students to earn credit toward a high school diploma and a college degree simultaneously.

The "Power of the Place" to Develop College Knowledge: Many ECHSs are located on a college campus, and, as a result, students learn what it is like to be in college by attending classes, using college facilities, and being around other college students. Students begin to see themselves as college-goers who are capable of handling the rigor of higher education and navigating the new environment. New small schools that are located on college campuses also provide a very different environment than traditional high schools, and students are able to receive more individualized attention and targeted support. College professors set higher expectations for the level of work, which allows high school students to build confidence in their abilities. Policymakers and administrators should recognize the potential impact of a new school's physical location and enable more institutions of higher education to share their campuses with secondary schools and programs.[136]

- The ECHSs with the strongest outcomes were located on college campuses; there is strong evidence of the "power of the site." These schools had the highest state assessment scores, attendance rates, and 9th-to-10th-grade progression rates. ECHSs located on college campuses outperformed district averages by 16 percentage points in math and 14 percentage points in ELA.

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134 The North Carolina New Schools Project is a nonprofit organization established by the Office of the Governor, North Carolina Education Cabinet, and with support from the Bill & Melinda Gates Foundation.

135 School-level findings in this section are statistically significant at the .05 level.

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136 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

- Students at an ECHS with a four-year IHE partner were significantly more likely to have taken the SAT or ACT exams than those at an ECHS with a two-year IHE partner.

- Of the 12 ECHSs that had the earliest cohorts of students reaching the 12th grade, an estimated 66 percent of students were expected to graduate on time, which was 14 percentage points higher than their district average rates.[137]

- ECHSs reported that students who graduated in 2006–07 had earned an average of 23 college credits before graduation, representing approximately 7–8 college classes.

- 83 percent of the students surveyed expected to receive a two-year or four-year college degree.

- ECHS graduates were more likely to plan to enroll in college in the fall after high school graduation than the national average, at a rate of 88 percent (versus 72 percent nationally).[138]

- 43 percent of ECHS graduates planned to enroll in a two-year college, and 41 percent planned to enroll in a four-year college or university. National data show that only 28 percent of all high school graduates enroll in two-year colleges, and 44 percent enroll in four-year colleges or universities. ECHS graduates' increased intentions of enrolling at two-year colleges may be related to the fact that the majority of ECHSs partner with this type of institution.

- ECHS students reported fairly high levels of academic self-concept and engagement.

- Students were more likely to report having high levels of interest in their academic work when they also reported that their classes had high levels of instructional rigor.

Findings from the Study of North Carolina's ECHS Initiative

- More ECHS students had progressed along a college preparatory course of study than students in the control group.

- By the end of 9th grade, ECHS students were significantly more likely to have taken and progressed in Algebra I, Algebra II, and English than students in the control group.

- By the end of 9th grade, ECHS students had taken more college preparatory math courses. 98 percent of the treatment group had taken at least one college preparatory math course, compared to 68 percent of the control group. 49 percent of the treatment group had taken at least two college preparatory math courses, compared to 19 percent of the control group.

- ECHS students reported receiving more rigorous and relevant instruction than students in the control group. They also reported participating in a greater number of academic and social support activities more frequently.

Program Details

Program Population

National ECHSI

- As of 2008–09, there were approximately 43,000 students enrolled in 197 ECHSs nationwide.

- More than half (53 percent) of ECHSs are located on college campuses.

- 65 percent of ECHSs involve partnerships with a two-year public IHE, and 23 percent partner with four-year public IHEs; the remaining ECHSs partner with private four-year colleges or have multiple partner types.

- The model targets students traditionally underrepresented in higher education (low-income,

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137 The evaluators used the Cumulative Promotion Index (CPI) as a proxy estimate for overall graduation rates. The CPI is the result of multiplying grade-to-grade progression rates for each grade level included in the school. The ECHS' rates were compared with their districts' 2004-05 rates, based on data from Editorial Projects in Education Research Center, n.d.

138 The college enrollment rates for ECHS students were based on data from the school survey. Some schools based their college enrollment data on graduates' intentions for college enrollment during the spring of their final year, and did not follow up with students in the fall to verify enrollment. National averages of college enrollment were based on 2003-04 data that was also based on reports from school administrators, rather than tracking students into college. (National Center for Education Statistics, 2007. In AIR and SRI, Forthcoming).

first-generation, English language learners, racial minority, etc.). Most ECHSs serve more low-income students and students of color than their geographic comparison districts.

■ The student population across all ECHSs consists of 67 percent students of color, 59 percent low-income students,[139] and 10 percent Limited English Proficient (LEP) students.

■ The parents of ECHS students have similar or higher levels of education than the national average, as compared with data from a nationally representative survey of students in the 10th grade. 31 percent of ECHS students report that their mothers were college graduates, compared to a national average of 24 percent for mothers and 29 percent for fathers.[140]

■ Three-quarters of ECHSs report that they use some admission criteria; 34 percent of these schools have minimum achievement test scores for admission, and 20 percent have a minimum GPA. The majority of schools with admission criteria require students to submit essays and recommendations from middle school counselors or instructors, and to complete interviews. The ECHSs that were located on college campuses were more likely to use admission criteria.

North Carolina Learn and Earn

■ The majority of North Carolina's new Learn and Earn ECHSs are in rural areas.

■ 58 percent of students are White, 28 percent are African American, and 8 percent are Hispanic; 26 percent are low-income.[141]

■ ECHSs in North Carolina are public high schools that require students to apply. The initiative is designed to serve students who are underrepresented in college, including first-generation, low-income, and minority students.

■ The ECHSs that are included in the study of North Carolina's ECHS initiative use a lottery to select eligible applicants for admission.

Program Components

National ECHSI

■ The original Core Principles of ECHSs, as defined by JFF and the Bill & Melinda Gates Foundation, included:
  ❏ The compression of the years of education necessary to obtain a postsecondary degree.
  ❏ The opportunity for all students to attain an associate's degree or two years of college credit toward a bachelor's degree while in high school.
  ❏ Outreach to the middle grades.

■ The Core Principles were revised by key stakeholders in Fall 2008, and the principle regarding completion of college credit was adjusted to require that participating high schools and postsecondary institutions develop a coordinated academic curriculum that allows all students to earn one to two years of transferrable college credit leading to college completion.[142]

■ ECHSs also demonstrate the attributes of high performing small schools. JFF and the Gates Foundation identify these attributes as:
  ❏ A common focus on key, research-based goals and intellectual mission.
  ❏ Small learning environments with no more than 400 students per school.
  ❏ Respect and responsibility among, and between, students and faculty.
  ❏ Time for staff collaboration and the inclusion of parents and the community.
  ❏ Technology as a tool for designing and delivering engaging curricula.

■ In many cases, ECHSs are characterized by non-traditional grade-level configurations. Some Early College Schools include the middle grades, and others are planning to incorporate a 13th grade, allowing students an extra year to accumulate college credits.[143]

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139 Low-income students were defined as those who were eligible for Free and Reduced Price Lunch (FRPL), or students meeting other comparable local criteria.
140 Ingels & Burns, et al., 2005. In AIR & SRI, Forthcoming.
141 Data reported by North Carolina New Schools Project, 2009.

142 Jobs for the Future, 2008. In AIR & SRI, Forthcoming.
143 As most ECHSs were relatively new at the time of data collection and were expanding one grade at a time, many had not yet included 12th or 13th grades.

- Ideally, all ECHS students take college courses for credit by the last two years of high school. The schools have formal partnerships with IHEs, which are most frequently two-year colleges.

- The large majority of schools offer tutoring and additional support classes during the regular school day. Many schools also feature advisory or mentorship groups.

- Students receive college application support through a formal support class, and many schools provide SAT and ACT preparation classes.

North Carolina's ECHS Initiative

- North Carolina's ECHSs are all located on community college or university campuses, with the exception of a small number of schools with online college courses.

- The ECHSs are required to follow five design principles, which are closely aligned with the expectations of the national ECHSI: Ready for College, Powerful Teaching and Learning, Personalization, Redefined Professionalism, and Purposeful Design.[144]

- The ECHSs are assigned School Change Coaches, and school staff and leadership participate in multiple professional development opportunities including an annual summer institute.

Cost/Funding

- The Bill & Melinda Gates Foundation has invested $110 million toward the ECHS Initiative; additional funding for early colleges comes from the Kellogg Foundation, the Carnegie Corporation of New York, the Ford Foundation, and other major philanthropic partners.

- Additional sources of funding have included per-pupil allocations to school districts based on student enrollment, federal entitlement aid (such as Title I and Title V of the Elementary and Secondary Education Act), state grants, charter grants, and in-kind contributions.[145]

- Costs associated with the ECHS model include coordination and collaboration, college tuition, books, and fees.

- North Carolina's Learn and Earn ECHSs receive five years of implementation funding from the state (North Carolina Department of Public Instruction and North Carolina New School Project), along with technical assistance. The total start-up grant funding per school was $287,000 in 2006–07. Schools in the first year of implementation receive an additional $10,000.

- The ECHSI evaluation is funded by the Bill & Melinda Gates Foundation.

- The study of North Carolina's Learn and Earn high schools by the SERVE Center at the University of North Carolina at Greensboro is funded by the US Department of Education's Institute for Education Sciences.

Evaluation of Early College High Schools

Evaluation Overview

National ECHSI Evaluation
AIR and SRI International began the ongoing National Evaluation of the ECHSI for the Bill & Melinda Gates Foundation in 2002. The mixed-method evaluation has been primarily descriptive, aiming to document the structural and design elements of the Initiative, as well as to examine the relationship between ECHS implementation and college-ready student outcomes.

The most recent report (Forthcoming) presents data collected during 2007–08, including quantitative data from the population of all open ECHSs and a student survey administered to a sample of students from 35 ECHSs, as well as qualitative data from site visits to six ECHSs and interviews with intermediary and sub-intermediary organizations, ECHS graduates, and JFF. Although no control group was established, researchers compared ECHS students with geographic comparison groups (district and state averages) on selected achievement and attainment outcomes.

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144 North Carolina New Schools Project, 2007.
145 Webb , 2004.

Study of North Carolina's ECHS Initiative
The ongoing study of North Carolina's Early College High School program, by the SERVE Center at the University of North Carolina at Greensboro, uses an experimental design to examine the performance of ECHSs. The study will ultimately include results from more than 20 ECHSs, all of which will use a lottery system to assign students from a pool of eligible applicants to treatment and control groups. Outcomes to be measured will include attendance, course-taking patterns, attitudes toward self and school, behavior, educational aspirations, academic achievement, academic growth, and dropout and attrition rates. The study began in 2006–07 and will continue through 2010–11.

An initial report provides results from a pilot study of two Learn and Earn ECHSs, which were oversubscribed and used lotteries to select their students from the outset. The report examines outcomes for three cohorts of 9th-grade students at two sites and one cohort of 10th-grade students at one site. In addition, this report also includes findings from a survey administered to treatment and control students in four ECHS sites.

Evaluation Population

ECHSI Evaluation

■ The school survey was administered to the entire population of open ECHSs, which included 157 schools in Fall 2007. Administrators from 151 schools completed the survey.

■ Student surveys were completed by a sample of 2,103 students from 35 ECHSs. This sample included 25 students per grade level from each school.[146]

■ Site visits were conducted at six ECHSs that had been open long enough to have at least one graduating class, and the study population at these sites included ECHS and college leaders, college liaisons, school district representatives, instructors, and guidance counselors.

■ The study population also included 16 graduates from the class of 2007, as well as 17 intermediary and sub-intermediary organizations, and JFF staff members.

Study of North Carolina's ECHS Initiative

■ Course-taking outcomes were examined for a sample of 285 students in the 9th grade (including 129 treatment group students at two ECHS sites and 156 control group students at traditional high schools) as well as 72 students in the 10th grade (including 37 students at one ECHS and 35 control group students). There were no systematic differences in demographic characteristics between students in the two groups.

■ Information on students' attitudes and experiences was collected from a sample of 220 students at the end of their 9th grade year, including 171 treatment group students from four ECHSs and 49 control group students from traditional high schools.

Evaluation Methodology

ECHSI Evaluation

■ All ECHSs that were open in Fall 2007 were invited to participate in an online school survey, and administrators at 151 schools completed the survey (a 96 percent response rate).[147] This survey focused on student selection criteria, student demographics, opportunities for taking college courses, and support services.

■ The evaluators also collected quantitative, school-level data from the Student Information System (SIS), an online data collection system developed by JFF that tracked the demographics, background characteristics, attendance, and academic progress of students at ECHSs nationwide. As this data set was incomplete, it was supplemented by published school records.

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[146] As many of the schools originally opened with one or two grade levels, the overall number of study participants from each school varied.

[147] The intermediaries solicited surveys from all 157 schools considered to be part of the ECHSI network at the time of data collection, and 151 schools completed at least some portion of the survey.

- Extant achievement data on English language arts (ELA) and mathematics scores were collected for each school, and these outcomes were compared with district averages.[148]

- An online student survey was administered in Spring 2008 to students at 35 ECHSs. The schools represented a systematic stratified sample of the 122 ECHSs that had been open since Fall 2006, enrolled high school grades in 2007–08, and remained part of the initiative. A random sample of 25 students per grade level was chosen to take the survey, representing each high school grade offered at the school.[149] As the sizes of the schools varied greatly, student responses were weighted to be representative of their grade level at their school. The overall survey response rate was 89 percent.

- The survey included inventories of concepts such as academic engagement and preparation for postsecondary education and careers, and also asked students to rate their schools and instructors on various indicators of rigor, relevance, relationships, and support.

- Evaluators used statistical controls for student demographics and other characteristics such as grade level, sex, racial background (White or non-White), economic background, and whether the student was a first-generation college-goer or an English language learner. They also used regression analyses and hierarchical linear modeling to examine the relationship between student-level characteristics and outcomes.

- The researchers conducted six ECHS site visits during 2007–08, with a focus on collecting qualitative data. These schools were selected from among the ECHSs that had been open long enough to have a graduating class and were not part of the 2006–07 or 2007–08 student survey samples. The schools were not representative of the entire population of ECHSI schools.

- Additional qualitative data collection methods included telephone interviews with 16 ECHS graduates who had enrolled in college upon graduation, as well as telephone interviews with the intermediary organizations, sub-intermediary organizations, and JFF.

Study of North Carolina's ECHS Initiative

- Eligible applicants to an ECHS were chosen by lottery and randomly assigned to the treatment group, which was accepted for admission, or to the control group, which was denied admission.

- The study uses administrative data collected by the North Carolina Department of Public Instruction to track and compare outcomes for both treatment and control students. Outcomes measured will include attendance, achievement, course-taking patterns, school-leaving and dropout rates, and disciplinary data.

- The study also collects original data on students' attitudes toward and experiences in school through a survey administered to a sample of treatment and control students.

- This profile includes early outcome data from two ECHSs that were oversubscribed and used a lottery system to select students prior to the beginning of the study.

- The early analysis of outcomes from these two ECHSs relied on data from state-mandated end-of-course and end-of-grade exams, as well as background data on all applicants to the two schools. Researchers used descriptive statistics and t-tests to compare the number of students taking a course and progressing in the course (defined as passing the state-mandated end-of-course exam).

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[148] There was not a baseline measure of students' performance to determine whether the students at ECHSs were already higher-achieving before entering ECHS.

[149] In schools with fewer than 25 students per grade, all students were sampled.

Contact Information

Research Contacts
Andrea Berger
Principal Research Analyst
Education, Human Development, and the Workforce
American Institutes for Research
1000 Thomas Jefferson Street, NW
Washington, DC 20007
202-403-6927
aberger@air.org

Julie Edmunds
Project Director
University of North Carolina at Greensboro
SERVE Center
2634 Durham Chapel Hill Boulevard
Suite 208
Durham, NC 27707
919-402-1060
Jedmunds@serve.org

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Enhanced Math in Career and Technical Education

Target Population	High school students in CTE classes. The national demonstration program included approximately 4,000 students in 69 schools.
Program Location	Demonstration program in 12 states.
Type of Evaluation	Experimental design with random assignment of teachers to control and experimental groups; student achievement findings were aggregated at the classroom level.
Findings	Improved scores on traditional math assessments and college placement math tests.
Elements of Success	■ Applied curriculum ■ Embedded professional development ■ Professional learning communities ■ Common planning time

Program Overview

The National Research Center for Career and Technical Education (NRCCTE) developed an Enhanced Math in Career and Technical Education (CTE) model to build more explicit, contextual math instruction into CTE curricula, and to evaluate its impact on student achievement. The model includes intensive professional development for teachers and a specific pedagogy. The program brings together math and CTE teachers to identify embedded math in career-related courses and find opportunities to make clear connections to the concepts learned in academic courses. After learning about the Math-in-CTE instructional strategy through professional development, the CTE and math teachers partner in the development of their own lesson plans.

The Math-in-CTE approach reflects the philosophy that math content should arise from occupation-specific material, not be forced into it. The theory of action posits that by teaching students to recognize math in real-world contexts, their engagement with the subject matter will increase, and both their academic and applied math abilities will improve as a result.

The demonstration program targeted high school CTE teachers of courses in five specific labor market preparation (SLMP) fields: agriculture, auto technology, business/marketing, health, and information technology (IT).

Key Findings

Students in the Math-in-CTE classrooms scored higher on traditional math assessments and college math placement tests than their peers in traditional classrooms. This increase in academic math ability did not have any negative impact on students' attainment of occupational knowledge; most Math-in-CTE classrooms also had higher scores on tests of technical ability.

General Findings

■ Students from the experimental group scored 4 percentage points higher than the control group on a traditional math assessment test, the TerraNova, after controlling for pretest classroom averages.[150]

■ The Math-in-CTE students scored 3 percentage points higher than the control group on a college placement math test, the ACCUPLACER.

■ The experimental classrooms' average scores were higher on the WorkKeys (applied math) test than control classrooms, though the difference was not statistically significant.[151]

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[150] The difference is statistically significant at the .003 level. The TerraNova results are based on 136 classrooms, representing 591 students. The effect size (.55) was moderate.

[151] The WorkKeys results are based on 126 classrooms and 536 students.

AYPF's Policy Takeaways

The Value of Human Capital Investments: This program depends upon a significant commitment of time and financial resources for professional development and the creation of a professional learning community, in order to integrate students' academic and occupational learning. Policymakers should support professional development that aims to increase the coherence of the curriculum through partnerships between academic and CTE teachers, team-teaching, and increased common planning time.

The Academic Benefits of an Applied Curriculum: Education leaders and policymakers have focused attention on the importance of college-preparatory math curricula, with a particular emphasis on algebra as a gateway course for college-readiness. The Math-in-CTE program demonstrates that applied math instruction and embedding math content in technical courses provide an opportunity for students to reinforce and gain competency in math skills that are considered critical to postsecondary success.[152]

■ The Math-in-CTE intervention did not have any negative effect on the amount of occupational knowledge gained by the experimental group. Most experimental groups scored higher on the occupational tests for their SLMP than did the control classrooms. These findings were limited by small sample sizes within each SLMP area.

■ The qualitative research found that both CTE and math teachers highly valued the partnerships. In their view it was not the lesson plans alone but the entire process of collaboration that was essential to their students' improvement.

■ The teachers generally agreed that most students benefited from the intervention. Students with higher math abilities were observed voluntarily helping other students.

■ The need to provide remediation in basic math functions and differentiated instruction proved challenging for CTE teachers.

■ Subsequent, smaller studies of the implementation of Math in CTE in replication sites have yielded similar, significant, positive results in four of five cases. The one outlier was a site that did not implement the full Math-in-CTE professional development model.

Program Details

Program Population

■ Each of the occupational fields was studied in multiple schools in one geographic area, constituting multiple simultaneous replications.[153] The CTE programs included in the study represented the following fields and geographic areas:[154]
  ❏ Business/Marketing (classroom-based): one Western state
  ❏ Auto Technology (heavily skill-oriented): several Eastern states
  ❏ IT and Health (both high-tech and high-growth industries): several Midwestern states
  ❏ Agriculture (a field historically associated with CTE): one Southern state

■ The 69 participating schools had an average enrollment of 986 students.

■ The participating schools had an average population that was 77 percent Caucasian, and 29 percent of students were eligible for Free and Reduced Price Lunch (FRPL).

Program Components

■ The pedagogical framework, entitled the "Seven Elements of a Math-Enhanced Lesson" included the following elements: introduction to the CTE lesson; assessment of the level of students' related math ability; completion of an embedded math example; completion of related, contextual math problems; completion of traditional math problems; demonstrated understanding; and formal assessment.

■ The professional development sessions brought together CTE and math teachers from the same re-

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152 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

153 Each site/SLMP included multiple schools within one geographical area.

154 The researcher team did not identify the specific states in which participating schools were located.

gion and field for 10 days of curriculum mapping and math-enhanced CTE lesson development.

❏ In the demonstration program, five sessions were held during the summer, four were held during the school year, and a final debriefing session took place at the end of the year.

❏ All experimental teachers received similar professional development sessions, regardless of the career field.

❏ Each teacher-team developed five to 10 lesson plans, using all seven "elements" of the pedagogy in each lesson.

■ The math teachers provided support to CTE teachers before and after each lesson was delivered. CTE teachers delivered the lessons on their own, instead of team-teaching.

■ Follow-up after each lesson included a structured debriefing protocol. Math teachers recorded their reflections on the debriefing session, and the CTE teachers completed a post-teaching report.

■ Smaller "math clusters" brought together two to four CTE teachers from the same geographic area with one math teacher "captain" for meetings that took place between professional development sessions approximately three times per year.

■ Math content included number relations, computation, problem solving, algebra, and trigonometry. The lessons moved from specific, contextual math examples to more abstract examples of the math concept or theory that resembled the type of problems found on traditional math tests.

■ The Math-in-CTE lessons represented approximately 10 percent of the total class time in a CTE course, making this a relatively low-intensity intervention.

■ Since the evaluation ended, NRCCTE has provided technical assistance to other states and cities interested in implementing the Math-in-CTE model. The NRCCTE facilitators work with state leadership teams over the course of one year, providing guidance and training in the implementation of the model. Participating states focus on a minimum of two CTE content areas.

Cost/Funding

■ The demonstration and evaluation were funded by the Office of Vocational and Adult Education (OVAE) at the US Department of Education.

■ The subsequent implementation of the model at replication sites has been funded by the Perkins IV Act.

Evaluation of Enhanced Math in CTE

Evaluation Overview

The study sought to evaluate whether the Math-in-CTE model improves student performance on traditional and applied math tests, and whether this modification to the CTE curriculum reduces students' occupational knowledge and skills. The study used a randomized trial design, with CTE teachers randomly assigned to the treatment or control group in each SLMP. The primary unit of analysis was the classroom. The results of pretests and posttests of student math ability were analyzed and changes in the scores of students in the treatment group classes were compared with changes in the control group classes. A one-semester pilot study was conducted in Spring 2004, and the full study took place in the 2004–05 school year.

Evaluation Population

Pilot Study

■ The study population included 236 CTE teachers, 104 math teachers, and 3,950 students across 12 states.

■ The demographics of the students varied by the SLMP sites. Five of the six sites had majority male and Caucasian enrollment in the experimental group.

■ Overall, the experimental group was 66 percent Caucasian, 12 percent African American, 10 percent American Indian/Pacific Islander, 9 percent Hispanic, and 3 percent Asian.

■ The average student GPA was approximately 3.0 for both the experimental and control groups.

Full Study

- The full study population included 131 CTE teachers. Of these, 57 teachers were in the experimental sample and 74 were in the control group. The population included at least 20 teachers in the combined treatment and control groups in each SMLP area except one.

- Approximately 3,000 students participated in the full study.

Evaluation Methodology

- Teachers were recruited to join the study and were randomly assigned to the treatment (Math-in-CTE) or control group, with equal numbers of treatment and control teachers in each SLMP area.[155] The treatment and control teachers were from different schools, to reduce crossover effects on nonparticipating students, and the control teachers continued to teach their regular curriculum. Most CTE teachers applied to join the study with a math teacher partner from their schools, though some were assigned math teacher partners.

- The initial (Spring 2004) study became a pilot study when more funding became available to extend the demonstration for another school year. The same group of teachers was invited to participate in the 2004–05 school year study.[156] Teachers in the experimental group attended additional professional development sessions during the summer to redesign lesson plans and create new ones.
  - ❏ One site was dropped from the full study due to administrative issues.
  - ❏ Attrition of experimental group teachers between the two studies also occurred, partly in response to the requirement of additional professional development during the summer. To maintain similar sample sizes in the experimental and control groups, the researchers randomly dropped a comparable number of control teachers from the study at this point.

- CTE teachers completed a pre-intervention survey regarding their self-efficacy with regard to teaching, confidence with teaching math, attitude about math, and other topics.

- The study examined a different CTE field (SLMP) in each geographic region, and each region included multiple participating schools.

- The study was mixed-method, and data sources included test scores, teacher surveys, focus groups, and classroom observations. The level of analysis was the classroom, rather than individual student results.

- Students were given the TerraNova Comprehensive Test of Basic Skills (CTBS) Basic Survey math test as a pretest. Three different posttests of math achievement were administered; one-third of students in each class took each of the three tests. The posttests were the TerraNova CTBS Basic Battery Test (a traditional math test), the WorkKeys Applied Mathematics Assessment (an applied math test), and the ACCUPLACER Elementary Algebra test (a college math placement test).[157] The researchers used hierarchical linear modeling to analyze differences in posttest scores as a result of belonging to either the treatment or control groups, with the pretest scores used as covariates.

- Students also took posttests of technical skills in the corresponding SLMP area.

- Students were allowed to opt out of data collection.[158] Students were given $10 gift certificates as an incentive for participating in the tests.

- Teachers' lesson plans were rated by the researchers on a common rubric. Observations, surveys, student assessments, and focus groups assessed the teachers' fidelity to the Math-in-CTE model, and found a high degree of consistency.

- The results cannot be generalized to all CTE teachers, because of the selection bias inherent in teachers' voluntary participation in the study.

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155 The experimental teachers were paid a $1,500 stipend for their participation in the pilot study, and the control group teachers were paid $500.

156 The decision to continue the study into a full year was not made in time to recruit additional teachers for the 2004-05 school year.

157 SLMPs varied in the extent to which their curricula were aligned with the concepts measured on the posttests.

158 Parents were informed of the study in advance and given an opportunity to exclude their children from testing by returning a signed form. The researchers report that only "very few did so."

Contact Information

James R. Stone III
Director
National Research Center for Career and Technical Education
University of Louisville
331 Education Building
Louisville, KY 40292
502-852-0639
james.stone@nrccte.org

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First Things First

Target Population	Students in Grades K-12. Evaluations focus on middle and high school students. The model serves all students in participating schools, and targets low-performing, high-poverty school districts.
Program Location	Evaluation sites in Kansas, Missouri, Texas, and Mississippi.
Type of Evaluation	A mixed-method, interrupted time-series evaluation comparing school-level outcomes from FTF schools and comparison schools with similar demographics.
Findings	In Kansas City, Kansas FTF schools improved academic outcomes, such as reading and math performance, attendance, and graduation rates, as well as school climate. In the expansion sites, gains from the early implementation of FTF (one to two years) were less prevalent or consistent.
Elements of Success	■ Accelerated learning ■ Smaller learning communities ■ Advocacy systems ■ Embedded professional development ■ Common planning time ■ Block scheduling ■ District-wide commitment to reform ■ Active, long-term commitment by technical assistance providers ■ Data-driven instruction

Program Overview

First Things First (FTF) is a comprehensive school reform model focused on improving organizational structures, interpersonal relationships, and classroom instruction, and on building capacity at the school and district levels to strengthen and sustain these improvements. The model focuses on interventions at the high school and middle school levels and through K-12 feeder patterns. The three hallmark elements of the model are smaller learning communities, a family and student advocate system that provides long-term academic and social support to each student, and instructional improvement efforts driven by teacher professional development and leadership support.

FTF was designed by the Institute for Research and Reform in Education (IRRE) and first adopted in Kansas City, Kansas in 1996, with implementation beginning in 1998 in one of the district's four comprehensive high schools along with its feeder middle and elementary schools. Over the next two years, the model was adopted in the district's three remaining comprehensive high schools and their feeder schools. The experience of the Kansas City site led to the expansion of the model to four additional school districts in Mississippi, Missouri, and Texas. The scaling-up effort was a US Department of Education-funded research and demonstration project; IRRE directed implementation in the expansion sites while the evaluation was conducted by MDRC. An earlier evaluation by Youth Development Strategies, Inc. (YDSI) focused exclusively on the impact of FTF on Kansas City, Kansas schools. The model is now being implemented in more than 12 school districts nationwide and targets particularly low-performing, high-poverty districts serving more than 40,000 students.

The model is based on theory from developmental and motivational psychology and strives to personalize all aspects of the school experience. FTF posits that by making the educational experience more personal, school environments will satisfy both students' and faculty members' fundamental needs to feel competent, autonomous, and related, which will result in higher levels of engagement. The theory of change goes on to state that when students and adults in these settings are more engaged in their work—teachers seeking to improve their instruction, students working toward higher expectations,

and families doing what they can to support student success—better academic outcomes, including student attendance, achievement, progress toward graduation, and postsecondary success, follow.

Key Findings

In Kansas City, Kansas FTF schools saw large gains in a variety of academic outcomes, such as reading and math performance, attendance and graduation rates, and improvements in school climate. These gains were sustained over several years and were pervasive across the district's schools. Similar gains were not observed in comparable schools in the rest of the state. The impact was particularly pronounced for reading scores and graduation rates. In the expansion sites, results were less consistent and conclusive, although statistically significant improvements in reading were registered at one Houston high school.[159]

Kansas City, Kansas Findings

MDRC Study

- At the 8th-grade level, the gains in reading proficiency at FTF schools outpaced improvements at comparison schools by 14 percentage points in 2004.[160]

- The gains in 11th-grade reading proficiency at FTF schools were 11 percentage points greater than the gains seen at comparison schools in 2004.[161]

- The impact on math results was smaller and less consistent, but the FTF schools still saw substantial improvements, particularly at the 7th-grade level. FTF schools experienced a 10 percentage point relative gain in 7th-grade math proficiency in 2004.[162]

AYPF's Policy Takeaways

District-Wide Focus and Long-Term Commitment: The MDRC evaluators attribute FTF's greater success in Kansas City, Kansas largely to the leadership and buy-in of key district leaders and longer implementation, as compared with the varied levels of support and shorter time implementing the initiative in the expansion sites. Comprehensive school reform models take more than two to three years to implement fully and achieve the kind of dramatic results reported for Kansas City, Kansas. Policymakers need to commit to a long-term reform strategy over several years, use data to inform progress and make mid-course corrections as needed, and provide sustained funding for the full implementation period.

Technical Assistance: Policymakers should provide greater support for a sustained, active role for high-quality technical assistance providers as part of school improvement grants, as a way to build district and school capacity.

Cost-Effectiveness: According to the analysis by Levin & Belfield, et al. (2007), FTF is a cost-effective intervention that results in a substantial return on investment, in terms of the individual and societal benefits of raising graduation rates.[163]

- Attendance at FTF schools, which was originally lower than the comparison schools, improved at a faster rate. FTF's impact on the rate of improvement in high school attendance ranged from 1.7–8.6 percentage points during the various years of the study, and this difference was statistically significant in two of the four years of data collection.[164]

- FTF schools saw significantly larger improvements in graduation rates than comparison schools, with relative gains ranging from 10.6 to 15.7 percentage points during the follow-up years.[165]

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[159] The MDRC researchers point out that the impact estimates are very conservative and may well underestimate the impacts of FTF. As the number of schools in the sample is relatively small, only relatively large impacts can be detected with statistical significance. Also, in Kansas City and the Mississippi Delta, the baseline period used to measure improvement was one year after FTF implementation and thus not a true measure of the baseline situation.

[160] The difference is statistically significant at the .01 level.

[161] The difference is statistically significant at the .05 level.

[162] Ibid.

[163] This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

[164] Attendance, dropout, and graduation data for the years prior to FTF implementation were available, and the researchers used a baseline average of the school-level rates from three academic years, 1997-98, 1998-99, and 1999-2000. The statistically significant findings for attendance were significant at the .01 level.

[165] The level of statistical significance ranges from .01-.05.

YDSI Study

- Students reported increased feelings of support from teachers and increased engagement in school.

- Students reporting high levels of teacher support were significantly more likely to score proficient on state tests and to meet district attendance standards.

- High schools with the highest levels of staff engagement and teacher support from colleagues reported higher student achievement scores.

- Teachers' ratings of support from administration and engagement in their jobs increased.

Houston Findings

- FTF was associated with improvements in standardized test scores at the one high school that had implemented FTF for three years. Improvements at this school outpaced gains at the comparison school by up to 12.5 percentage points in the last two years of follow-up.

- This particular high school also scored higher than all of the other expansion sites in terms of the level of implementation of the FTF model, and teachers reported statistically significant increases in feelings of support and engagement over time. At the other schools, teachers' feelings of support and engagement did not change significantly over time.

- At the other Houston high schools, which had implemented FTF for a shorter period of time, test score improvements were inconsistent.

Riverview Gardens Findings

- FTF was associated with relative improvements in math scores at the middle and high school levels, though findings were not statistically significant; similar effects on communication arts scores were not evident.[166]

Mississippi Delta Findings

- FTF was associated with relative improvements in high school reading scores, though findings were not statistically significant; effects on math scores were inconsistent.[167]

Program Details

Program Population

- The FTF model serves all students from all communities in a district, but it was designed to focus on schools serving large numbers of low-income students.

- Most FTF schools are predominately non-White, and more than 50 percent of students are eligible for Free and Reduced Price Lunch (FRPL).

Program Components

- Smaller Learning Communities (SLCs): In the FTF model, larger schools are redesigned into SLCs comprised of no more than 350 students and their teachers. This group of students and adults stays together throughout the grade levels served by each school. The SLCs are organized around broad academic and career themes. Teachers typically have students multiple times over the course of their school experience, allowing them to build longer-term relationships. Teacher schedules include a large amount of planning time with staff who share the same set of SLC students.

- Family and Student Advocate System: Each student has a faculty member, from the same SLC as the student, who serves as an advocate, monitors the student's progress and development, and acts as a liaison between the school and the family. Advocates are expected to meet in person with their students' families at least twice per year and meet weekly with their students during a regularly scheduled "advocate period" during the school day.

- Instructional Improvements: FTF's approach to instructional improvements includes both teacher professional development (the bulk of which is

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[166] As the number of schools in the sample is relatively small, only relatively large impacts can be detected with statistical significance.

[167] Ibid.

on site and embedded during the school day) to help teachers make instruction rigorous, engaging, and aligned with state and district standards, and structural changes in how instruction is delivered.

❏ The model does not prescribe a specific curriculum. Curricula are to be aligned with state and local standards. Kansas City engaged in extensive professional development with outside consultants on literacy and student engagement strategies, and some expansion sites contracted with the same consultants. As FTF has evolved, it has incorporated these supports into its own comprehensive and coordinated instructional improvement model.[168]

❏ The model calls for increased instructional time (80–90-minute blocks) and lower student-teacher ratios whenever possible.

■ Structure and Leadership: Each district includes an FTF liaison in a district leadership position, and each school has a School Improvement Facilitator. FTF staff work closely with district and building leaders to build their capacity to support, strengthen, and sustain implementation.

■ Academic Supports: Transitional Communities and Opportunity Centers are provided for those below grade level or overage, with the goal of catching up to their grade level within one year.

■ Use of Data: FTF schools utilize a set of tools, data reports, and a data-driven dialogue processes called Measuring What Matters (MWM) to evaluate their progress toward implementation of the model's core components, as well as to monitor student progress. MWM allows teachers and principals to obtain and monitor data from classroom observations, student and staff surveys, and student performance data, in order to guide instructional improvements. IRRE works with the School Improvement Facilitators to monitor implementation.

Cost/Funding

■ The estimated cost of a four-year process of implementing FTF (including professional development training, materials, estimated district and school incremental personnel costs, and all technical assistance and consultant fees and expenses) per school varies depending on the number of schools in the district involved. The average cost ranges from $350,000 per school, if only one school is involved, to $200,000 per school for five schools. Intensity of supports and costs are higher in the first two years of FTF supports than in the latter two years.

■ This translates into approximately $250 per student for large high schools (1,500-2,000-plus students).

■ A cost-benefit analysis of comprehensive school reform models conducted by Levin & Belfield, et al. (2007) found that FTF produced the greatest return on investment, with regard to increases in graduation rates.

❏ For every dollar spent on FTF, the additional benefit to society was $3.54.[169]

■ Initial funding for the implementation and YDSI evaluation of FTF in Kansas City, Kansas was provided by the Ewing Marion Kauffman Foundation.

■ The scale-up and five-year research project were funded by the US Department of Education.

Evaluation of First Things First

Overview of Evaluations
MDRC Study (2005): This evaluation represented the final report of the Scaling Up First Things First Demonstration, a five-year research and demonstration project involving MDRC and IRRE. The study was a mixed-method, interrupted time-series evaluation which compared changes seen in FTF schools with

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[168] This instructional improvement "package" is now being offered as a stand-alone set of supports in several school districts under the title "Every Classroom Every Day" and is the focus of an ongoing randomized control trial study funded by the Institute for Educational Sciences.

[169] The cost-benefit analysis relied upon the MDRC data from Kansas City, Kansas. FTF was the only reform model that met the authors' criteria for a rigorous evaluation and demonstrated a positive impact on graduation rates. The analysis also recognizes Talent Development, AVID, National Academy Foundation, KIPP, and Institute for Student Achievement as promising models, with regard to cost-effectiveness.

similar groups of schools that did not implement FTF. The study followed the implementation and early results from expansion sites, which included secondary schools in Houston, the Riverview Gardens District, an inner-ring district in metropolitan St. Louis, and two sites in the Mississippi Delta: Greenville and Shaw. Additionally, this study reanalyzed the data from the YDSI (2004) evaluation of FTF implementation in Kansas City, Kansas data using a different methodology and added an additional year of follow-up.

YDSI Study (2004): This evaluation analyzed the experience of school improvement in Kansas City, Kansas schools at the various stages of implementation of the FTF conceptual model. This was a mixed-method study, and the analysis of quantitative outcomes compared data from FTF schools to statewide averages and trends. Data sources included student and staff surveys, interviews with teachers and administrators, classroom observations, and school records.

Note: *As the MDRC evaluation expanded upon the earlier Youth Development Strategies, Inc. research, including additional years of data and a matched comparison group, this program profile primarily features the results of the MDRC evaluation. Results from the student and staff surveys of the YDSI evaluation are reported here to provide information on the program elements most strongly associated with successful outcomes.*

Evaluation Population

- The study population included all students at the featured FTF secondary schools during the study period. Data were collected for the period prior to FTF's implementation at most sites, and data collection continued through the 2003–04 school year.

- The scope of the evaluation varied across sites. In Kansas City, it included all four comprehensive high schools in the district and the elementary and middle schools in their feeder patterns. In Houston, the evaluation included three high schools and four middle schools. In Riverview Gardens, it included one high school and its two feeder middle schools. In Mississippi, it included two high schools in two school districts in the Mississippi Delta region of the state.

- The student population was predominately Latino in Houston, mostly African American in Mississippi and St. Louis, and both Latino and African American in Kansas City, Kansas.

Evaluation Methodology

MDRC Evaluation

- The evaluation followed a comparative interrupted time series design. It compared changes in selected school-level outcomes over time in FTF schools with changes in a matched sample of schools that did not implement FTF.

- Quantitative data sources included student records and aggregate school data, including scores from statewide assessment tests, as well as teacher and student surveys. Qualitative data consisted of site visits, classroom observations, and interviews.

- Teacher and student feelings of "support" and "engagement" were assessed using scaled surveys.

- The Houston study featured the most complete version of the evaluation design. Comparison schools were chosen from the same school district based on similar pre-intervention test scores and student demographics. The researchers also used regression analyses to adjust outcome data for changes over time in student composition. The data included three pre-intervention baseline years, with three years of follow-up data from one high school and its feeder middle schools, and two years of follow-up findings from the remaining two high schools and their feeder middle schools.

- The Riverview Gardens study used a similar design as used in the Houston study, and included data from three baseline years and three follow-up years. Comparison schools had to be selected from other urban Missouri districts, however, because FTF was implemented in all of the district's secondary schools. Additionally, only school-level data were available for Riverview Gardens, which did not allow researchers to adjust data for changes in the student populations over time.

- The Kansas City study used quasi-baseline data from 2001, the first year that a new state assessment was administered.[170] Three additional years of follow-up data were included. The study used comparison schools from other districts in the state, and the outcome results were adjusted for demographics.

- The Mississippi Delta study used baseline data from 2002, which was also the first year that a new state assessment was administered, with only two years of follow-up data.[171] Data were available only at the school level, and widely disparate pre-intervention English and math scores at one of the two FTF schools made it impossible to find comparison schools for those schools. The researchers caution that the findings from the Mississippi Delta should be considered as suggestive only.

YDSI Study

- The study focused exclusively on Kansas City, Kansas schools.

- The evaluators collected longitudinal data from student and staff surveys, interviews with teachers and administrators, classroom observations, and school records over six years.

- Changes in students' achievement over time were measured as changes in the proportion of students scoring proficient or above on state assessments in each subject and grade, controlling for race, poverty level, and gender.

- The results from FTF schools were compared with state averages for non-FTF schools, but the study did not have a matched comparison group of schools.

Contact Information

Program Contacts
James Connell
President
Institute for Research and Reform in Education
25 South Shore Drive
Toms River, NJ 08753
215-545-1335
jpcirre@aol.com

William Moore
Director of Research and Measurement
Institute for Research and Reform in Education
25 South Shore Drive
Toms River, NJ 08753
215-545-1335
wmirre@aol.com

Research Contacts
Janet Quint
Senior Associate
MDRC
16 East 34th Street, 19th Floor
New York, NY 10016
212-532-3200
janet.quint@mdrc.org

Michelle Gambone
President
Youth Development Strategies, Inc.
PO Box 759
Island Heights, NJ 08732
267-975-0723
MGambone@ydsi.org

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Quint, J.C., Bloom, H.S., et al. (2005). *The Challenge of Scaling Up Educational Reform: Findings and Lessons from First Things First* (Full Report) New York: Manpower Demonstration Research Corporation.

Additional Resources
http://www.irre.org/ftf/

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[170] FTF had already been implemented for one to three years in the Kansas City, Kansas schools at this point. Because the baseline data was collected after FTF's initial implementation, the study may underestimate some of the results from Kansas City.

[171] FTF had already been implemented for one year in the Mississippi Delta at this point.

GEAR UP

Population Served	Middle and high school students in low-income schools. More than 700,000 students served each year.
Program Location	Nationwide
Type of Evaluation	Longitudinal, quasi-experimental study of school-level outcomes at GEAR UP and comparison schools.
Findings	Increased college knowledge[172] for both middle school students and parents; increased parental involvement; increased advanced course-taking in the middle grades.
Elements of Success	■ Family involvement ■ Early college exposure ■ Increased college counseling ■ Institutional partnerships ■ Secondary-postsecondary partnerships ■ Expanded learning opportunities

Program Overview

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) provides federally-funded matching grants for services designed to enhance the college preparation of entire cohorts of low-income students along the pathway from middle school to the post-secondary transition. The unique service delivery model relies upon partnerships between local school districts, institutions of higher education (IHEs), and at least two other organizations. The grants are made for six years, and the projects' comprehensive, school-based services begin no later than the 7th grade. Program activities may include tutoring, mentoring, college counseling, and financial aid assistance.

Early college outreach and academic enrichment beginning in middle school is believed to increase the aspirations, college awareness, and engagement of students, families, and schools, which will ultimately lead to increased postsecondary enrollment. By serving entire grade cohorts in high-poverty schools, the GEAR UP model posits that peers and the entire school community will positively reinforce a college-going culture. It also allows services to be integrated into regular educational offerings during the school day.

Key Interim Findings[173]

GEAR UP improved middle school students' and parents' knowledge of the college admission process, and increased parental involvement in education. GEAR UP students were more likely to take advanced science courses in the middle grades, and the program was associated with increases in the overall rate of enrollment in advanced courses for African American students.

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[172] "College Knowledge" refers to the contextual knowledge needed to understand the college planning, admission, and selection process.

[173] The most recent evaluation report (2008) presents the interim findings of the National Evaluation of GEAR UP, focusing on impacts on college awareness and preparation at the end of middle school.

AYPF's Policy Takeaways

Early Intervention: GEAR UP emphasizes early college outreach activities beginning by the 7th grade, and the evaluation demonstrates that the program increases middle school students' and parents' college knowledge. Policymakers should bear in mind the importance of starting early to provide students and families from underrepresented and first-generation groups with accurate information about high school courses needed for college, college preparation activities, the college admission process, and the availability of financial aid, as decisions made in the middle school years have an important impact on students' future college and career options.[174]

General Findings

- GEAR UP middle school students increased their college knowledge more than the comparison group, based on survey indicators such as obtaining accurate information about postsecondary education from adults.[175]

- GEAR UP increased parents' knowledge of postsecondary education requirements and availability of financial assistance.

- GEAR UP increased parents' involvement in their children's education. Parents were more likely to talk to their children about going to college, attend college outreach and financial aid events, receive information about college requirements, and attend back-to-school nights and Parent-Teacher Association (PTA) meetings.

- GEAR UP increased parents' educational expectations for their children.

- GEAR UP students were more likely to know about different types of postsecondary schools and to talk about and make plans for college.

- GEAR UP students were significantly more likely to take advanced science courses in middle school.

- Overall, African American students in GEAR UP took more high-level courses than did their peers in non-GEAR UP schools.

- GEAR UP did not have a significant effect on students' GPA, grades in core subjects, attendance, or educational expectations.

- A previous study of GEAR UP in one Florida high school (Yampolskaya, Massey, and Greenbaum, 2006) found that the higher levels of participation in GEAR UP academic and behavior-related services were associated with improvements in GPAs and reductions in disciplinary referrals.[176]

Program Details

Program Population

- There are 204 GEAR UP projects nationwide, serving 739,000 students.[177]

- According to the National Evaluation's baseline data, the national GEAR UP population was 36 percent Hispanic, 30 percent African American, and 26 percent White in 2001–02. 11 percent of students were in special education, and 12 percent were limited English proficient (LEP), both of which were higher proportions than the national averages.

- The program targets low-income schools; at least 50 percent of students at participating schools must be eligible for Free and Reduced Price Lunch (FRPL).

- Partnership grants serve all students in a grade-level cohort at a GEAR UP school. The cohort must start receiving services no later than Grade 7, and programs must continue through high school.

Program Components

GEAR UP is designed to give programs the flexibility to adjust the type and intensity of services to fit the needs of students in each cohort. The common services include:

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174 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

175 All findings in this section are statistically significant at the .05 level, unless otherwise noted.

176 The Yampolskaya, Massey, and Greenbaum (2006) study used a matched comparison group design, employing propensity score matching to control for initial differences between the High Participation, Low Participation, and No Participation groups. The sample size was 447 students.

177 Data from Fiscal Year 2008, US Department of Education.

■ College Information: Services include individual counseling and advising about high school selection and college preparation; college preparation meetings; college fairs; and career awareness activities.

■ College Campus Visits: GEAR UP students visit college campuses by the end of 8th grade.

■ Academic Support: Students receive tutoring and test preparation assistance. These services may be targeted to specific groups of students. Tutoring is provided by paid classroom teachers, as well as college and high school students.

■ Expanded Learning Opportunities: Most programs offer voluntary afterschool, Saturday, and summer programs and classes.

■ Mentoring: Many sites provide one-to-one mentoring, which may be part of a partnership with an organization like Big Brothers Big Sisters.

■ Parental Involvement: Some projects provide long-term workshops, or Parent Institutes, to inform parents about the college process. They may also provide individual college counseling sessions for students and their parents.

■ Professional Development: Many projects use GEAR UP funds to expand professional development for teachers, including workshops on leadership, training in instructional methods, and national conferences.

■ Two-thirds of GEAR UP grants are awarded to partnerships. Institutional partners include community organizations and businesses, as well as the required school district and IHE partners. Each project defines its own goals, within the broader GEAR UP goals. Partners often provide in-kind donations and volunteers.

■ Grants to state agencies constitute one-third of the program funds, and these grants operate under different guidelines. State GEAR UP projects must use at least 50 percent of the federal grant to provide college scholarships. They are not required to serve an entire cohort of students and may choose to target services differently.

Cost/Funding

■ The US Department of Education's GEAR UP appropriation was $313 million as of Fiscal Year 2009.

■ Partnership grants provide approximately $600 per student per year.

■ Partners must match federal funding, through either monetary or in-kind contributions.

■ State grants provide approximately $270 per student per year.

Evaluation of GEAR UP

Evaluation Overview

The National Evaluation of GEAR UP is a longitudinal, quasi-experimental evaluation being conducted by the Policy and Program Studies Service of the US Department of Education. The evaluation has tracked students from GEAR UP and comparison middle schools since 2000. The most recent evaluation report (2008) presents the interim findings, focusing on impacts on college awareness and preparation at the end of middle school. Subsequent evaluations will examine GEAR UP's impact on high school outcomes, as well as long-term outcomes such as college enrollment. Only partnership grantees were included in the evaluation.

Evaluation Population

■ The study included a sample of 18 GEAR UP middle schools and 18 comparison middle schools.[178]

■ The student sample consisted of 4,692 students from the cohort of students in the 7th grade in 2000. Up to 140 student participants were randomly selected from each GEAR UP and comparison school to join the sample.

■ The GEAR UP schools in the sample were 35 percent White, 31 percent Hispanic, 25 percent African American, 7 percent Native American, and 3 percent Asian.

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[178] The evaluators note that the small size and purposive nature of the school sample limit the ability of the evaluation to detect small school-level effects and for its findings to be generalized to GEAR UP programs.

Evaluation Methodology

- The GEAR UP schools for the evaluation were chosen from the 164 partnership awards that were made in 1999–2000. The evaluation sites were selected on two main criteria: (1) implementation status: the projects indicated that they were "well along" in implementation and planned to select a new cohort in the coming year, and (2) diversity: the sample was intended to reflect national diversity in program approaches.

- Comparison schools were selected from the same or nearby school districts as the GEAR UP schools, based on demographics and the grade span of the schools. Regression analyses controlled for remaining differences in student characteristics and adjusted for changes in student composition over time.

- The researchers selected a random sample of up to 140 students in the 7th grade at each school, after excluding students whose parents had not given consent to participate in the study.

- Data sources included student and parent surveys, school records, GEAR UP participation records, 2002 Annual Performance Reports, and observations from site visits.[179]

- The researchers analyzed the differences in the GEAR UP and comparison groups' quantitative data using statistical techniques that adjusted for differences in some 7th-grade variables.[180]

- Results were disaggregated based on race, potential first-generation college status, and scores on the College Orientation Index, which was a scaled score that reflected student and parent survey responses.

Contact Information

Program Contact
James Davis
Team Leader
GEAR UP
Office of Postsecondary Education
US Department of Education
1990 K Street, NW, Room 6109
Washington, DC 20006
202-502-7802
james.davis@ed.gov

Research Contact
Margaret Cahalan
Policy and Program Studies Services
US Department of Education
400 Maryland Avenue, SW
Washington, DC 20202
202-401-1679
Margaret.Cahalan@ed.gov

Sources Used

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Additional Resources

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http://www.ed.gov/programs/gearup/

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[179] Students and parents completed baseline surveys in late Fall 2000. Some GEAR UP services had already begun prior to this point.

[180] Students who left their original middle schools before the end of the study were excluded from the data analysis. There was an attrition rate of 16 percent.

Hillside Work-Scholarship Connection

Population Served	Students in Grades 7-12 at risk of dropping out of school. Participants also receive services for two years following their expected high school graduation date. Approximately 2,200 students participate each year.
Program Location	Rochester and Syracuse, New York
Type of Evaluation	Longitudinal study of graduation outcomes with a program group and a matched comparison group of nonparticipants. Outcomes measured at the student level.
Findings	Increased graduation rates, particularly for African American students and those entering the program at later grades.
Elements of Success	■ Tutoring and academic support services ■ Adult mentors ■ Family involvement ■ Connections to employment ■ Financial incentives ■ Comprehensive social support services ■ Institutional and community partnerships ■ Employer partnerships ■ Expanded learning opportunities

Program Overview

Hillside Work-Scholarship Connection (HW-SC) is a comprehensive dropout prevention and college- and career-readiness initiative directed by a community-based social service organization in upstate New York. The program provides home, school, and employment supports for students from Grade 7 through the first two years after high school graduation. HW-SC aims to help students from disadvantaged communities to "stay in school, achieve academic success, and earn their high school diplomas."

The program was founded by Wegmans Food Markets in 1987, and it became a program of Hillside Family of Agencies, a local social service provider, in 1996. Today, the program still retains an employer partnership with Wegmans. The program features school-based Youth Advocates (YA) and provides comprehensive support services aimed at increasing academic enrichment and job-readiness, with the overall goal of raising high school graduation rates. The program benefits from strong partnerships with the community, school districts, employers, and higher education.

The HW-SC model posits that a long-term, supportive relationship with YAs will provide students at risk of dropping out with support and guidance, which will increase their likelihood of completing high school. Comprehensive, community collaboration across school, home, and work realms ("360-degree support") is believed to promote success.

Key Findings

HW-SC participants had higher graduation rates than students in the comparison group, and the program was particularly effective at raising the graduation rates of African American students. Female program participants had higher high school grades than matched nonparticipants. Graduation rates and grades were positively correlated with job placement and personal contact with YAs. Approximately 75 percent of HW-SC graduates enrolled in postsecondary education each year, and 80 percent were employed after high school graduation.

AYPF's Policy Takeaways

Community Partnerships: As a community-based organization, HW-SC relies heavily on the support of schools, employers, social service providers, and institutions of higher education. Youth advocates (YA) serve as brokers of multiple systems affecting youth, and connections between the YAs, school personnel, and employers help students to stay on track to high school graduation. Policymakers should create incentives for broad-based community collaboration, support intentional, student-focused connections across multiple agencies, and provide funding for small youth-serving organizations to increase their capacity to form and join coalitions and perform as effective intermediaries.

Facilitating Youth Employment: The evaluation found that paid work experiences were associated with academic achievement and high school graduation rates. The job placements offered by HW-SC offer youth a chance to develop workforce knowledge and employer-desired skills, and may also help students remain engaged in school. As rates of teen employment tend to be low during economic downturns, having opportunities for youth to connect with employers through programs like HW-SC is important. Policymakers can support the job-readiness and placement elements of programs like HW-SC and can provide incentives for employers to offer year-round jobs and mentorship for youth at risk of high school dropout.[181]

Graduation Rates

- The 2004 evaluation found a 61 percent graduation rate for participants, compared to a 31 percent graduation rate for a comparison group, for a difference of 30 percentage points.[182]

- The HW-SC participants eligible to graduate in 2006 had a 57 percent graduation rate, compared to a 35 percent graduation rate for the comparison group.

- The studies consistently found much lower graduation rates for students entering the program in 7th grade, versus those entering in the 8-10th grades. Those who entered the program in 7th grade had a 43 percent cumulative graduation rate.

- Students who entered the program at later grades had higher average graduation rates. For the class of 2006, students who entered the program in 10th grade had a 67 percent graduation rate, while those who entered in 9th grade had a 61 percent graduation rate, and those who entered in 8th grade had a 58 percent graduation rate.

- Across the three studies, the cumulative graduation rate of students who entered HW-SC in 10th grade was 80 percent. The similar rate for the comparison group was 51 percent.

- HW-SC has been most effective at increasing the graduation rates of African American students. Across the evaluation years, African American participants graduated at a rate of approximately 65 percent, outperforming African American students in the comparison group by approximately 25 percentage points.

- The evaluations did not find a positive effect on graduation rates for White or Hispanic students, or for those with higher initial GPAs (above 3.0).

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[181] This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

[182] Levels of statistical significance are not reported.

Participation Intensity

■ The most recent evaluation had the highest proportion of high school graduates who had left the program before graduation (17 percent). One interpretation is that even a short amount of the intervention appears to have an impact on graduation rates. Compared with previous graduating classes, however, a much higher percentage of these students left the program before completing 9th grade (41 percent, versus 10 percent for previous graduating classes).

Outcomes by Program Components

■ Student outcomes were correlated to the amount of time spent one-on-one with YAs and the amount of time YAs spent communicating with teachers and school officials. Direct intervention by YAs occurred at a higher rate for those students who graduated.

■ Graduation and academic achievement were positively correlated with successful job placement and retention (though the direction of the relationship is unclear); those placed in jobs were more than twice as likely to graduate as those who were not.
  ❏ 73 percent of the HW-SC students placed in jobs graduated, versus 34 percent of those who were never placed in jobs.
  ❏ How long students stayed in their jobs was significantly related to successful high school graduation while in the program; participants who had stayed in their jobs for two years or more had a 93 percent graduation rate.
  ❏ Students who held jobs also maintained higher average GPAs.

Academic Performance Outcomes[183]

■ Female HW-SC students had higher GPAs than their matched peers, but the program did not have an effect on the GPAs of males.

■ Students who entered the program in high school maintained more consistent GPAs than those who transitioned from middle to high school.

Postsecondary Outcomes

■ Over the past five years, at least 75 percent of HW-SC graduates enrolled in postsecondary education each year.

■ 41 percent of HW-SC graduates from the class of 2003 received scholarships, including 16 scholarships offered by Wegmans.

■ On average, 80 percent of HW-SC graduates are employed after graduation. The data do not distinguish between students who are employed while also enrolled in postsecondary education and those who do not attend postsecondary education.

Program Details

Program Population

■ The Rochester, New York program serves approximately 1,800 students per year in Grades 7-12 from two middle schools and 11 high schools. The newer Syracuse, New York program serves approximately 400 students per year, in nine middle schools and four high schools.

■ Participants are 61 percent female, 73 percent African American, 14 percent Latino, and 4 percent Caucasian.

■ Staff demographics mirror those of program participants.

■ YAs actively recruit students for the program, and schools may be involved in identifying potential participants.

■ Students voluntarily enroll in Grades 7-9.[184]

■ All participants must possess two or more risk factors, which include: low test scores, overage for grade level, low attendance, failure in core subjects, low socioeconomic status (SES), and multiple school suspensions. Students can also be

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183 Findings in the Academic Performance section are drawn from the 2004 report, representing data collected during the 2002–03 school year.

184 Previous eligibility requirements allowed students to enroll up to Grade 10.

disqualified if risk factors are too great and above thresholds (such as being three or more years behind grade level, failing grades in four or more subjects, or having too many suspensions).

■ In order to be placed in jobs, students must be 16 years old, have 93 percent school attendance, have a 2.0 GPA in core subjects, and have completed the program's Youth Employment Training Academy.

■ Scholarship eligibility criteria include college admission, minimum GPA requirements, and proof of financial need, and some scholarships require completion of community service.

Program Components

■ Youth Advocates (YA): Each YA has a caseload of about 30 students and usually meets with each student at least once per week. YAs coordinate program elements, serving as counselors and case managers, and visit students' homes and meet with parents on a quarterly basis. Youth attend meetings with their YAs and program enrichment activities after school, on weekends, and during their lunch breaks.

■ When students' GPAs fall below 2.0, they are required to attend mandatory tutoring.

■ The Core Career Planning and Placement Curriculum (CPP) targets academic achievement, career exploration, college preparation, job-readiness training, and social and life skills training.

■ Supplemental program components include the Teen Outreach Program (a curriculum to improve academic achievement and reduce teenage pregnancy), the 7 Habits of Highly Effective Teens, and the Six Whole Self Concept Development Intelligences (a curriculum designed to build positive self-image).

■ The Youth Employment Training Academy teaches job-readiness skills, financial education, and leadership development in 25 hours of instruction, which is typically offered throughout the 9th grade. Students can also attend accelerated training programs on consecutive Saturdays.

■ HW-SC partners provide part-time, year-round employment opportunities to students meeting eligibility criteria. Approximately 55 percent of students are typically placed in jobs during the course of their participation with HW-SC. In any given month, approximately 25 percent of program participants are employed. Employer partners commit to providing HW-SC students with jobs for at least 500 hours over one year. Most partners provide workplace mentors for students, and YAs regularly communicate with mentors.

■ The program requires all students to complete 20 hours of community service each year, but implementation of the community service component varies.

■ Ten college scholarships are awarded each year to eligible HW-SC graduates through the Hillside Children's Foundation. Some of these scholarships are provided through partner businesses and may be designated for students who work for specific companies.

■ Local educational partners also provide support and scholarships, such as:
  ❏ Rochester Institute of Technology: ten $10,000 scholarships offered;
  ❏ St. John Fisher College: four full scholarships offered;
  ❏ University of Rochester: up to $80,000 in scholarships offered to each of five HW-SC students.

■ Follow-up services continue for the first two years after graduation, which include quarterly contact with the Alumni Coordinator. Graduates can receive career exploration assistance and attend an annual job fair for HW-SC alumni.

Cost/Funding

■ HW-SC receives funding from private foundations, such as the Edna McConnell Clark Foundation and United Way, as well as public funding from New York State Department of Labor, Temporary Assistance to Needy Families (TANF), Monroe County, and the Rochester City School District.

■ The Finger Lakes Health Systems Agency has conducted a return-on-investment evaluation of

HW-SC and found that HW-SC creates a net so-
cial benefit by increasing individuals' earnings and
decreasing lifetime government expenditures.

■ The evaluations were supported by the Edna Mc-
Connell Clark Foundation.

Evaluation of Hillside Work-Scholarship Connection

Evaluation Overview

The Center for Governmental Research (CGR) has
conducted three longitudinal, independent studies of
the impact of program participation on graduation
rates. The first evaluation, published in 2004, tracked
the progress of the first cohorts of HW-SC students,
from 1996-97 to 2002-03. Student outcomes were
compared with a matched sample of similar Roches-
ter City School District (RCSD) students. The 2005
study reported on the outcomes of the cohort of
students who had been eligible to graduate in 2004
or 2005. The final 2006 evaluation reported on the
graduation outcomes for students who had been
eligible to graduate in 2006, and included a greater
emphasis on the characteristics of implementation, in
order to identify program components contributing
to success and those that can be strengthened. The
Hillside/Buffalo Center for Social Research also plans
to conduct a randomized, controlled study of HW-SC
over the next five years.

Evaluation Population

■ The full evaluation population included approxi-
mately 1,250 students who entered HW-SC in
Grades 7-10, from 1996-97 through 2005-06, as
well as a similar number of matched comparison
students from RCSD high schools.

■ The 2006 study included 228 HW-SC participants
who were eligible to graduate in 2006, along with
a similar number of comparison students.

■ The 2004-05 study included 312 students who
were eligible to graduate in 2004 or 2005.

■ Those identified as HW-SC "participants" had
been in the program for at least seven months at
any point during the evaluation period, even if
they had left the program for several months or
years before their expected graduation date.

■ The study population did not include students
from the Syracuse program, for reasons of data
availability and resources. It also excluded stu-
dents who moved from the district.

Evaluation Methodology

■ The evaluators used school district records and the
program's student database to conduct an updat-
ed, longitudinal evaluation of student outcomes
through 2006. Student surveys were also conduct-
ed for the initial (2004) evaluation.

■ The comparison group was formed by RCSD
for CGR for the initial evaluation. The HW-SC
students were individually matched with a group
of other RCSD students based upon prior GPA,
gender, race/ethnicity, poverty status, and grade
level.

■ The study also included an analysis of a repre-
sentative sample of 220 HW-SC student files,
including those of both graduates and terminated
students.

■ The authors conducted a detailed examination of
a smaller sample of 84 students who entered the
program in the 7th grade, in order to identify fac-
tors leading to low graduation rates for those who
begin the program as 7th-grade students.

■ Additional data collection included focus groups
with YAs, interviews with three managers of YAs,
and written surveys of YAs. The survey response
rate was 75 percent. The researchers disaggregated
data based on gender, race, and other factors.

■ Graduation rates excluded students who obtained
GEDs, as GED data were not available for the
comparison students. Those who graduated in
more than four years were included.

■ The results were further disaggregated by those
students who remained in HW-SC when they
graduated, and those who graduated after termi-
nating from the program.

■ HW-SC tracked participants' postsecondary plans,
but the evaluation was unable to compare postsec-
ondary outcomes with students in the nonpartici-
pant group because the comparison study relied
on school district data.

Contact Information

Program Contact
Kathi Willis
Director of Quality
Hillside Work-Scholarship Connection
1 Mustard St., 1st Floor
Rochester, NY 14609
585-654-1618
kwillis@hillside.com
www.hillside.com

Research Contacts
Don Pryor
Director, Human Services Analysis
Center for Governmental Research
1 S. Washington St. Suite 400
Rochester, NY 14614
585-327-7067
dpryor@cgr.org
www.cgr.org

Erika Rosenberg
Senior Research Associate
Center for Governmental Research
1 S. Washington St. Suite 400
Rochester, NY 14614
585-327-7066
erosenberg@cgr.org
www.cgr.org

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Knowledge is Power Program (KIPP)

Population Served	Primarily middle school students in Grades 5-8, though elementary and high schools now represent one-third of the network. As of 2009, there are 82 KIPP schools serving more than 20,000 students.
Program Location	Nationwide; KIPP schools are in 19 states and the District of Columbia. Evaluations in the San Francisco Bay Area, California; Baltimore, Maryland; and Memphis, Tennessee.
Type of Evaluation	The San Francisco Bay Area evaluation is a mixed-method study of five schools, including school-level comparisons between three of the schools and similar schools in the same district. The Baltimore and Memphis evaluations analyze student-level outcomes using matched comparison groups.
Findings	Increased achievement test scores, particularly in Grades 5-6 and in math. Improved attendance rates in the Baltimore KIPP school.
Elements of Success	■ Tutoring and academic support services ■ Accelerated learning ■ Culture of high expectations ■ Smaller learning communities ■ Early college exposure ■ Longer school day and year ■ School-level autonomy ■ Extensive selection and training of school leaders ■ Data-driven instruction and programming

Program Overview

The Knowledge Is Power Program (KIPP) is a national network of free, open-enrollment public schools. KIPP schools emphasize a rigorous academic curriculum and a culture of high expectations and college-going. KIPP aims to provide students "the knowledge, skills, and character needed to succeed in top quality high schools, colleges, and the competitive world beyond." The KIPP network was founded in 1994 by Teach for America alumni Mike Feinberg and Dave Levin. KIPP schools are typically small schools, the majority of which serve Grades 5–8. More recently, elementary and high schools have been added and currently comprise one-third of the network.

There are now 82 independent KIPP schools in mostly urban, underserved areas nationwide.[185] These schools receive support and services from the KIPP Foundation, though they are independently operated. KIPP middle schools are typically launched with one 5th-grade class and add one grade per year, reaching a target size of approximately 320 students.

Key Findings

Achievement gains outpaced comparison schools and the national average, and KIPP students scored higher than the comparison groups in many cases. These impacts were most pronounced in Grades 5-6 and in mathematics. Attendance rates for students at the Baltimore KIPP school were higher than those of comparison students. School climate was generally positive. Attrition emerged as a common issue across these schools, and the researchers sought to understand why students leave KIPP.

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185 KIPP Foundation, 2009.

AYPF's Policy Takeaways

Expanded Learning Time: KIPP features a longer school day, week, and year for the entire student body. As policymakers weigh initiatives aimed to raise the performance of high-poverty, high-minority schools, they should consider the potential benefit of increasing the amount of time students spend in structured learning environments. Policymakers can provide incentives for districts and schools to support expanded learning time.

Leadership Development: KIPP's principals are extensively trained to be instructional leaders, managers, and entrepreneurs that direct the founding of new schools. Significant human capital investments in professional development for principals and teacher leaders may prove valuable strategies for turning around low-performing schools or opening new public schools, replicating one of the core practices of the KIPP model.

Options for Students and Families: As a leading charter school operator, KIPP aims to increase the amount and quality of choices available in the public school system, and to create a competitive pressure for traditional public schools to prepare more students for college and the workplace. The KIPP strategy depends on a policy environment that poses few barriers to charter school entry and growth, and that allows multiple options for all students.[186]

The KIPP model is based on its Five Pillars:

1. Choice and Commitment: Each year, students, parents, and faculty actively choose to commit to the rigorous environment of KIPP.

2. High Expectations: School culture emphasizes high standards for academic achievement, and reinforces this value through a system of incentives and consequences.

3. More Time: The KIPP school day is nine hours long, on average, with mandatory Saturday and summer enrichment programs.

4. Power to Lead: KIPP principals have autonomy with regard to curricula, budgets, and hiring.

5. Focus on Results: KIPP schools are accountable for monitoring progress and raising achievement.

By building a college-going culture and raising expectations, KIPP aims to provide students from underserved communities with the structure, tools, and support for a college-bound path that many higher-income students experience.

Academic Achievement Findings

San Francisco

- In 80 percent of cases, the Bay Area KIPP students' average progress on the Stanford Achievement Test (SAT) 10 math assessment outpaced national averages. Reading scores showed similar trends, but the gains were typically smaller.

- Improvements in SAT 10 scores in 5th-grade math and reading were greater than national averages in all five schools.[187]

- Students in the 5th grade at KIPP schools had significantly greater achievement gains on the California Standards Test (CST) than the comparison students.[188]

- Students who joined KIPP in 6th grade also had significantly greater 6th-grade achievement gains than comparison students.[189]

Baltimore

- During the first year of operation, KIPP 5th-grade students' mathematics achievement growth was significantly higher than comparison students. KIPP students did not outperform their feeder school comparison group in 5th-grade reading achievement.

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186 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

187 All San Francisco findings are significant at the .01–.05 levels, unless otherwise stated.
188 These differences reflect differences in percentile rank between KIPP and non-KIPP students at the three schools ranging between 3.6–33.0 percentile points. Effect sizes varied from small to large, ranging from .16–.86.
189 The difference in percentile rank ranged from 8.9–33.9 percentile points, and effect sizes were .24–.88.

- In Grades 6–8, when most of the comparison group students attended large middle schools, KIPP students outperformed comparison students in both reading and in math.[190]

Memphis

- Year 1 and Year 2 math and reading scores were significantly higher for KIPP students than the comparison group.[191]

- In Year 4, KIPP students scored higher than the comparison group on most tests, but the only statistically significant impact was in 5th-grade math.[192]

Attendance Findings

- Students in the Baltimore KIPP school had significantly higher attendance rates than the comparison group. The impact on attendance rates was greatest in Grades 6–8, when most comparison students attended large middle schools.

School Climate Findings

San Francisco

- 95 percent of students reported that their teachers believe all students can do well, and 98 percent reported that their teachers have high expectations for them.

Memphis

- The KIPP school scored above the national average on the School Climate Inventory in all years, but the scores declined over the period of the study.

- Teacher perceptions of school climate were comparable to the national averages on the Comprehensive School Reform Teacher Questionnaire CSRTQ and also declined over time.

- Issues cited as barriers to success included discipline problems and changes in school leadership.

Attrition Findings

- In San Francisco, the evaluators found that students who enter KIPP with lower test scores are more likely to leave before finishing 8th grade. The students who experienced the greatest gains in test scores after enrolling in KIPP were more likely to remain at KIPP.

- In Baltimore, student attrition was not related to lower prior achievement scores, but students who left KIPP at any point after 5th grade had lower achievement in their 5th-grade year at KIPP than did students who stayed. Male students were more likely than females to leave KIPP.

Long-term Outcomes: Internal Data from the KIPP Report Card

- In 2007, approximately 95 percent of KIPP alumni matriculated to college-preparatory high schools.

- As of 2008, more than 85 percent of alumni from the original two KIPP cohorts have enrolled in college.

Program Details

Program Population

- The 82 KIPP academies are in 19 states and the District of Columbia, with more than 20,000 students. Average enrollment is 242 students.[193] Each school has an open enrollment policy, and oversubscribed schools maintain a waiting list.

- Nationally, about 62 percent of KIPP students are African American and 33 percent are Latino; more than 80 percent of KIPP students are eligible for Free and Reduced Price Lunch (FRPL).

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[190] All Baltimore differences are significant at the .05 level, unless otherwise stated.

[191] The average effect size was +.31, which is moderate, and the difference was significant at the .01 level.

[192] The effect size was large, at .74. The difference is statistically significant at the .01 level.

[193] KIPP Foundation, 2009.

Program Components

Culture of High Expectations and Character Development

- Students are given two to three hours of homework per night.

- The trademark KIPP culture is evidenced by slogans, banners, and rituals that promote college-going.

- Incoming KIPP students are introduced to the KIPP culture, behavior systems, and values through the summer school.

- All students, parents, teachers, and leaders sign a Commitment to Excellence pledge, demonstrating their dedication to KIPP's Five Pillars.

- Students must be at or near grade level to be promoted to the next grade, with a particularly strong emphasis on bringing 5th-grade students up to grade level.

- Schools develop structured behavior management systems. Points are rewarded for good behavior, which translate into "paychecks" for prizes and purchases at the school store. Parents must sign students' paychecks. In some schools, a consequence for poor behavior is being sent to the "bench," where students are temporarily isolated from their peers.

Extended Learning Time

- All KIPP schools have longer school days, and the average schedule is 7:30 a.m. to 5:00 p.m.

- Many KIPP schools spend at least 85 minutes per day on English language arts and math classes.

- Schools must also offer half-day Saturday school on alternate Saturdays, along with three weeks of summer school.

- KIPP schools have an average of 60 percent more class time than regular public schools.

Extensive Professional Development for School Leaders

- New KIPP principals complete the one-year KIPP School Leadership Program. This includes a six-week School Leadership Institute at New York University, involving business and education courses. The Fellows opening new schools also complete a residency at a high-performing KIPP school and engage in planning with KIPP Foundation staff and the community.

- School leaders are given the autonomy to choose the curriculum at each site.

KIPP to College

- This alumni program helps former KIPP students continue to use what they have learned at KIPP to succeed in high school and enter college. The program includes counseling, academic support, financial aid advising, internships, and job placement.

Use of Data

- KIPP collects, analyzes, and publishes a large amount of internal data from all of its schools through its annual KIPP Report Card. For the purposes of this summary, however, AYPF relies primarily on the results of external program evaluations.

Cost/Funding

- More than 95 percent of KIPP schools are public charter schools and receive a portion of their funding from local districts; the KIPP Foundation and local fundraising supplement this funding.

- KIPP estimates that the extended-learning-time program costs roughly $1,500 additional dollars per pupil.

- The San Francisco (SRI) evaluation was funded by William and Flora Hewlett Foundation. The Baltimore (CSOS) evaluation was funded by the Abell Foundation. The Memphis (CREP) evaluation was funded by the Hyde Foundation of Memphis, Tennessee.

Evaluation of KIPP

Note about evaluations: The following three evaluations of KIPP schools in different regions provide examples of recent, quasi-experimental evaluations of KIPP's early outcomes, but caution should be taken in generalizing findings to other KIPP schools.

Evaluation Overview

San Francisco: SRI conducted an evaluation of the five San Francisco Bay Area KIPP middle schools to describe their early implementation and effectiveness. The schools all opened between 2002 and 2004. This study covers the three school years from Fall 2004 to Spring 2007. The evaluation uses a mixed-method study design, including a smaller quasi-experimental study matching KIPP students from three of the schools to a neighborhood comparison group, as well as comparisons to district and state norms.

Baltimore: The Center for the Social Organization of Schools (CSOS) at Johns Hopkins University analyzed the longitudinal outcomes of students at the KIPP Ujima Village Academy in Baltimore, as compared with their peers from the same feeder elementary schools. The study followed four cohorts of students who entered KIPP in the 5th grade in 2002, 2003, 2004, and 2005.

Memphis: The Center for Research in Education Policy (CREP) at the University of Memphis used a longitudinal, quasi-experimental design to examine the impact of KIPP on 5–8th-grade students in the KIPP Diamond Academy in Memphis, in comparison to individually matched students in similar schools nearby. The study began in Year 1 of program implementation, in 2002–03, and the most recent report covers Year 4 (2005–06). The study also included a qualitative component, designed to measure school climate and program implementation.

Evaluation Population

All of the KIPP schools included in these evaluations serve predominately students of color. The Baltimore and Memphis schools each have a population of nearly 100 percent African American students, and approximately 90 percent of students are FRPL-eligible. The San Francisco schools represent greater diversity in student demographics.

San Francisco

- The five Bay Area KIPP schools are Bayview

Academy and San Francisco Bay Academy (San Francisco Unified School District), Bridge College Preparatory Academy (Oakland Unified School District), Heartwood Academy (Alum Rock Union Elementary School District in East San Jose), and Summit Academy (San Lorenzo Unified School District in the East Bay).

- Together, the schools served more than 1,300 students in Grades 5–8 as of 2006–07. Each school started with approximately 80 students; the student population at each school ranged from 239 to 328 by 2006–07.

- The study population included five cohorts of students who enrolled at one of the five schools in 2002–03, 2003–04, 2004–05, 2005–06, and 2006–07.

Baltimore

- The study population included four cohorts of students who were in the 5th grade in Baltimore City Public Schools in 2002–03, 2003–04, 2004–05, and 2005–06.

- Eligibility for enrollment is based on residence in a neighborhood that is tied to particular feeder elementary schools in Northwest Baltimore.

- Students at KIPP were compared with 5th-grade cohort groups from the same neighborhood feeder elementary schools who did not attend KIPP. The KIPP students' demographics were similar to the comparison students, except that KIPP enrolled a lower percentage of special education students.

Memphis

- The study population included 165 KIPP students and an equal number of matched comparison students in Grades 5–8. The KIPP 8th-grade students were the original Year 1 cohort who started at KIPP in the 5th grade when the school opened in 2002–03.

Evaluation Methodology

San Francisco

- The mixed-method study design included qualitative data from interviews with teachers and lead-

ers, as well as classroom observations. All data were collected from Fall 2004 through Summer 2007. The study also included quantitative data from surveys of students and teachers in Spring 2007 and student test scores from the nationally-normed Stanford Achievement Test 10(SAT-10) and the California Standards Test (CST).

- The researchers reported descriptive statistics on average survey responses and test scores across the five schools, with the results weighted to equalize disparities in school size.

- Surveys were completed by 714 students in Grades 6–8, for an 82 percent response rate.

- 66 of the KIPP teachers completed online surveys, for a response rate of 86 percent.

- The researchers used propensity score matching to create a comparison group that closely approximated the student composition at the three KIPP schools for which student-level CST data were available.[194]

- The high levels of attrition and 5th-grade retention made it impossible to measure longitudinal outcomes with this study design after the students' first year in the program, as the sample size became too small. 9 percent of students in the 2004–05 cohort were retained in 5th grade. Overall, 48 percent of students in this cohort left KIPP before the end of 7th grade.

Baltimore

- The researchers used Baltimore City Public School System (BCPSS) data to identify and track students in KIPP and a comparison group of students from the same feeder elementary schools.
  - ❏ The study identified subcohorts of KIPP students who transferred out before the end of the year, as well as subcohorts of those who transferred in.

- The study used multivariate statistical analyses for each cohort that controlled for prior achievement, gender, and special education status (race and income level were already found to be equivalent in the two groups).

- Researchers only collected data for students who were promoted on schedule, since the Maryland School Assessment design does not permit score comparisons across grade levels and years. Retained students were therefore excluded from analyses.

Memphis

- The study used a mixed-method design, including teacher and student surveys, focus groups, interviews, classroom observations, and student scores on state-mandated tests. The most recent report (2008) focused on student outcomes four years after implementation.

- In the analysis of student outcomes, each KIPP student was individually matched to a comparison peer who attended one of several neighborhood schools. New students who transferred into KIPP were also matched with peers on the basis of previous years' test scores.

- The researchers compared student achievement on the statewide, norm-referenced assessment test, controlling for students' own pre-KIPP scores.[195]

- Results were further broken down by the number of years students had been in the KIPP program (i.e. those that had completed two years of KIPP in 6th grade).

- School climate and implementation were examined using several externally developed instruments, such as a School Observation Measure, the School Climate Inventory, and the Comprehensive School Reform Teacher Questionnaire (CSRTQ).

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194 Only three KIPP schools were included in the comparative analysis because they belonged to the two host districts that shared their student-level CST data with the researchers. KIPP students were matched with comparison students based on race, gender, FRPL-eligibility, gender, special education status, English language learner status, 4th-grade CST scores, and zip code.

195 Differences in the number of correct answers on assessment tests were compared using a multivariate analysis of covariance.

Contact Information

Program Contact
Carrie Hahnel
Director of Research and Evaluation
KIPP Foundation
135 Main Street, Suite 1700
San Francisco, CA 94105
415-874-7494
chahnel@kipp.org

Research Contacts
Jane Brigden-Abney
Research Associate
Center for Research in Educational Policy
The University of Memphis
325 Browning Hall
Memphis, TN 38152
901-678-2310
jabney1@memphis.edu
www.memphis.edu/crep

Martha MacIver
Research Scientist
Systemic Support for School Reform
Center for Social Organization of Schools
Johns Hopkins University
3003 N. Charles Street Suite 200
Baltimore, Maryland 21218
410-516-8256
mmaciver@csos.jhu.edu
http://web.jhu.edu/csos

Katrina Woodworth
Senior Researcher
SRI International
Center for Education Policy
333 Ravenswood Avenue
Menlo Park, CA 94025
650-859-2000
katrina.woodworth@sri.com

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Additional Resources
http://www.kipp.org/

National Guard Youth ChalleNGe

Population Served	Youth ages 16–18 who have dropped out of high school and are unemployed. Each program serves approximately 200 students per year.
Program Location	Programs in 27 states, the District of Columbia, and Puerto Rico.
Type of Evaluation	Experimental design with random assignment of participants to program and control groups. Outcomes measured at the student level.
Findings	Increased rates of GED and high school diploma attainment; increased college enrollment and employment; improved health and self-efficacy.
Elements of Success	■ Teambuilding ■ Adult mentors ■ Connections to employment ■ Comprehensive social support services ■ Individualized programming ■ Community service

Program Overview

National Guard Youth ChalleNGe is an intensive dropout recovery program that aims to connect youth to a pathway to high school completion, postsecondary education, and careers. The cornerstone of the 17-month program is an intensive 20-week residential experience in a "quasi-military" environment, often located on a military base. This phase is preceded by an orientation and assessment period. The final postresidential phase features one year of mentoring.

ChalleNGe is based on the principles of positive youth development. The residential period is structured around eight core components, including Responsible Citizenship, Service to Community, and Life-Coping Skills.

Approximately 75,000 participants have completed the program since it was founded in the early 1990s. The model was based upon a project by the Center for Strategic and International Studies that concluded that aspects of the military culture could be beneficial for out-of-school youth, and the program was developed by the National Guard Bureau in the US Department of Defense.

ChalleNGe programs operate on a state level, and each participating state enters into a Master Cooperative Agreement with the National Guard Bureau. More than half of the states have ChalleNGe programs today.

Key Findings

Youth who were given the opportunity to participate in ChalleNGe were more likely to have earned a high school diploma or a GED during the first nine months of the study than the control group. The ChalleNGe participants were more likely to be enrolled in college courses and to be employed, and they were less likely to have been arrested. The program also produced a positive impact on health and self-efficacy.

General Findings

■ ChalleNGe group members were much more likely to have earned a high school diploma or GED (46 percent) than the control group (10 percent) during the first nine months of the study, for a difference of 35 percentage points.[196]

■ The chance to participate in ChalleNGe increased the likelihood of earning a high school diploma by 12 percentage points. 15 percent of the program group earned a high school diploma, compared to only 3 percent of the control group.

■ ChalleNGe increased the likelihood of earning a GED by 23 percentage points. 31 percent of the

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[196] The difference is statistically significant at the .01 level.

AYPF's Policy Takeaways

Comprehensive Youth Development: All of the eight core components of the ChalleNGe experience are based on principles of positive youth development, and the program takes a holistic approach to the multiple social, emotional, and academic components affecting participants' readiness for postsecondary education and careers. Other publicly-funded programs to reconnect out-of-school youth or engage students at risk of dropping out should incorporate a similarly comprehensive lens, addressing the variety of skills and success behaviors needed during early adulthood. Policymakers must ensure that resources are provided to address the non-academic components of youth success.

Residential and Single-Sex Programming: The core of the ChalleNGe model is the intensive residential experience, in which youth are isolated from negative peer pressures, societal influences, and other barriers to learning and growth. The single-sex learning environment is also thought to remove youth from distractions and foster self-esteem. Policymakers should consider the benefits of supporting and expanding such options, as part of a variety of differentiated supports for students who have dropped out or are at risk of dropping out.[197]

program group earned a GED, compared to 8 percent of the control group.

- At the nine-month follow-up, 11 percent of the program group was taking college courses, compared to 3 percent of the control group.[198]

- The program group members were 19 percentage points less likely to be enrolled in high school at the follow-up point.[199]

- ChalleNGe group members were 9 percentage points more likely to be employed, at a rate of 51 percent compared to 42 percent for the control group.[200]

- Approximately 25 percent of those in both the program and control groups were neither working nor enrolled in education or training at the time of the follow-up survey.

- Participants were 6 percentage points less likely to have been arrested since random assignment,[201] and 8 percentage points less likely to have been in jail, prison, or a detention facility.[202]

- 77 percent of the program group rated their health as very good or excellent, compared to 68 percent of the control group.

- The program group members were more likely to have high self-efficacy (by a difference of 4 percentage points)[203] and less likely to have low self-efficacy (by a difference of 10 percentage points.)[204]

Discussion

Although this first report found statistically significant, promising findings, it is too early to make conclusions about the long-term effectiveness of ChalleNGe.

Program Details

Program Population

- ChalleNGe programs operate in 27 states, as well as the District of Columbia and Puerto Rico.

- Most states operate a single program, serving approximately 200 participants per year through two cycles, beginning in January and July.

- Eligible youth must be ages 16-18, have dropped out of (or been expelled from) school, be unemployed, be drug-free, and not have extensive involvement with the justice system. Participation in ChalleNGe is voluntary.

- Approximately 80 percent of program participants are male.

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197 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.
198 The difference is statistically significant at the .01 level.
199 The difference is statistically significant at the .05 level.
200 The difference is statistically significant at the .01 level.

201 The difference is statistically significant at the .05 level.
202 The difference is statistically significant at the .01 level.
203 The difference is statistically significant at the .05 level.
204 The difference is statistically significant at the .01 level.

- There are no income-based eligibility requirements.

- Youth are recruited through multiple referral centers, such as schools, juvenile justice agencies, and community organizations, as well as through advertising campaigns and word-of-mouth.

- Youth must complete an application to the program, and most programs conduct personal interviews and require applicants to complete the Test of Adult Basic Education (TABE).

- Most programs select participants based primarily on motivation, but some screen out applicants based on factors such as gang affiliation, psychological problems, or very low TABE scores.

Program Components

- The program culture is described as a quasi-military environment. Program participants are called "cadets," and they are divided into platoons and squads. They wear uniforms during the residential phase, have their hair cut short, usually live in barracks, and are supervised by staff, called cadre, at all times.

- The highly regimented program structure is intended to prevent the potentially negative effects of placing a large group of youth at risk of negative behaviors together in a program setting.

- Males and females are not allowed to fraternize during the program.

- A typical program, serving class cycles of 100 youth, has 50-52 staff, about 28 of whom are operational staff. The cadre, or team leaders, directly supervise the cadets at all times and report that a large portion of their job involves counseling the cadets. The majority of the cadre have some military experience.

- All programs have at least six full time instructors, as well as counselors. The instructors may be teachers from a local school district, and the counselors typically have degrees in psychology or related fields.

- There are no requirements for military service during the program or afterward.

Pre-ChalleNGe Phase (2 weeks)

- This phase is an intensive evaluation and orientation period, in which participants are introduced to the program's structure, culture, and expectations and begin physical fitness training. The staff assess the candidates' physical readiness for the program, attitude, and leadership potential. This phase is also residential.

- This phase includes a large amount of physical instruction, along with exercises to build teamwork and a sense of team identity.

- Candidates must comply with all requirements and pass a drug test to graduate from Pre-ChalleNGe.

- At the end of Pre-ChalleNGe, candidates are promoted to cadet status, and they are issued uniforms.

Residential Phase (20 weeks)

- The daily schedule is highly structured, and cadets have little free time.

- Discipline is approached as a constructive way to promote personal responsibility for one's actions. Types of consequences include mandatory push-ups, losing privileges such as phone calls or extracurricular activities, and "mass discipline," or punishing the entire platoon for the actions of one member.

- Participants complete a curriculum in each of the eight Core Components and must demonstrate 80 percent achievement in each component's competency measures to graduate. The components include:
  - ❏ Leadership/Followership: Cadets have the opportunity to lead their squads throughout different components of the day. They also must learn to follow the guidance and instructions of one another and staff.
  - ❏ Responsible Citizenship: This portion of the program teaches cadets about the legislative and democratic processes.
  - ❏ Service to Community: Service activities involve partnerships with local community organizations. Each cadet must complete at least 40

hours of these activities to graduate, though many complete more than 80 hours.

❏ Life-Coping Skills: This component includes anger management, financial management, household management, and character development. Most programs also offer Alcoholics Anonymous and Narcotics Anonymous groups.

❏ Physical Fitness: This component is viewed as a method to develop self-esteem and measure success. Cadets are tested against the President's Challenge national benchmarks.

❏ Health and Hygiene: Cadets learn about nutrition, hygiene, the effects of substance abuse, and the prevention of sexually transmitted diseases.

❏ Job Skills: All programs include career exploration, but this component varies across the sites. Some focus primarily on job-search skills such as interviewing, while others offer more occupation-specific training.

❏ Academic Excellence: Cadets attend classes and work toward a GED, high school diploma, or college credits, depending on the structure of their program. Classes are small and interactive, and students progress at their own pace. All cadets are expected to show at least grade-level improvement on the TABE, with the goal of passing the GED exams or obtaining a high school diploma.

■ From the beginning of the residential phase, cadets work with staff to arrange a postresidential "placement," which may include continued education, employment, or the military. Each cadet develops a Postresidential Action Plan (PRAP), which identifies short, intermediate, and long-term goals. All cadets take the Armed Services Vocational Aptitude Battery, and staff also help participants to obtain job interviews and take college placement tests.

Postresidential Phase (1 year)

■ This phase features a structured mentoring program. The purpose of this period is to help participants maintain the attitudinal and behavioral changes that they gained during the residential phase.

■ Youth nominate their own mentors from the community during the application process, and mentors are screened and trained by program staff.

Mentors must be at least 21 years old, the same gender as the cadet, and live near the cadet; they cannot be immediate family members.

■ Cadets and mentors must be in contact on a weekly basis, and this contact must be face-to-face at least twice per month. Mentors must complete a monthly report for the program.

■ Case managers contact program graduates monthly to check on their progress.

Cost/Funding

■ ChalleNGe programs receive approximately $14,000 per participant. This funding level has not changed since the early 1990s.

■ Funding for ChalleNGe was made permanent in 1998.

■ The typical state program has an annual budget of approximately $3 million.

■ The federal government pays for 60 percent of the cost of the program, and states pay the remaining 40 percent. The state portion is sometimes supported by local school districts and nonprofit organizations.

■ The evaluators note that many programs report having to cut staff positions due to insufficient funding.

■ The evaluation was funded by the US Department of Defense (20 percent) and private foundations (80 percent).

Evaluation of National Guard Youth ChalleNGe

Evaluation Overview

MDRC and the MacArthur Foundation Research Network on Transitions to Adulthood are conducting an ongoing, experimental study of ChalleNGe in collaboration with the US Department of Defense. The evaluation began in 2005-06, and approximately 3,000 applicants were randomly assigned to program and control groups for 18 class cycles across 10 programs. The first report (2009) presents early findings from a nine-month follow-up survey, when the program group had recently begun the Postresi-

dential Phase. An 18-month and a 36-month survey are planned for future release.

Evaluation Population

- Approximately 3,000 youth entered the study in 2005-06. The study participants were all eligible applicants to ChalleNGe programs that were over-subscribed, and they were randomly assigned to the treatment and control groups.[205]

- The sample included 2,320 members of the program group and 754 members of the control group.

- The 10 states that participated in the study were California, Florida, Georgia, Illinois, Michigan, Mississippi, New Mexico, North Carolina, Texas, and Wisconsin. All of the projects included in the study had been in operation since at least 2001.

- The sample was 41 percent White, 40 percent African American, 14 percent Hispanic, and 4 percent other races.

- More than 40 percent of sample participants lived with a single parent, with only 23 percent living with both biological parents.

- 30 percent of the sample was from households receiving public assistance, indicating that the population was not predominately low-income.

- 30 percent of the sample had an Individual Education Plan, indicating special education status.

- 82 percent had been suspended from school.

- Only 16 percent of participants had completed the 11th or 12th grades.

- 49 percent of participants reported that their high school grades had been mostly Ds and Fs.

- The sample members most frequently cited their reasons for applying to the program as the desire

to get a high school diploma or GED (81 percent), the desire to get their lives on track (77 percent), and the desire to go to college or get more training (45 percent). 31 percent reported being motivated by a desire to join the military. Additional factors influencing the decision to attend the program, according to interviews with select cadets, included conflict with parents, gangs, violence, and substance abuse.

- Approximately 20 percent of those assigned to the treatment group never actually began the program; they may have decided not to participate or failed a drug screening.

- About two-thirds of the treatment group completed the pre-ChalleNGe phase and enrolled in the Residential program.

- Among enrollees in the Residential program, approximately 78 percent graduated from this phase, which is approximately the same as the national ChalleNGe graduation rate.

- The nine-month follow-up survey was completed by approximately 1,000 study participants. This survey did not target all study participants, and the response rate of those targeted was 85 percent.

Evaluation Methodology

- The 10 participating programs were chosen on the basis of having stable staffing and receiving more applicants than they could serve. They do not represent a random sample of ChalleNGe programs, and the findings cannot be generalized to all programs.

- The evaluators randomly assigned the study participants to a program group, which was invited to participate in ChalleNGe, and a control group, which was not invited to participate. All members of the sample had been deemed eligible for participation in ChalleNGe.

- Random assignment could only be conducted for a particular class cycle if the program received at least 25 more eligible applicants than the number of available program slots. In many cases, the number of applicants was too small to conduct random assignment, requiring the study to con-

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[205] Applicants under age $16^1/_2$ at the time of random assignment were excluded from the study, in order to limit the number of younger youth who would be denied the opportunity to reapply to the program while they still met the age requirements.

tinue across more class cycles than the evaluators
had originally intended. The study lasted for 18
class cycles.

■ Applicants who were assigned to the control
group were not allowed to reapply for future class
cycles.

■ Data sources included a baseline questionnaire;
program data from the ChalleNGe Data Manage-
ment and Reporting System; follow-up surveys
administered by Westat, Inc.; and structured
interviews with program staff and participants at
each site.

■ The nine-month follow-up survey was admin-
istered either over the phone or in person. In
addition to assessing education, training, and
employment outcomes, this survey also measured
involvement with the criminal justice system, fam-
ily and adult support, and health. A self-efficacy
and social adjustment scale asked participants
to respond to items regarding setting priorities,
problem-solving, and ability to make a positive
impact.

■ The nine-month survey does not include data on
military enlistment, as the survey firm was not yet
able to locate all the participants that had enlisted.

Contact Information

Program Contact
Ernie Gonzales
Office of the Assistant Secretary of Defense for
Reserve Affairs (Resources)
US Department of Defense
1500 Defense Pentagon
Washington, DC 20301
703-693-8630
ernie.gonzales@osd.mil

Research Contact
Dan Bloom
Senior Research Associate
MDRC
16 East 34th Street
New York, NY 10016
212-340-8672
dan.bloom@mdrc.org

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    of the National Guard Youth ChalleNGe Program
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Opening Doors and Enhanced Opening Doors at Chaffey College

Population Served	Community college students ages 18-34 on "academic probation" or "progress probation."
Program Location	Rancho Cucamonga, California
Type of Evaluation	Experimental design; participants were randomly assigned to treatment and control groups; outcomes were measured at the student level.
Findings	The Enhanced Opening Doors program increased college grades and credit accrual, and was effective in moving students off probation.
Elements of Success	■ Instruction in academic success behaviors ■ Tutoring/academic support services ■ Advisory systems

MDRC, an education and social policy research institution, developed the Opening Doors demonstration project to test promising practices designed to improve the achievement and persistence of students at community colleges. The six community colleges included in the project developed and piloted diverse interventions that incorporated at least two of the project's three key strategies: curricular and instructional innovations; enhanced student services; and supplementary financial aid. The participating colleges were located in New York, California, Louisiana, and Ohio. An evaluation of the Opening Doors Learning Communities program at Kingsborough Community College in Brooklyn, New York is also included in this volume and follows this profile.

Opening Doors and Enhanced Opening Doors at Chaffey College

The Opening Doors and Enhanced Opening Doors demonstration programs at Chaffey College in Southern California were designed as a strategy to improve the academic success of students who were on probation due to poor grades or inadequate progress toward a degree. The cornerstone of the intervention was a "College Success" course that addressed academic success behaviors and college knowledge, along with increased exposure to the college's academic supports.

The original Opening Doors program at Chaffey College, which took place in the Fall 2005 semester, offered a voluntary College Success course taught by college counselors. In 2006-07 the college implemented a modified version of the program, entitled

Enhanced Opening Doors,[206] which featured a required College Success course and increased enforcement of program expectations. Both programs also offered participants a textbook voucher, which covered the cost of the books for the College Success course.

The Opening Doors and Enhanced Opening Doors programs built upon Chaffey's pre-existing strategy of providing academic support for the development of basic skills through subject-based "Success Centers" in the areas of reading, writing, and math. The resources of the Success Centers include individual tutoring, group instruction, and computer-based assistance. Opening Doors incorporated the supports provided by the Success Centers into a more concerted initiative to help struggling students

Key Findings

While the original Opening Doors program did not meaningfully impact academic outcomes, the Enhanced Opening Doors program significantly increased the average number of credits earned by participants, their likelihood of earning a GPA above 2.0, and their likelihood of passing all of their classes. The Enhanced Opening Doors group members were significantly more likely to move off probation during the two-semester program period.

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206 The actual title of the revised program at Chaffey College was "Opening Doors to Excellence," but the MDRC evaluation uses the title "Enhanced Opening Doors." This profile maintains consistency with the evaluation by using the title Enhanced Opening Doors.

AYPF's Policy Takeaways

Comprehensive Student Support at the Post-secondary Level: The Opening Doors and Enhanced Opening Doors programs featured a College Success course that emphasized both the academic behaviors and personal life skills required to navigate the challenges of early adulthood and the postsecondary environment. It is important for policymakers to recognize the critical role of nonacademic factors that can affect progress toward a degree. Community colleges should be encouraged to develop innovative programs to address these multiple barriers and provided with the resources to expand the capacity of their academic and social support services.

Academic Success Behaviors and College Access Programs: The content of the College Success course may be beneficial for a large number of entering community college students. Policymakers may wish to incorporate appropriate strategies from Opening Doors and Enhanced Opening Doors into federally-funded college access programs, such as the TRIO programs, in order to provide youth from underrepresented groups with a stronger orientation to the demands and expectations of the college environment.[207]

remain at the college and move off probation. Following the demonstration programs, Chaffey College institutionalized the Enhanced Opening Doors model by implementing a revised program, entitled Opening Doors to Excellence, for students who had been on probation for two consecutive semesters.

Findings for Opening Doors

- Approximately half the program group enrolled in the College Success course.

- A higher percentage of the program group (78 percent) rated their college experience as good or excellent than the control group (69 percent).

- Participation in Opening Doors increased the likelihood of visiting a Success Center by 15 percent.[208]

- The program group attempted an additional half-course during the program semester. This increase was attributable to the nontransferable College Success course.[209]

- The program group attempted 1.2 fewer regular credits than the control group.[210]

- Approximately one-fourth of both the program and control groups passed all of their classes during the program semester.

- Opening Doors did not significantly impact subsequent academic performance. During the four semesters of the study, approximately one-third of both the program and control groups moved off probation at any point.

Findings for Enhanced Opening Doors

- About three-fourths of the program group enrolled in the College Success course during the first semester, and nearly one-third enrolled in the second semester continuation course.

- During the first program semester, the program group members were more than twice as likely as the control group to visit a Success Center (69 percent versus 32 percent), and they spent almost three times as much time there, on average (5.7 hours versus 1.7 hours).[211] This difference narrowed during the second term but remained statistically significant.

- Across the two program semesters, the program group members earned approximately three more credits on average than the control group.[212]

- The program increased participants' likelihood of earning a cumulative GPA (across the two semesters) of 2.0 or higher by 13 percentage points, from 23.6 percent to 35.2 percent.[213]

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207 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

208 The difference is statistically significant at the .01 level.
209 Ibid.
210 Ibid.
211 Ibid.
212 Ibid.
213 Ibid.

- The program increased participants' likelihood of passing all of their classes by 7 percentage points during the first semester[214] and 9 percentage points during the second semester.[215]

- During the first semester, 40 percent of the program group earned a GPA of 2.0 or higher, compared with only 22 percent of the control group.[216]

- 30 percent of the program group achieved good academic standing at some point during the two semesters, compared with 16 percent of the control group.[217]

Program Details

Program Population

- Chaffey College, like other community colleges in California, is essentially an "open enrollment" institution, accepting all students who are at least 18 years old or a high school graduate. Tuition for California community colleges is lower than other states, at $26 per credit as of 2007.

- Located in Rancho Cucamonga, California, Chaffey College is a two-year, publicly funded institution.

- The student body consisted of 17,200 students when the study began in 2005, and approximately 70 percent of students attended the college part-time.

- Students who have attempted 12 or more credits at Chaffey are placed on "academic probation" if they have a cumulative GPA below 2.0, and on "progress probation" if they have not successfully completed 50 percent of the credits they have attempted. Approximately 3,500 students were on "academic" or "progress" probation in Spring 2004.

- If students are on academic or progress probation for three or more consecutive semesters, they are subject to dismissal from the college. This policy was not regularly enforced until 2006.[218]

- Students can also be placed on "financial aid probation" if they have a GPA below 2.0 or fail to make sufficient progress toward a degree or certificate, and may lose their financial aid if they do not improve their performance.

- Students were eligible for the Opening Doors and Enhanced Opening Doors programs if they were on academic or progress probation, had earned fewer than 35 credits, had earned a high school diploma or GED, and were ages 18-34.

Program Components

College Success Course

- This was a three-credit course taught by counselors and designed to help probationary students build academic success skills and behaviors. The credits were nontransferable and did not count toward a degree.

- The course was the cornerstone of the intervention, and students who did not enroll in the College Success Course did not receive any program services.

- The control group members were also allowed to enroll in the course, but fewer than 3 percent did so.

- The class was structured as a two-credit lecture and a one-credit workshop or practicum, which met directly after the lecture.

- Topics covered included goal-setting, time management, college regulations and culture, study skills, self-motivation, exploring careers, and developing emotional intelligence.

- Counselors received several days of training on the program model and the core curriculum.

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214 The difference is statistically significant at the .10 level.
215 The difference is statistically significant at the .05 level.
216 The difference is statistically significant at the .01 level.
217 Ibid.

218 The authors note that participants in the study were exempt from the dismissal policy during the study period.

- *During the Opening Doors Program:*
  - ❏ This course was encouraged, but not required, for the program group.
  - ❏ Class sizes ranged from 7–27.
  - ❏ A second-semester, one-credit follow-up course was offered, but only 3 percent of the program group enrolled in the follow-up course.

- *During the Enhanced Opening Doors Program:*
  - ❏ The program group members were told that the course was required, as a condition of registering for any classes that semester.[219] Approximately 72 percent of the program group enrolled in the course.
  - ❏ Students were also required to complete a one-year education plan that detailed the steps they would take to move off probation prior to registering for courses.
  - ❏ The project coordinator selected the counselors, all of whom had worked in the original Opening Doors program and were considered to have been strong staff.
  - ❏ Instructors met on a monthly basis for common planning and professional development.
  - ❏ An optional, second-semester, two-credit follow-up course was offered, and approximately 40 percent of those who took the first-semester course enrolled in this class. The curriculum was based on *The Seven Habits of Highly Effective Teens*. The students continued to receive counseling from their instructors, but they were not required to utilize the Success Centers.

Success Centers

- These resource centers provide individual and group tutoring, as well as workshops and computer-based assistance, in the skill areas of reading, writing, and math. The Centers are staffed by full-time college faculty, and they are open for extended hours through the evenings and during some hours on weekends. Many of the college's developmental-level courses require students to utilize the Success Centers to complete certain assignments.

- *During the Opening Doors Program:*
  - ❏ Participants were assigned to work on their reading, writing, or math skills, based on assessment test results. They were also expected to utilize the corresponding Success Center nine times as a requirement of the College Success course. This component of the intervention was not fully implemented across all of the College Success courses.

- *During the Enhanced Opening Doors Program:*
  - ❏ Participants were expected to visit the Centers five times in the first semester of the program.
  - ❏ Students were allowed to choose which Center to visit.
  - ❏ Assignments were integrated into five course themes: skills assessment, learning styles, time management, use of resources, and test preparation.
  - ❏ Students were required to document the tasks that they completed at the Success Centers.

Enhanced Counseling

- The counselors who taught the College Success courses were expected to meet with students individually outside of class time.

- *During the Opening Doors Program:* Each student was expected to meet with his or her counselor outside of class time at least twice during the semester. This expectation was not fully implemented.

- *During the Enhanced Opening Doors Program:* The counselors and counselor apprentices developed a system to follow up with all students who were absent from class.

- The control group had access to the college's regular counseling services. The regular counselor-to-student ratio was approximately 1 to 1,500.

Cost/Funding

- MDRC provided Chaffey College with funding for the implementation of Opening Doors through grants from the William and Flora Hewlett and James Irvine Foundations.

- The evaluation was funded by 13 major foundations and three government agencies: the Depart-

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[219] Ultimately, the college administrators did not block program group members who did not take the College Success course from registering for other courses, due to concerns about low enrollment rates. The program group members were not informed about this change in policy, and they had already received the message that enrollment in the College Success class was required.

ment of Education, Department of Labor, and the National Institutes of Health.

Evaluation of Opening Doors and Enhanced Opening Doors

Evaluation Overview

The multisite Opening Doors study was conducted by MDRC, a group of scholars from the MacArthur Foundation-funded Research Network on Transitions to Adulthood, and an expert on the relationship between education and health at Princeton University. This study represents the first large-scale community college research to use an experimental design. Students at each site who met the program's eligibility criteria were randomly assigned to receive either the special demonstration services or the college's regular services.

The Opening Doors program at Chaffey College took place during the Fall 2005 semester, and participant outcomes were tracked for four semesters, through Spring 2007. The Enhanced Opening Doors program operated during the 2006-07 academic year, and participant outcomes were tracked for two semesters.

Evaluation Population

- All study participants met the program's eligibility criteria, meaning that they were on academic or progress probation, had earned fewer than 35 credits, did not have an associate's degree, had a high school diploma or GED, and were ages 18-34.

Opening Doors Study

- 898 students were randomly assigned to the program group or control group.

- 60 percent of the sample members were women.

- 53 percent of the sample members were Latino, 23 percent were White, 15 percent were African American, 6 percent were Asian or Pacific Islander, and 4 percent were designated as other races.

- The majority (59 percent) of study participants were ages 18-20.

- 93 percent of study participants were unmarried, and only 12 percent had children.

- Approximately half of study participants (52 percent) reported being financially dependent on their parents.

- 14 percent of participants were from households receiving public assistance.

- One-third of sample members were the first in their families to attend college.

Enhanced Opening Doors Study

- 444 students were randomly assigned to the program group or the control group.

- Most of the sample members' demographics mirrored the Opening Doors sample, with a few exceptions:
  - Participants were somewhat more likely to be employed when they entered the study (75 percent versus 68 percent).
  - Participants were more likely to have graduated from high school or received their GED in the past year (32 percent versus 21 percent).

Evaluation Methodology

- Students on probation were informed about the study and recruited to participate through letters, phone calls, flyers, and probation orientation sessions. All study participants were given $20 gift cards as compensation. Before random assignment, participants completed baseline questionnaires that included background information, as well as questions about students' well-being and health.

- In 2005, study participants were randomly assigned to the program group, which was eligible for the Opening Doors program in the Fall 2005 semester, or the control group, which received the college's regular services. These services consisted of a brief workshop on how to improve one's academic standing, and encouragement to schedule an appointment with a college counselor.

- Based on assessments from the Opening Doors program, the college decided to offer a refined, two-semester program called Enhanced Opening Doors to a new group of probationary students during the 2006-07 school year. The random assignment process was repeated for this group.

Students who were recruited to participate in the Enhanced Opening Doors study were informed about the required College Success course prior to random assignment.

■ Since the Opening Doors and Enhanced Opening Doors programs were not offered simultaneously, it is not possible to definitively attribute differences in the outcomes to the programs themselves.[220] The evaluation can only offer suggestive evidence about the factors that might have generated the different effects of the two programs.

■ A 12-month follow-up survey was administered to the Opening Doors sample (both program and control), with a 68 percent response rate. The Enhanced Opening Doors group did not complete this survey.

■ Data sources included participant questionnaires; college transcript data; college probation data; Success Center participation data; National Student Clearinghouse data; and field interviews with college administrators, faculty, and staff.

Contact Information
Program Contact
Ricardo Diaz
Opening Doors Coordinator
Chaffey College
5885 Haven Ave.
Rancho Cucamonga, CA 91737
909-652-6504
Ricardo.diaz@chaffey.edu

Research Contact
Susan Scrivener
Senior Associate
MDRC
16 East 34th Street
19th Floor
New York, NY 10016
212-532-3200
sue.scrivener@mdrc.org

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[220] For a definitive comparison, participants would have had to have been randomly assigned to one of the two programs or to a control group. That was not possible because the Opening Doors and Enhanced Opening Doors programs were offered sequentially, not simultaneously.

Opening Doors Learning Communities at Kingsborough Community College

Population Served	Community college students in their first semester; ages 17–34. Approximately 770 students were served during the Demonstration Period.
Program Location	Brooklyn, New York
Type of Evaluation	Experimental design; participants were randomly assigned to treatment and control groups; outcomes were measured at the student level.
Findings	Improved course-passing rates and GPAs during the program semester, faster progression through developmental English requirements, increased student engagement and greater overall student satisfaction.
Elements of Success	■ Tutoring and academic support services ■ Smaller learning communities ■ Personal relationships ■ Advisory systems ■ Financial assistance ■ Comprehensive social support services ■ Team-teaching ■ Effective leadership of reform effort

MDRC, an education and social policy research institution, developed the Opening Doors (OD) demonstration project to test promising practices aimed to improve the achievement and persistence of students at community colleges. The six community colleges included in the project developed and piloted diverse interventions that incorporated at least two of the project's three key strategies: curricular and instructional innovations; enhanced student services; and supplementary financial aid. The participating colleges were located in New York, California, Louisiana, and Ohio. An evaluation of the Opening Doors program at Chaffey College in Rancho Cucamonga, California is also featured in this compendium and precedes this profile.

Learning Communities at Kingsborough Community College

The Opening Doors Learning Communities program, an intervention aimed at improving the success and persistence of entering college students, was implemented and evaluated at Kingsborough Community College in Brooklyn, New York from 2003-05.

"Learning communities" aim to improve college student success, particularly for students from his-torically underrepresented groups, by placing incoming students in small cohorts with whom they take core courses. These models are thought to provide more support for students, accelerate their progress, and improve their retention and completion. They represent a strategy to address the low completion rates of community college students, and the particularly low success rates of students who must take developmental-level courses.

Kingsborough first implemented a learning communities program with its English-as-a-second language (ESL) students in 1995, and later expanded the learning communities structure to include non-ESL students in specific career majors. The college

Key Findings

Opening Doors improved participants' course-passing rates, average number of credits earned, and GPAs during the program semester. Few of these academic outcomes persisted during additional semesters. Participants passed more quickly through developmental English requirements. Program participants reported higher levels of engagement and integration, and were more satisfied with their overall college experience.

AYPF's Policy Takeaways

Comprehensive Support Systems at the Post-secondary Level: Policymakers should recognize the importance of comprehensive student services in addressing common barriers to college success and completion. Community colleges need resources to expand the support structures available to incoming students and to reduce the caseloads of freshman advisors, counselors, and tutors. Professional development for college faculty and staff plays an important role in building a culture of support for youth who enter college underprepared or at risk of dropping out. Public funding sources should assist postsecondary institutions in building their institutional capacity to serve the academic and social support needs of all of their students.

Addressing the Hidden Costs of College: Opening Doors provides textbook vouchers to help students defray the high cost of textbooks. The prices of books and other supplies can impede low-income students' academic success, as they may avoid purchasing the necessary texts. Policymakers should consider strategies to provide targeted financial assistance to relieve the financial burden of these hidden costs of college.[221]

observed positive early outcomes from these programs, which prompted their interest in participating in MDRC's demonstration project and vastly expanding their learning communities.

The Kingsborough Opening Doors Learning Communities program aimed to impact both students' short-term and long-term academic outcomes and their satisfaction with the college experience. First-semester college students were placed into clusters of up to 25 students, with whom they shared two academic courses and an orientation course. The students also received enhanced academic counseling and tutoring, along with vouchers to defray the costs of textbooks. A slightly revised version of the Opening Doors Learning Communities program is still in operation at Kingsborough today, and is being expanded to serve 80 percent of incoming freshmen by 2010.

Findings for Opening Doors

- OD participants were significantly more likely to report positive feelings of engagement, integration, and using critical thinking than the control group, and to rate their college experience as "good" or "excellent" after 12 months.[222]

- During the program semester, 43 percent of OD students passed all their courses, compared to 33 percent of control students.[223]

- OD participants were also 7 percentage points more likely to earn GPAs of 3.0-4.0 during the first semester than the control group.[224]

- Participants earned an average of 1.2 more credits during the first semester.[225]

- OD did not have an impact on persistence at Kingsborough in the first two post-OD semesters, but participants were 5 percentage points more likely to persist to a third post-program semester.[226]

- Overall, OD students earned an average of 2.4 more credits during the four semesters of the study than the control group. The effect on credits earned was particularly evident during the program semester, and to a lesser extent in the first post-OD semester.

- OD significantly increased students' likelihood of attempting and passing either of the English skills placement tests (reading or writing) during the OD semester. Students must pass these tests in order to progress to credit-bearing English courses. OD participants were 11 percentage points more likely to attempt either of the placement tests,[227] and 6 percentage points more likely to pass both placement tests by the end of the semester.[228] The program had the most substantial impact on the writing test.

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221 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

222 The differences are statistically significant at the .01 level.
223 Ibid.
224 The difference is statistically significant at the .05 level.
225 The difference is statistically significant at the .01 level.
226 The difference is statistically significant at the .10 level.
227 The difference is statistically significant at the .01 level.
228 The difference is statistically significant at the .05 level

- OD students who had initially failed one English assessment test were more likely to pass developmental English and move on to Freshman English I than the control group. They were also more likely to pass Freshman English I.[229]

- Among students who had initially failed *both* English assessments, participation in OD increased the likelihood of passing both English tests by the end of the first postprogram semester.[230]

- OD did not increase the likelihood of passing English classes for students who had passed both English assessment tests before starting the program.

- There were no meaningful differences in impacts on different subgroups by race and achievement. Impacts were slightly larger for males than for females.

- OD did not have a meaningful impact on overall student health and well-being.

Program Details

Program Population During the Demonstration Period

- The program targeted full-time, incoming freshmen who planned to take daytime classes.

- Eligible students were ages 17–34.

- ESL students were excluded, as were students in specific career majors (accounting, business, mental health, and early childhood education) during the first year of the study, as these students had their own learning community programs.

- Kingsborough is one of the six community colleges in the City University of New York (CUNY) system; it serves 35,000 students.

- All students who enter the CUNY system must take reading, writing, and math placement tests; students who do not pass these tests must pass developmental, noncredit courses in order to retake the tests, as well as to earn an associate's degree or transfer to a four-year college. In 2003, when the study began, only 18 percent of incoming Kingsborough students passed all three placement tests.

Program Components

Curriculum/Instruction

- First-semester students took three clustered courses: English, one academic content course required for the student's major (such as health or psychology), and a one-credit freshman orientation course.

- The courses were block-scheduled on a Monday through Thursday week and lasted for one 12-week semester.

- These classes were limited to the 25 members of each learning community, while other freshman content courses typically enrolled 30–35 students.

- Students in lower-level developmental courses typically did not take any additional, unclustered courses in the first semester; other students typically took at least one non-Opening Doors class.

- Approximately three-quarters of the English classes in the Opening Doors program were at the developmental level; the other 25 percent of students took credit-bearing English classes.

- The freshman orientation course covered academic skills, such as time management and study skills, as well as college familiarity and career exploration. It was offered to all Kingsborough students as an optional course but was required for Opening Doors students.

- Instructors' teaching loads were reduced so that they had more time to assist Opening Doors students. They were also compensated for presemester planning time.

- Faculty teams met before each term and many often met regularly throughout the semester.

- Faculty partners gave some joint assignments, and most used a common grading scheme. During the demonstration, some learning communities integrated content across courses more fully than others.

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[229] Ibid.
[230] The difference is statistically significant at the .10 level.

Student Supports

■ Opening Doors freshman orientation classes were taught by Opening Doors "case managers," who worked with other faculty to address students' barriers and identify areas of concern. Typically, each case manager had approximately 75-100 students through different classes, while regular freshman counselors had a caseload of approximately 500 students. Opening Doors case managers met with students individually for both academic and personal advising and made referrals to the counseling center.

■ Tutors were assigned to each learning community and regularly attended the English class and the content class.

■ Students were given a textbook voucher of $150 for use at the campus bookstore. They were also given $75 vouchers for the six-week inter-term module following the program semester.

Structural Components

■ Students had a mini "graduation" celebration from Opening Doors after the first semester.

■ The six-week inter-term session following the program semester offered a transition period into regular college. Students could take additional, regular classes and still receive case management.

■ Close collaboration took place between the Academic Affairs and Student Services divisions of the college.

Cost/Funding

■ The college received special funding from the Robin Hood Foundation to implement the Opening Doors Learning Communities.

■ The initial program cost was $1,000 per student per semester, including faculty training costs. Later program costs were estimated at $500 per student per semester.[231]

■ The evaluation was funded by 13 major foundations and three government agencies: the Department of Education, Department of Labor, and the National Institutes of Health.

Evaluation of Opening Doors

Evaluation Overview

The multisite Opening Doors study was conducted by MDRC, a group of scholars from the MacArthur Foundation-funded Research Network on Transitions to Adulthood, and an expert on the relationship between education and health at Princeton University. This study represents the first large-scale community college research to use an experimental design. Students at each site who met the program's eligibility criteria were randomly assigned to receive either the Opening Doors program or the college's regular services.

The Opening Doors Learning Communities program was implemented and evaluated at Kingsborough Community College from 2003-05. The evaluation used a random assignment methodology; the researchers collected data on study participants at the beginning of their college experience and over a four-semester period.

Evaluation Population

■ The total study population was 1,534 students, which included the program group and a control group that was not offered the opportunity to participate in Opening Doors. The population included four cohorts of students who entered the college as freshmen in Fall 2003, Spring 2004, Fall 2004, and Spring 2005.

■ 38 percent of study participants were African American, 27 percent were White, and 20 percent were Latino.

■ The participants were 55 percent female.

■ 79 percent of participants were ages of 17-20.

■ 71 percent of students had earned a high school diploma before entering Kingsborough, and 29 percent had earned a GED.

■ 28 percent of students came from households that received some public assistance.

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231 American Youth Policy Forum, 2005.

- 40 percent of participants were foreign-born.

- Only 29 percent had passed both the reading and writing placement tests upon enrollment.

- The students reported that they were generally healthy and had strong mental health at the base-line period.

- Faculty members who taught in the program during the Fall 2004 semester were also surveyed.

Evaluation Methodology

- The study used a longitudinal, experimental design.

- Participants were recruited during early registration or large registration sessions, and they were given a $20 transit card as an incentive to participate.

- Data sources included a student baseline questionnaire, college transcripts, assessment tests, the National Student Clearinghouse, the Opening Doors student survey administered 12 months after random assignment, and a smaller Kingsborough Community College student survey administered in Fall 2004.

- The Opening Doors 12-month survey examined integration at the college, engagement, types of knowledge that students were using, and acquired academic and work skills. It also assessed health and well-being.

- Additional sources of data included a survey of faculty of the Opening Doors program, as well as field interviews with administrators, faculty, staff, and 23 students.

- The evaluators compared the outcomes for the program group and the control group over the study period. The comparisons controlled for the baseline number of English assessments passed by each student, as well as the term of entry into the college.

Contact Information

Program Contact
Rachel Singer
Director of Academic Affairs
Kingsborough Community College
2001 Oriental Boulevard
Brooklyn, NY 11235
718-369-5027
RESinger@Kingsborough.edu

Research Contact
Susan Scrivener
Senior Associate
MDRC
16 East 34th Street
19th Floor
New York, NY 10016
212-532-3200
sue.scrivener@mdrc.org

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Project GRAD

Population Served	Students in Grades PreK-12 and into the first year of college. More than 134,000 students are served nationwide. The evaluation focuses on high school students.
Program Location	The program is in 13 sites nationwide. Evaluations in Houston, Texas; Columbus, Ohio; and Atlanta, Georgia.
Type of Evaluation	Quasi-experimental, longitudinal, matched comparison group study with analysis of school-level outcomes.
Findings	Increased on-time completion of a core academic curriculum.
Elements of Success	■ Tutoring and academic support services ■ Instruction in academic success behaviors ■ Family involvement ■ Safe, supportive climate ■ Early college exposure ■ Scholarships ■ Comprehensive social support services ■ Expanded learning opportunities

Program Overview

Project Graduation Really Achieves Dreams (GRAD) is a comprehensive school reform model that targets its interventions throughout "feeder systems" of elementary, middle, and high schools, with the goal of increasing low-income students' academic achievement, high school graduation, and college attendance. The program aims to instill a college-going culture at all levels of the PreK-12 system and into the first year of college, with a strong emphasis on family and community involvement. This represents a significant departure from the school-by-school approach of many educational reform efforts. Project GRAD's theory of change is rooted in the belief that schools operate in the context of communities, and key stakeholders—especially parents—must take ownership of school reform.

Project GRAD's core operational strategies include improving school climate, enhancing learning opportunities, and building school-level capacity for management. At the younger grades, the model consists of curricular reforms and teacher professional development in reading and mathematics. One of its cornerstones at the high school level is the opportunity to receive a college scholarship, along with Summer Institutes and other initiatives to promote college preparation and enrollment. Students and families learn about the scholarship opportunity as early as elementary school.

The reform model began in the feeder schools for Jefferson Davis High School in Houston, Texas in 1993–94, and now includes more than 200 schools including all grade levels. The original high school and its middle schools were chronically low-performing and experienced high rates of suspensions and expulsions. Collaboration efforts between the business community, spearheaded by Tenneco Corporation, and the school district date back to the early 1980s, when corporate partners began funding scholarships and other reforms aimed to address the problems of underperforming schools. In 1998, Project GRAD was scaled up to other districts nationwide, and has often been combined with other reform initiatives.

Key Findings

Project GRAD significantly increased the number of students completing a core academic curriculum on time in one Houston high school. Other positive findings at the implementation sites included increased numbers of credits earned, increased performance on standardized tests, and improved attendance and on-time promotion rates, though these results were not statistically significant.

AYPF's Policy Takeaways

Supporting a System-Wide Approach: Project GRAD aims to positively impact the feeder patterns of K-12 systems, holding that strong preparation in the early grades is essential to pave the way for college preparation at the high school level, and that consistency of certain programs and approaches across elementary, middle, and high schools improves student outcomes. As student mobility into and out of feeder system schools poses an implementation challenge, policy leaders should consider ways to create incentives for district-wide commitment to a particular school improvement strategy that takes into account the reality of student mobility.

Comprehensive College Outreach: Project GRAD uses a multi-faceted approach to building a college-going culture. The promise of a college scholarship for qualifying graduates and the annual Walks for Success serve to raise students' and families' aspirations and provide transparent information about the necessary steps to prepare for college, and Summer Institutes build academic readiness for college-level work. Policymakers should support comprehensive initiatives that simultaneously address financial, academic, informational, and social barriers to college-readiness.[232]

Currently, programs operate in 13 sites across the United States, including Newark, New Jersey; Los Angeles, California; Akron and Cincinnati, Ohio; Houston, Texas; and Atlanta, Georgia.

Findings from Houston

- At Davis High School, Project GRAD was associated with a statistically significant, positive effect on the percent of students completing a core academic curriculum on time (a 6.6 percent larger increase than at comparison schools).[233] At the other high schools, the effect was also positive but the difference from comparison schools was not statistically significant.

- Overall, attendance at Project GRAD schools did not improve, while rates did improve at comparison schools during the study. Project GRAD was associated with a negative impact on student attendance rates.[234]

- Both Project GRAD and comparison schools increased the percent of 9th-grade students earning algebra credits, the overall 9th-grade credits earned, and the percent of students who passed the 10th-grade reading and math state assessment test. Project GRAD's impact was not significant.

- Project GRAD did not have a significant impact on on-time graduation rates. Graduation rates improved at all schools, but the majority of 9th-grade students still did not graduate within four years.

Findings from Columbus[235]

- 9th-grade attendance rates increased, but the improvements were not significantly greater than the improvements seen at the comparison schools.

- 9th-grade promotion rates increased during early implementation, while rates at comparison schools declined, for a total impact of 13 percentage points. The differences are not statistically significant, but suggest a positive effect.

Findings from Atlanta

- Project GRAD schools had significantly larger improvements in attendance than comparison schools during Years 1 and 2, while impacts were not statistically significant in Year 3.

- Promotion rates increased more in Project GRAD schools than in the comparison schools, but the impact was not statistically significant.

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232 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.
233 The finding is significant at the .05 level.

234 Ibid.
235 Implementation at the Columbus site faced unique challenges. Communities in Schools (a partner organization) did not have a large staff presence in Columbus before Project GRAD, and needed to increase capacity. The scholarship coordinator position was not filled until the 3rd year of implementation. Because Columbus has an open enrollment policy, the effect on feeder systems was diluted; many students in the high school may not have been exposed to the interventions earlier.

Program Details

Program Population

■ Project GRAD serves all students in its target schools, which currently include more than 134,000 students. All of the schools implementing Project GRAD serve a disproportionately large population of students of color. Historically, these schools had lower prior academic achievement, attendance rates, and 9th-grade promotion rates than their district averages.

■ In order to be eligible for the Project GRAD Scholarship, students must complete a "core academic curriculum" that meets local definitions of college preparation, maintain a 2.5 GPA, graduate from high school on time, and attend the Summer Bridge and two Summer Institutes.

Program Components
At the time of the MDRC evaluations, the following program components characterized the Project GRAD model:

■ All levels of Project GRAD schools implement a classroom management program called Consistency Management & Cooperative Discipline. This program strives to increase student participation in classroom management and behavior regulation.

■ Schools provide access to social services and promote community engagement through partnerships with Communities in Schools (CIS) or Campus Family Support (CFS).

■ Local Project Grad offices support the feeder pattern schools and outreach to communities to implement reforms. The national organization, Project GRAD USA, provides technical assistance and fundraising support for local offices.

■ Curricular interventions in the lower grades include the Success for All reading curriculum and MOVE IT math for Grades 1–6; MOVE IT has also been expanded to some middle schools.

High School Program

■ College scholarships for qualifying students provide financial incentives for college preparation.

The scholarships are usually $1,000–1,500 per year for four years and require students to enroll in college within one year of graduating from high school (unless they enter the military).
  ❑ There are scholarship coordinators in all schools, who also provide college counseling and admission and financial aid assistance.
  ❑ 9th-grade students can elect to sign a contract to demonstrate their commitment to the scholarship opportunity, and they are then designated as Project GRAD scholars. The scholarship coordinators work specifically with Project GRAD scholars to make sure that they are on track for graduation and scholarship eligibility.

■ Project GRAD offers Summer Institutes, which are academic enrichment programs for qualifying students in the 10th and 11th grades. The Institutes, which specifically target the Project GRAD scholars, are based on college campuses and taught by college professors. The students also learn study skills and may receive remediation.

■ Project GRAD and school staff conduct Annual Walks for Success, which consist of visits to each 9th-grade student's home to introduce the program and scholarship. The parents sign a commitment to the program and complete a survey.

■ Social services and academic enrichment are provided through Communities in Schools or Campus Family Support.

Cost/Funding

■ Project GRAD USA is funded by the Bill & Melinda Gates Foundation and US Department of Education. Local Project GRAD nonprofits typically receive one-third of their funding from national and federal grants, one-third from local districts, and one-third from local fundraising.

■ The MDRC evaluation was funded with support from the Ford Foundation.

Evaluation of Project GRAD

Evaluation Overview
MDRC conducted a third-party, quasi-experimental, matched comparison group evaluation of Project GRAD high schools. The longitudinal study primarily focused on the early expansion sites in Houston,

Atlanta, and Columbus, and also included a retrospective evaluation of the outcomes at the original program site in Houston. The evaluators examined changes in high school student outcomes from the first year of implementation in these schools through Spring 2004, and compared them to corresponding changes in similar schools that did not implement Project GRAD.

Evaluation Population

Houston

- Jefferson Davis High School was the model's flagship high school. At baseline data collection, this school was predominately Latino (84 percent), compared to a district average of 37 percent Latino students.

- Project GRAD was implemented in Jack Yates High School in 1996–97 and in Wheatley High School in 1997–98.

- Overall, Houston's Project GRAD schools were 56 percent African American and 42 percent Latino. 54 percent were English-as-a-Second-Language (ESL) students.

- The average Project GRAD high school size was 1,333 students.

- By the end of the study period, the average entering freshman at Davis High School had spent 4.5 years in a Project GRAD feeder school.

Columbus[236]

- The Columbus Project GRAD high school, Linden-McKinley High School, had just undergone reconstitution for low academic performance when Project GRAD was implemented in 1999–2000. The entire Project GRAD feeder pattern included the high school, four middle schools, and seven elementary schools.

- The high school population was 758.

- The student body was mainly African American (78 percent), including many African immigrants. 8 percent of the students were White.

- 20 percent of Linden-McKinley students were classified as students with disabilities.

- Only 27.4 percent of students had attendance rates at or above 90 percent, compared with a district average of 42.8 percent.

- The average Project GRAD high school student in Columbus had had less than one year of prior exposure to Project GRAD feeder schools in the earlier grades.

Atlanta

- Project GRAD was implemented at Booker T. Washington High School and its feeder schools in 2000–01. The feeder pattern included two middle schools and nine elementary schools.

- The high school was 98 percent African American.

- The high school population was 1,474 students, which was larger than the district average.

- By the time of the study, the average Project GRAD high school student in Atlanta had had fewer than six months of prior exposure to Project GRAD feeder schools in the earlier grades.

Study Methodology

- The evaluation measured student high school outcomes before and after implementation to examine changes in student performance, compared to corresponding changes in similar schools in each district that were not implementing Project GRAD.

- The length of analysis varied, from 10 years at Jefferson Davis High School in Houston to three years maximum in Atlanta and Columbus.

- Data included student records from all schools, starting with baseline measures several years before program implementation.

- Comparison schools were chosen to match Project GRAD schools as closely as possible in prior

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[236] It is important to note that Columbus is no longer a Project GRAD site.

academic achievement (in the years immediately preceding Project GRAD) and racial/ethnic composition.

- Statistical analysis controlled for changes in student demographics during the period of the study.

- The outcomes measured included attendance rates, test scores, promotion rates, credits earned, graduation rates, and proportion of students completing a "core" academic curriculum.

- The sample sizes in Columbus and Atlanta were smaller, and the lack of statistical power limited the chances of finding statistically significant results.

Discussion

- The nature and complexity of the feeder system intervention was a challenge to the study. The feeder systems were "more leaky" than expected, due to student mobility. A large proportion of students in the Project GRAD high schools had not attended Project GRAD feeder schools, particularly at the expansion sites.

- Project GRAD had not been operating long enough in Atlanta and Columbus to allow the researchers to assess its effects on graduation rates or completion of a core academic curriculum.

- At the time of the MDRC evaluations, Project GRAD did not include curricular reforms at the high school level. The researchers suggested that Project GRAD enhance interventions to improve curriculum and instruction at the high school level.

- Next Generation Systemic Model: Project GRAD has become a more comprehensive school reform model since the MDRC evaluations were conducted. Some of the components that have been added to the model, which were not necessarily present in the evaluated sites, include:
  - ❏ Increased academic intervention in Grades 8–9, as well as the requirement that partner districts must provide a strictly aligned academic curriculum for Grades PreK-12.
  - ❏ Summer Bridge for Younger Students: a transition program that takes place in the summer

between Grades 8 and 9 and is operated in partnership with a local college or university.
  - ❏ College Access and Career Expectations: The College-Readiness Team at each school, led by the College Access Coordinator, provides targeted college access support, career planning and mentorship, and peer leadership opportunities.

Contact Information

Program Contact
Pam Buckley
Vice President of Program Development and Implementation
Project GRAD USA
4265 San Felipe, Suite 900
Houston, TX 77027
713-986-0491
pbuckley@projectgradusa.org

Research Contact
Fred Doolittle
Vice President and Director
Policy Research and Evaluation Department
MDRC
16 E. 34th Street
New York, NY 10016
212-340-8638
fred.doolittle@mdrc.org

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Additional Resources

http://www.projectgrad.org/

Talent Development High Schools

Population Served	High school students in Grades 9–12. The model serves all students in 113 participating schools.
Program Location	Nationwide; Talent Development High Schools are located in 15 states. Evaluations in Baltimore, Maryland; Philadelphia, Pennsylvania; and Newark, New Jersey.
Type of Evaluation	Quasi-experimental studies with matched comparison schools; outcomes are analyzed at the school level.
Findings	Increased credit accrual and reading and math performance in the 9th grade; increased rates of on-time promotion to the 10th grade.
Elements of Success	■ Instruction in academic success behaviors ■ Accelerated learning ■ Smaller learning communities ■ Embedded professional development ■ Team-teaching ■ Common planning time ■ Block scheduling ■ Active, long-term commitment by technical assistance providers ■ Data-driven instruction and decision-making

Program Overview

Talent Development High Schools (TDHS) is a comprehensive school reform model that aims to restructure large high schools that struggle with persistently low student achievement, discipline problems, and high dropout rates. The package of reforms targets school administration, structure, curriculum, instruction, and student support systems.

TDHS aims to improve achievement, on-time promotion, and graduation rates through school-wide restructuring that emphasizes high expectations for all students, a positive school climate, personalized relationships, and curricula designed to close skill gaps and accelerate student learning. Schools are reorganized into smaller learning communities, including themed career academies for students in Grades 10–12. One of the model's characteristic elements is the Ninth Grade Success Academy. Based on research that demonstrates success in the 9th-grade year reduces the likelihood of dropping out, these smaller learning communities provide 9th-grade students with targeted support and prepare them for a rigorous college preparatory curriculum.

Talent Development High Schools was founded in Baltimore, Maryland in 1994, as a partnership between Johns Hopkins University Center for Research on the Education of Students Placed at Risk

Key Findings

In Philadelphia, TDHS sites increased the average number of credits that students earned in the 9th grade, with a particularly strong impact on the percentage of 9th-grade students earning an algebra credit, and they improved their rates of promotion to the 10th grade. TDHS was also associated with an increase in 9th-grade reading and math achievement scores. Early graduation outcomes indicate an increase in graduation rates, but this finding is not statistically significant.

In Baltimore, TDHS 9th-grade students outperformed comparison students on assessment tests in reading and math.

(CRESPAR) and Patterson High School. The model was scaled up to other Baltimore schools and to high schools in Philadelphia, Pennsylvania in 1997. TDHS is now supported by the Center for the Social Organization of Schools (CSOS) at Johns Hopkins University, and it operates in at least 113 schools in 15 states.[237] Although TDHS is typically implemented in existing high schools as a school improvement initia-

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[237] Talent Development High Schools, 2007.

AYPF's Policy Takeaways

Flexible Policies: The implementation of Talent Development depends upon a considerable degree of latitude for schools to adopt the program's curricula for accelerated catch-up courses, the freshman seminar, and re-organize the schedule into double-blocked class periods. The Baltimore Talent Development High School's principal also has a higher degree of authority over staff selection and professional development. At the state and local levels, policies can empower school leaders with the flexibility to implement the curricular and structural reforms that best serve their students and to develop their individual school culture.

Support for the Transition to High School:
Talent Development features Ninth Grade Success Academies, and offers specific academic and social support strategies to improve students' transition to high school and likelihood of on-time promotion. Policymakers should recognize the critical significance of the 9th-grade year and provide incentives for schools and districts to develop innovative models to increase the personalization and support for students during this period.[238]

tive, the program developed its first new high school, Baltimore Talent Development High School, from the ground up in 2004. This school is one of Baltimore's "innovation high schools," which are small schools developed in collaboration with outside technical assistance providers. Innovation schools are part of the Baltimore City Public School System (BCPSS) and, as such, receive the same per pupil funding and are subject to many of the same regulations as other BCPSS schools. They do, however, have greater autonomy over curriculum and instruction and over some recruitment and staffing decisions.

Findings from the MDRC Evaluation of TDHS in Philadelphia
Findings for First-Time 9th-Grade Students

- Increases in average freshman attendance rates at TDHS schools were 5 percentage points greater than the attendance gains at comparison schools.[239]

- TDHS increased the amount of credits earned by students in the 9th grade.

- TDHS led to a substantial increase in the percentage of 9th-grade students earning an algebra credit; this increase was 24.5 percentage points greater than the course-taking trend at comparison schools.[240]

- TDHS schools improved the overall rate of on-time promotion to 10th grade by 8 percentage points.[241]

- TDHS's impact on credit accumulation was sustained in the 10th and 11th grades.

- TDHS was associated with an increase of 14 percentage points in the number of students who were on track in English and math credit accumulation by the end of 10th grade, and of 11 percentage points by the end of 11th grade.[242]

- Impacts on achievement test scores were modest; TDHS was associated with small increases in the percent of students scoring proficient or above in math, and there were no significant impacts on English scores on the state assessment, which is given in 11th grade.

Findings for Repeating 9th-Grade Students

- TDHS reduced the overall number of students repeating the 9th grade. Those who did repeat that year, however, showed little change in outcomes.
  - ❏ TDHS improved this group's attendance by 5.6 percentage points, but their average attendance rates remained below 70 percent.

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238 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

239 Statistically significant at the .10 level for Year I, and the .01 level for Year 2 and Year 3.
240 Significant at the .01 level.
241 Significant at the .05 and .10 levels in Years 1 and 2, respectively.
242 Significant at the .01 level.

❑ TDHS was associated with a negative impact on promotion to 11th grade for this group.[243]

Early Graduation Outcomes

■ Outcomes from the initial two TDHS schools (the only cohorts for which data were available) showed a 7.5 percent increase in graduation rates associated with TDHS, but this impact is not statistically significant.[244]

Findings from the CRESPAR Study in Baltimore

■ Students in the 9th grade in TDHS schools outperformed comparison students on the California Test of Basic Skills-5 Terra Nova (CTBS), both in terms of raw achievement scores and in terms of gains during the 9th grade year. TDHS was associated with an increase of 6 national percentile points in reading and 7 points in math.[245]

■ TDHS students were more likely to pass Algebra 1 than students in the comparison schools.

■ A supplemental study in Philadelphia largely replicated the results of the main study.[246]

■ The supplemental study that focused on the impact of TDHS's first-semester catch-up courses found that on average, TDHS students gained eight months of math ability in one semester, and 35 percent of students gained a year or more of reading ability in one semester.

Program Details

Program Population

■ There are now at least 113 TDHS schools in 15 states.

■ The model serves all students in participating open enrollment high schools.

■ Between 1995 and 1997, six of Baltimore's nonselective high schools began implementing TDHS components. All were characterized by low average attendance (in the 70 percent range) and dropout rates of 50 percent or higher. The student population in the Baltimore TDHS schools was approximately 85–90 percent African American.

■ TDHS was adopted in five Philadelphia high schools, beginning with two schools in 1999. Among the 22 nonselective high schools in the city, these schools were generally the lowest-performing schools. As of baseline data collection (1996–98), these schools had a large percentage of 9th-grade students who were overage for their grade level (41 percent) and low promoting power, with only 41 percent of students promoted to 12th grade on time.

Program Components

■ Ninth Grade Success Academy: This self-contained, school-within-a-school is organized in its own part of the school building, with its own principal and teaching staff organized into interdisciplinary teacher teams.
  ❑ The Success Academy has traditionally been the earliest and most fully implemented component of the reform model.

■ A Freshman Seminar during the first semester of 9th grade prepares all students with study and time-management skills; self- and career-awareness activities; and nonacademic skills such as teamwork, conflict resolution, and effective communication.

■ Twilight Academy: This special academic support program serves as an alternative high school model for 9th-grade students who have struggled with discipline problems or have previously dropped out of school. Instruction typically takes place later in the day, after the traditional school day has ended.

■ Career Academies: Students in the 10–12th grades belong to smaller Career Academies, each of which typically enroll 250–350 students and are organized around themed career pathways. All academies are designed to offer a college-preparatory curriculum, career electives, and work-based learning experiences.

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[243] Significant at the .05 level.

[244] A smaller sample size limited statistical strength. The researchers note that these two high schools received the greatest level of support from CRESPAR and consistently saw greater improvements than the other three schools in the study. The findings with regard to graduation rates should be considered exploratory.

[245] The effect sizes were .28 for reading and .18 for math.

[246] Students in TDHS schools had greater achievement gains, with effect sizes of .26 in reading and .52 in math.

❏ This aspect of TDHS has been less fully imple-
mented in many expansion sites, and many
schools already had smaller learning communi-
ties for their upper grades. The MDRC evalua-
tion notes that the Academies serving the upper
grades in the Philadelphia TDHS schools were
only loosely associated with the TDHS model.

■ Extended Block Scheduling: The school day typi-
cally consists of four 90-minute periods per day,
and students take four courses per semester. The
Baltimore Talent Development High School imple-
ments five periods per day: four 80-minute periods
and one 45-minute period dedicated to Arts and
Expression courses for the 9th grade, and Career
Exploration courses taught by community mem-
bers for the 10–12th grades.

■ Accelerated Learning with Academic Support:
  ❏ All students take a four-year sequence of Eng-
  lish and math.
  ❏ Students who are two or more years behind
  grade level receive double doses of English and
  math in the 9–11th grades, providing oppor-
  tunities for closing skill gaps while also keep-
  ing students on track to meet college entrance
  requirements. "Catch-up courses," such as
  Strategic Reading, Reading and Writing in Your
  Career, and Transition to Advanced Math-
  ematics, are offered during the first semester
  of 9–11th grades, allowing students to take
  grade-level courses that meet their district
  promotion requirements in the second semester.
  The extended block schedule allows for this
  acceleration.
  ❏ The 9th-grade curriculum includes one semester
  each of science and social science. The schools
  typically do not offer physical education for
  freshmen.

■ Teacher Professional Development and Effective
Use of Data:
  ❏ Teachers of TDHS acceleration courses receive
  extensive course-specific professional develop-
  ment and weekly curriculum coaching.
  ❏ Administrators and Academy leaders are typi-
  cally supported by on-site facilitators in the
  areas of data-driven decision-making and effec-
  tive teaming practices. TDHS partner schools
  attend annual national conferences of TDHS
  schools and training institutes, and staff from

expansion sites may have the opportunity to
visit other schools implementing the model.

■ Community Engagement: Family involvement
is promoted through the National Network of
Partnership Schools, which is also part of CSOS.
The Network assists schools with forming action
plans to involve community members in school
improvement initiatives.

Cost/Funding

■ The estimated additional cost per student, above
public education funding, is approximately $300-
$500 per year and includes materials and salaries
for coaches and facilitators. The costs vary with
the size of the school and availability of resources
that may be redirected to the reform effort.

■ Philadelphia's implementation of TDHS was
funded by federal Comprehensive School Reform
grants, federal Smaller Learning Communities
grants, CRESPAR, and district funds provided to
the Philadelphia Education Fund.

■ TDHS received an additional grant to scale up the
model from the US Department of Education's
Institute of Education Sciences (IES) in 1999,
through the Comprehensive School Reform Dem-
onstration.

■ IES funded both the MDRC and the CRESPAR
evaluations.

Evaluation of Talent Development

Evaluation Overview
MDRC Study (2005): MDRC conducted an inde-
pendent, quasi-experimental evaluation of Talent
Development's replication in the Philadelphia School
District as part of the federally-funded Comprehen-
sive School Reform Demonstration program. Ex-
pansion of the TDHS model to Philadelphia began
in two schools in Fall 1999, and additional schools
incorporated the model in the following years. The
school-level study examined the experience of the
first five Philadelphia schools to implement TDHS,
and the study included data from the 1996–97
through 2003–04 school years.

CRESPAR Study (2004): An internal study from Johns Hopkins University looked at the impact of the 9th-grade TDHS curriculum and instructional methods on reading and math achievement, drawing on data from schools in multiple cities. The main component of the study focused on three TDHS high schools in Baltimore during 1999–2000, comparing their outcomes with three matched comparison schools. The supplemental studies examined the effectiveness of 9th-grade catch-up interventions in Philadelphia, Baltimore, Newark, and New York City using 2000–01 data.

Evaluation Population

MDRC Study

- The study population included students from each of five Philadelphia TDHS high schools and six matched comparison schools.

- The TDHS sample included approximately 1,500 students per grade cohort.

- The TDHS students were exposed to the TDHS model in the 9th grade. Two-thirds of these were first-time 9th-grade students and one-third were repeating the grade.

- 82 percent of the students in the TDHS sample were African American, and 17 percent were Latino. Fewer than 1 percent were White and other races.

- The study population excluded English-as-a-Second-or-Other-Language (ESOL) and special education students.

- The treatment high schools were characterized by different levels and quality of implementation of the TDHS model.

CRESPAR study

- The main study population included 9th-grade students from three TDHS and three matched comparison public schools in Baltimore during the 1999–2000 school year.

- Data were analyzed for 140 Talent Development students in math and 257 students in reading, along with a comparison group of 233 students in math and 200 in reading.

- The TDHS student population was at least 90 percent African American in each subject, with at least 80 percent African American students in the comparison schools.

- In both TDHS and comparison schools, average student reading proficiency was at the 4th-grade level and math proficiency was at the 5th-grade level by the end of the 8th grade.

- Special education classrooms were excluded from the study.

Evaluation Methodology

MDRC

- The quasi-experimental study used a comparative interrupted time series design,[247] with data from three baseline years in each school and up to five years of follow-up.

- The researchers identified two to four comparison schools to match each TDHS school. Six comparison schools were ultimately chosen to match the TDHS schools on the basis of student demographics, 9th-grade promotion rates, average achievement test scores, and attendance rates.

- Regression analysis was used to control for remaining differences in student background characteristics and prior achievement, as well as changes in school composition during the study.

- The researchers measured changes from the baseline in student outcomes in the TDHS schools and the non-TDHS schools. The impact of TDHS was calculated as the difference between these changes in student outcomes in the TDHS and non-TDHS schools.

- Outcomes measured include attendance, course-taking, credits earned, promotion, and state assessment scores. The study also included a preliminary analysis of graduation rates, using

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[247] In the interrupted time series analysis, student outcomes in the TDHS schools are compared with the performance of similar students (the three baseline cohorts) in the same schools. In the comparative analysis, a similar interrupted time series analysis is conducted in the non-TDHS schools. The difference between the change observed in the TDHS and comparison-group school is an estimate of the impact of the intervention.

data from the initial two schools to implement TDHS in Philadelphia. Because of the small size of the sample used to examine four-year graduation rates, these findings are exploratory.

■ The primary data from the impact analysis are individual student school records obtained from the school district administrative records.

CRESPAR

■ In the main portion of the study, 9th-grade outcomes at three TDHS schools were compared with outcomes at the three neighborhood schools.

■ Talent Development's freshman English intervention, Strategic Reading, was implemented in 20 classes of regular education students, and the math curriculum, Transition to Advanced Mathematics, was used in 16 classes.

■ The comparison schools also offered double doses of math and English classes in 90-minute blocks during the 9th grade, and students attended 9th-grade academies with designated teacher teams, but the classes followed the regular district curricula. These similarities in school structure offer particularly strong comparisons, allowing the researchers to isolate the effect of TDHS's specific curricular interventions.

■ The primary outcomes measured were student performance on standardized reading and math tests. Students in both TDHS and comparison classes were given the California Test of Basic Skills-5 Terra Nova (CTBS) in spring of 8th grade, as well as February and May of 9th grade.

■ The students were allowed to choose whether to participate in the study, and were given small incentives for participating. The voluntary nature of the study may have lead to some selection bias.

■ Supplemental studies were conducted during the 2000–01 school year in additional sites.
  ❏ The main study was replicated in Philadelphia, with three TDHS schools and three comparison schools. Outcomes were measured using an abbreviated version of Stanford 9 test. The comparison schools did not offer double-block classes or freshman academies.

❏ Another supplemental study sought to isolate the impact of TDHS's first semester catch-up courses, using pretests in September and post-tests in January in all TDHS schools in multiple cities (Philadelphia, Baltimore, Newark, and New York).

Contact Information
Program Contacts
Robert Balfanz
Research Scientist
Johns Hopkins University
Center for the Social Organization of Schools
410-516-4272
rbalfanz@csos.jhu.edu

Nettie Legters
Research Scientist
Johns Hopkins University
Center for the Social Organization of Schools
410-516-8874
nlegters@csos.jhu.edu

Research Contact
Corinne Herlihy
Senior Research Associate
MDRC
16 East 34th Street, 19th Floor
New York, NY 10016
212-340-8894
Corinne.herlihy@mdrc.org

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Talent Search

Population Served	Students in middle and high school. At least two-thirds of each project's participants must be both low-income and first-generation college students. More than 360,000 students are served each year.
Program Location	Nationwide; evaluations in Texas, Florida, and Indiana.
Type of Evaluation	A quasi-experimental, retrospective analysis of large administrative data sets; outcomes analyzed at the student level.
Findings	Increased likelihood of applying for financial aid and enrolling in college.
Elements of Success	■ Tutoring and academic support services ■ Early college exposure ■ Increased college counseling ■ Financial aid assistance ■ Secondary-postsecondary partnerships ■ Expanded learning opportunities

Program Overview

Talent Search (TS) is one of the federal TRIO programs created under the Higher Education Act of 1965.[248] It is designed to increase low-income, first-generation college students' rates of high school graduation, college preparation, and college access. The program offers college counseling, including guidance on college preparatory course selection, and assistance with the process of obtaining financial aid.

Talent Search reflects the theory that low-income and first-generation college students have both financial and informational barriers to enrolling in college. By addressing these barriers, TS aims to improve the college enrollment of these populations. The program rests on the assumption that relatively small interventions at crucial points along the pathway to college can be critically important.

TS projects are typically organized by a host college or university (either two- or four-year), though community organizations host about 20 percent of the projects. Grantee institutions work with a target group of middle and high schools, and the average TS project serves 14 schools. Most Talent Search services are provided within the target schools. Many

Key Findings

Across all three states, the study found that Talent Search participants were more likely to have applied for federal financial aid and to have enrolled in a public college or university during the study period than nonparticipants. There were substantial variations in the effect on college enrollment across project sites in each state. TS participation was particularly associated with increased enrollment at two-year colleges. Overall, TS participants were more likely to enroll in the type of institution that hosted their Talent Search project (two-year versus four-year colleges). The Florida study found that TS increased participants' likelihood of taking the SAT or ACT exam, as well as their likelihood of completing a two-year degree by the end of the study period.

projects pull students out of their regular classes to participate in TS search activities during the school day, while others take place after school or during the summer. Participation in program services is typically optional.

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[248] "TRIO" refers to a set of federally-funded programs authorized under Title IV of the Higher Education Act to help low-income Americans enter college, graduate, and move on to participate more fully in America's economic and social life.

AYPF's Policy Takeaways

Cost-Effectiveness: Talent Search provides an example of a relatively low-intensity and low-cost program that is associated with higher college enrollment rates. These findings suggest that interventions designed to help students overcome informational and financial barriers to college access are worthy investments, and that these programs can be taken to scale.

Integrating School-Based and Out-of-School Services: Most Talent Search programs incorporate both programs during the school day, such as college planning workshops, and expanded learning opportunities (ELOs) for smaller groups of students, such as college visits, summer programs, and family activities. Federal policymakers may wish to consider making more explicit connections between TRIO programs, such as Talent Search, and other federally-funded afterschool programs, such as recipients of 21st Century Community Learning Center funds. Programs could be encouraged to draw on the strengths of both the college access assistance provided by Talent Search and the other comprehensive, youth development services provided by ELOs.[249]

Findings from Texas

- TS participants completed high school at a higher rate (86 percent) than students in the comparison group (77 percent).

- TS participants applied for federal financial aid at a substantially higher rate (62 percent) than their matched peers (35 percent).[250]

- Overall, TS participants were 18 percentage points more likely to enroll in colleges in Texas than nonparticipants.

- Participants were more likely to enroll in college full-time (38 percent) than the comparison students (25 percent).

- TS participants completed approximately 1.5 more courses in their first year of college and three more credits over three years.

Findings from Indiana[251]

- TS students were more likely to apply for federal financial aid (59 percent compared with 45 percent).

- TS students enrolled in Indiana postsecondary institutions at a higher rate (56 percent) than their counterparts in the comparison group, but the increased rate of college enrollment was statistically significant for enrollment only in two-year colleges, not in four-year colleges.

- There was no significant difference in postsecondary persistence across two years.

Findings from Florida

- TS participants had an 84 percent high school completion rate, which was 14 percentage points higher than comparison students.

- 44 percent of TS participants took the SAT or ACT, compared with 27 percent of the comparison group.

- A greater percentage of TS students applied for financial aid (52 percent) than students in the comparison group (33 percent).

- TS participants had higher rates of college enrollment, and TS was particularly associated with an increase in enrollment in two-year colleges.

- A higher percentage of TS participants had completed a two-year degree by the end of the study (13 percent) than the comparison students who attended similar colleges (8 percent).

Program Details

Program Population

- In Fiscal Year (FY) 2008, Talent Search served 366,300 students in 466 projects nationwide,

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[249] This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

[250] All of the state-level findings are statistically significant at the .01 level, unless otherwise noted.

[251] Data limitations did not allow measurement of high school persistence or completion in Indiana.

making it the largest of the TRIO programs, in terms of the number of students served. There are more than 5,500 target schools involved. Overall, approximately 11–13 percent of all public secondary schools are served by TS projects.

■ The average TS project enrolls almost 900 students annually.

■ TS projects are intended to serve students with average academic ability and the likelihood of graduating from college, but who lack access to information about the college-going process and financial assistance.

■ At least two-thirds of participants in each project must be both low-income (defined as below 150 percent of the federal poverty level) and a potential first-generation college student (defined as neither parent having earned a bachelor's degree).

■ Projects can serve students as young as age 11, though the projects surveyed in the National Evaluation served more than twice as many high school students as middle school students.

■ Two-thirds of participants nationally are students of color, and 60 percent are female.[252]

■ Participants are most often recruited by guidance counselors and teachers. Some projects offer incentives for participation, such as money or prizes. Staff often screen students for eligibility, based on the proportion of low-income and first-generation students needed by each project, after they have been recruited. Only approximately 14 percent of all projects require a minimum GPA for program participation.

■ TS projects may set additional eligibility requirements for more intensive activities, such as participating in college trips and summer programs. These activities may require applications, establish a GPA requirement, and charge an additional fee to participants.

Program Components

■ Since Talent Search provides grants to a variety of different projects, the specific program designs and activities vary greatly. Phase I of the National Evaluation found that the following program components were offered by more than 90 percent of projects:
   ❑ Test taking/study skills
   ❑ Academic advising
   ❑ College orientation activities
   ❑ Campus visits
   ❑ College counseling
   ❑ Financial aid counseling and workshops
   ❑ Assistance with the Free Application for Federal Student Aid (FAFSA)
   ❑ Assistance with scholarship searches

■ Approximately 80 percent of projects reviewed in Phase I offered family activities, particularly involving financial aid information and assistance with financial aid applications.

■ Many projects hold workshops in each of their target schools approximately biweekly or monthly. Some projects offer a curriculum of workshops on various topics at different grade levels, both in the schools and at the host college or university.

■ Afterschool activities include assisted computer labs, academic enrichment or tutoring, and life skills development. Some projects include a mentoring component. Other projects offer field trips or brief residential summer programs on college campuses.

■ TS project directors ranked workshops and campus visits as their highest-priority program activities.

■ Most TS activities last one hour or less, making this a relatively low-intensity intervention. Overall, 48 percent of high school Talent Search participants participated in 10 hours or fewer of Talent Search services over the course of the 1998–99 school year.

■ Some projects serve disconnected youth by providing assistance with reentry into secondary education and accelerated pathways to postsecondary education.

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252 This statistic, along with the remaining information in this section, is drawn from Phase I of the National Evaluation.

Cost/Funding

■ Talent Search received approximately $143 million in federal funds in FY 2009.

■ Each project received approximately $390 per participant in FY 2008. This makes Talent Search a lower-cost intervention than many college access initiatives.[253]

Evaluation of Talent Search

Evaluation Overview

The US Department of Education contracted Mathematica Policy Research, Inc. to conduct a large-scale evaluation of Talent Search. *Phase I of the National Evaluation* (2004) provided descriptive information on program implementation across Talent Search projects. This study included a national survey of Talent Search projects.

Phase II of the National Evaluation (2006) examined the effectiveness of Talent Search programs using administrative data from three states: Florida, Indiana, and Texas. The study used a quasi-experimental, retrospective analysis of the outcomes of former Talent Search participants who had been in 9th grade in 1995–96. The authors tracked the outcomes of these students through 2001, using data at both the secondary and postsecondary levels, and compared these outcomes to those of a group of matched peers from the same schools. Data were not reported consistently across the three states.

Evaluation Population

Phase I

■ Surveys were received from 361 Talent Search projects, corresponding to a 93 percent response rate.

■ Approximately 36 percent of TS participants were African American, 32 percent were White, 22 percent were Hispanic or Latino, 4 percent were Asian, 1 percent were Native Hawaiian/Pacific Islander, and 1 percent reported more than one race. 60 percent of participants were female. Two-thirds of participants were in Grades 9–12, with the greatest representation in Grade 12.

Phase II

■ Those who were considered Talent Search Participants may have received Talent Search services at any point in Grades 6–12 during 1993–2000.[254]

■ Across each of the states, TS participants were more likely to be female and students of color than the general student population.[255]

Texas Study

■ The study population included 4,112 students in TS and approximately 31,000 in the comparison group.

■ The TS sample included 10 of the 16 Talent Search projects in the state, each serving 10–20 high schools.

■ TS students served were disproportionately low-income (51 percent), Black or Latino (73 percent), and enrolled in vocational or technical courses (45 percent).

■ The majority were not served by TS until 11th grade.

Indiana Study

■ This population included 1,166 students in TS, representing six of the state's seven TS projects. There were approximately 10,000 students in the comparison group.

■ The data set included only those students who participated in a voluntary survey of 9th-grade students administered by the Indiana Career and Postsecondary Advancement Center in 1995.

■ TS participants were disproportionately African American.

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[253] For example, in FY 2008, the average cost per student served by Upward Bound, another TRIO program, was $4,804 per year.

[254] "Participants" were enrolled in TS projects that were willing to submit their data to the researchers; at least 60 percent of the Talent Search projects in each state submitted their data.

[255] All differences in the Evaluation Population section are statistically significant at the .10 level.

- TS participants also participated in Indiana's 21st Century Scholars program at a much higher rate (23 percent) than nonparticipants (7 percent).[256]

- The majority of TS students were served by the program by Grade 10.

Florida Study

- The study population included 908 students in five of the seven TS projects in the state, and almost 14,000 students in the comparison group.

- Each project served 10–20 high schools.

- African American students were overrepresented in Talent Search, and Latino students were underrepresented.

Evaluation Methodology

Phase I (2004)

- This phase consisted of an implementation study using data sources collected through a national survey sent to all Talent Search projects operating in 1998–99 (93 percent response rate); data from program performance reports submitted to the US Department of Education's Office of TRIO programs; and data from major US Department of Education surveys.

- The researchers also completed 14 case studies of TS projects. Eight of these projects were selected from a stratified random sample to ensure representation from all types of host institutions, as well as both urban and rural geographic areas. Six projects were purposively chosen, because they were considered to exemplify one of the following areas: middle school services, academic support services, and use of technology.

Phase II (2006)

- This phase consisted of secondary data analysis of the outcomes of TS former participants in three states (Florida, Indiana, Texas); data were includ-

ed for at least 60 percent of TS projects operating in those states.

- The evaluation used a quasi-experimental design with a weighted comparison group of nonparticipants from the same high schools. The comparison group was constructed using a technique called "matching with replacement," controlling for gender, race, socioeconomic status, length of persistence in high school, academic performance in high school, and other variables.[257]

- Although the actual comparison sample was much larger than the TS sample, the weighted comparison sample was the same size as the TS group.

- The researchers used regression analyses to examine the impact of TS participation.

- Data sources included high school records, Talent Search project records, FAFSA application records, and public postsecondary school records from each state.[258]

- The data sets were limited to students who attended public colleges and universities in their home states; those youth who moved out of state at any point during the study period were excluded.

- The researchers note that using a comparison group of students from the same high schools as the TS participants may increase the likelihood of selection bias.

- The data from Texas and Florida allowed the researchers to examine postsecondary persistence, in terms of continuous enrollment and credits

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[256] The 21st Century Scholars program is a statewide college preparation program that targets low-income 8th-grade students, with the promise of a college scholarship for those who meet eligibility criteria.

[257] The researchers matched each participant to as many nonparticipants as possible, based on the above variables, and then assigned the comparison students weights based on the number of Talent Search students to whom they were considered comparable. If several nonparticipants were deemed strong matches for a particular TS participant, these comparison students were all considered to represent an equal fraction of the participant's weight. For example, if five nonparticipants were considered strong matches for a particular TS student, then each non-participant was assigned one-fifth of the TS student's weight.

[258] FAFSA application records were obtained for first-time applications for financial aid in 1999 and 2000. Postsecondary enrollment information was obtained for 1999, 2000, and 2001, in order to allow some flexibility for the year of college entrance.

earned. The Florida data also allowed research-
ers to compare additional outcomes, including
college-entrance test-taking and two-year degree
completion, and to control for variables such as
participation in dropout prevention and gifted
programs.

■ The data from Indiana were more limited, as the
high school measures were based only on a one-
time survey in 9th grade. Importantly, researchers
could not measure high school persistence and
completion, and could not control for income
level or prior achievement. However, the Indiana
survey data included students' self-reported edu-
cational aspirations, which were missing from the
other states, and allowed researchers to control
for this variable.

Contact Information

Research Contacts
Margaret Cahalan
Policy and Program Studies Services
US Department of Education
400 Maryland Avenue, SW
Washington, DC 20202
202-401-1679
Margaret.Cahalan@ed.gov

Jill Constantine
Associate Director of Human Services Research
Mathematica Policy Research
PO Box 2393
Princeton, NJ 08543
609-716-4391
jconstantine@mathematica-mpr.com

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Additional Resources

http://www.ed.gov/programs/triotalent/index.html\

Upward Bound

Population Served	High school students ages 13-19. At least two-thirds of each project's participants must be both low-income and first-generation college students. Approximately 65,000 students participate each year.
Program Location	Nationwide
Type of Evaluation	Longitudinal, experimental study with participants randomly assigned to program and control groups; analysis of student-level outcomes.
Findings	Increased high school credit accumulation, particularly for higher-risk subgroups. Increased rates of earning a postsecondary certificate or license from a vocational program. For students who participated for a longer period or completed the program, Upward Bound increased the likelihood of enrolling in a four-year college and obtaining a bachelor's degree.
Elements of Success	■ Rigorous curriculum ■ Tutoring and academic support services ■ Physical program location on a college campus ■ Secondary-postsecondary partnerships ■ Expanded learning opportunities

Program Overview

Upward Bound (UB) is one of largest federally-funded college access programs. UB was the first of the TRIO programs[259] established by the Higher Education Act of 1965, and it aims to "generate skills and motivation necessary for success in education beyond high school among young people from low-income backgrounds and with inadequate secondary school preparation." The program provides high school students from underrepresented groups with college-preparatory academic and nonacademic enrichment courses, along with guidance in the college search and application process. Two-thirds of UB projects are hosted by four-year colleges and universities and often include summer academic programs held on the college campus, along with courses provided outside of regular school hours during the school year.

UB reflects the theory that rigorous coursework and early exposure to a college environment serve to build a college-going identity and prepare students for the demands of higher education.

Key Findings

At the high school level, UB had a small, positive impact on credit accumulation across the overall sample. It had a larger, statistically significant effect on high school credits earned by students with lower initial academic expectations and those at greater levels of academic risk. UB increased participants' likelihood of earning a postsecondary certificate or license from a vocational school, though the program did not have a significant effect on the likelihood of earning a bachelor's or associate's degree. The length of UB participation and program completion were positively associated with increases in the likelihood of enrolling in a four-year institution and the likelihood of earning a bachelor's degree. UB had positive impacts on postsecondary enrollment and completion rates for specific subgroups, such as students who initially had lower academic expectations and those not on track with college preparatory coursework in the 9th grade.

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[259] "TRIO" refers to a set of federally-funded programs authorized under Title IV of the Higher Education Act to help low-income Americans enter college, graduate, and move on to participate more fully in America's economic and social life.

AYPF's Policy Takeaways

Expanded Learning Time and Participation Intensity: Upward Bound significantly increases the amount of time students spend in structured learning environments during the full calendar year. Upward Bound students also receive a substantial dosage of classes and services, as the average student participates in a large number of both academic and nonacademic activities. Summer programs, which are often residential experiences lasting several weeks, facilitate this depth and breadth of involvement. Policymakers should recognize the value of added time for learning for all youth, as well as the potential of out-of-school-time programs to help close achievement gaps, reduce summer learning loss, and improve preparation for postsecondary education, particularly for disadvantaged students.

Program Targeting: The findings suggest that exposure to rigorous courses, college knowledge, and extra supports provided by UB may provide the additional confidence and academic boost necessary for under-prepared and first-generation students to recognize their potential for college success and pursue postsecondary education. Policy should ensure that programs are targeted to populations that are underrepresented in postsecondary education and enable them to close the college-going gap.[260]

High School Outcomes[261]

- UB had a small, positive impact on credit accumulation. It had a larger, statistically significant effect on high school credits earned by students with lower initial academic expectations and those at greater levels of academic risk. Students with lower expectations earned two more credits than the similar control group (about two additional courses) and increased their honors/AP course-taking by 0.7 credits (about one additional course);[262] those in the high-risk group earned 1.1 more credits in core academic courses than the control group.[263]

Postsecondary Outcomes[264]

- Overall, UB did not impact postsecondary enrollment, as both the treatment and control groups enrolled in postsecondary education at approximately the same rate (80 percent) as the national average (76 percent). However, this college-going rate is higher than the 52 percent average for students from low-income families.

- Across the full sample, UB did not have a statistically significant impact on the likelihood of applying for financial aid or the likelihood of receiving a Pell Grant.

- UB increased the rate at which students earned a credential or license from a vocational school (by 5 percentage points), but had no effect on the likelihood of earning an associate's or bachelor's degree across the entire sample.

- For students who had lower initial educational aspirations, UB increased enrollment in postsecondary education by almost 6 percentage points and increased the postsecondary completion rate by 12 percentage points.[265]

- For students who were not initially on a college preparatory track in 9th grade, defined by the level of math class taken, UB increased the overall rate of college enrollment by 6.5 percentage points.[266]

- Among students who had higher initial educational aspirations, UB increased their likelihood of receiving a Pell Grant by 4.5 percentage points.[267]

- UB significantly increased enrollment at four-year colleges, as well as at more selective colleges,

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260 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

261 The High School Outcomes section includes findings from the third data collection, as reported in Myers & Olsen, et al, 2004.

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262 The difference is statistically significant at the .10 level.

263 The difference is statistically significant at the .05 level.

264 The Postsecondary Outcomes section includes findings from the Final Report, as reported in Seftor & Mamun, et al., 2009.

265 The differences are statistically significant at the .10 level for enrollment and the .05 level for completion.

266 The difference is statistically significant at the .05 level.

267 The difference is statistically significant at the .10 level.

for students with higher 9th-grade GPAs (above 2.5).[268]

- Students with lower 9th-grade GPAs (below 2.5) increased their rates of completion of certificate or license programs.[269]

- The length of UB participation and program completion were positively associated with college enrollment, aid application, and degree completion.
  - ❏ Applying to UB in the 9th grade or earlier increased students' likelihood of receiving a Pell Grant.
  - ❏ Participating in UB for an additional year raised the rate of enrollment at four-year colleges by 9 percentage points for otherwise similar students.[270]
  - ❏ Students who completed the UB program were 27 percentage points more likely to enroll in four-year colleges and 21 percentage points more likely to graduate than those who left the program before graduation.[271]

Program Details

Program Population

- About 65,200 students now participate in 964 regular UB programs in all 50 states and the District of Columbia.[272]

- The program targets high school students who must be ages 13–19 and in need of "academic support to pursue a program of postsecondary education."

- At least two-thirds of each project's students must be both low-income and first-generation college students.

- Students apply for admission and usually enter the program in the 9th or 10th grade. The average student remains in UB for approximately 20 months. Approximately 40 percent of participants

"complete" the program, staying in UB through high school graduation.[273]

Program Components

- College-preparatory academic enrichment classes offered during out-of-school time and during the summer: All UB projects must provide classes in the core academic subjects of English, math, science, and foreign languages; other subjects are also offered at many projects. The average student participates in 265 academic sessions and 212 nonacademic activities.[274]

- Precollege services year-round: Most students participate in college counseling, skill development, and college preparation activities.

- Tutoring: Academic support services are also provided by most projects.

Cost/Funding

- In Fiscal Year 2008, UB received more than $260 million in federal funds.

- The average annual cost of UB is $4,800 per student, reflecting the rich array of services provided.

- The US Department of Education funded the longitudinal evaluation.

Evaluation of Upward Bound

Evaluation Overview

Mathematica Policy Research, Inc. conducted a longitudinal evaluation of UB for the US Department of Education. The experimental study randomly assigned UB applicants to treatment and control groups in 1992–94, and tracked the long-term outcomes of both groups. The final report (2009) analyzes data collected in 2003–04, approximately seven to nine years after the study participants were scheduled to graduate from high school.

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268 The difference is statistically significant at the .05 level for four-year college enrollment and at the .01 level for highly selective college enrollment.
269 The difference is statistically significant at the .10 level.
270 The difference is statistically significant at the .01 level.
271 Ibid.
272 Data from Fiscal Year 2008. US Department of Education, 2009.

273 Myers & Olsen, et al., 2004.
274 Ibid.

Evaluation Population

■ The evaluation included a sample of 67 UB projects from a total of 395 regular UB projects operating in the 50 states and the District of Columbia in 1992.

■ The sample design was stratified to overrepresent some less common types of UB projects, such as those serving predominately Native American students, and findings were weighted to reflect each project type's prevalence in the total population of UB projects nationwide.

■ The original sample included approximately 2,800 students: 1,500 in UB and 1,300 in a control group.

■ Across the full evaluation sample, the UB group was 68 percent female and the control group was 72 percent female.

■ The net response rate for the final follow-up survey was 74 percent.

■ The sample for the final analysis was 49 percent African American, 24 percent White, and 21 percent Hispanic.

Evaluation Methodology

■ The evaluation studied the impact of UB on three key educational outcomes: enrollment in postsecondary education, application for and receipt of financial aid, and completion of postsecondary education.

■ To isolate the impact of UB, the evaluation used a random assignment design. Eligible students who applied to UB from 1992–94 were randomly assigned to a treatment group and offered the opportunity to participate in UB or to a control group that was not offered the opportunity to participate in UB.

■ With random assignment, the two groups are statistically equivalent. Therefore, differences between the two groups seven to nine years after high school graduation are due to differences in the opportunity to participate in UB.[275]

■ Data collection included a baseline survey and five waves of follow-up surveys conducted from 1994–95 through 2003–04. The researchers also examined student high school and postsecondary transcripts in addition to data from the National Student Clearinghouse, federal Student Financial Aid records, and UB staff reports.

■ Program effects were measured in two ways: the overall effect of having the opportunity to participate in UB, and the "participation effect," or how much students' actual level of involvement in UB impacted outcomes.[276]

■ The study also examined the impact of UB on student subgroups with different levels of educational expectations, grade at time of application to UB, 9th-grade math enrollment, and 9th-grade GPA.[277]

■ During the third phase of follow-up data collection, students' responses to surveys were cross-checked against the Integrated Postsecondary Education Data System (IPEDS) to verify college attendance and the type of institution.[278]

■ In order to analyze the impact of the duration of UB participation, treatment group members were

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[275] When assigning applicants to treatment and control groups, the researchers used stratified random sampling of applicants to ensure a gender and racial composition that was representative of the national UB population. Further, the researchers found that 13.5 percent of students in the control group did participate in UB and 15 percent of the treatment group did not actually participate in UB. Statistical analysis techniques were used to adjust for these challenges, as well as any remaining differences between the two groups in baseline characteristics.

[276] The researchers weighted responses to account for potential sampling error and survey nonresponse bias.

[277] Students were classified as having "lower academic expectations" if they did not expect to earn a bachelor's degree at the time of the baseline survey.

[278] Not all colleges provided transcripts, making it impossible to verify student attendance at all these schools. The researchers calculated findings based on both an approach that required verification of attendance and one that did not, and both methods yielded similar results unless otherwise noted. Myers & Olsen, et al. (2004).

divided into subgroups based on their duration in the program: 1–12 months, 13–24 months, and 25–36 months. The participants with the lowest duration were matched to those with medium duration, and those in the medium duration group were matched to those with high participation. The resulting two groups of lower and higher participation were compared.

- For the completion analysis, treatment group members who did not complete the UB program were matched with those who did complete the program.

Discussion

- The researchers note that the stratified random sample design, which required an overrepresentation of certain types of UB projects that were less common, led to unequal weighting of particular UB projects in the analysis and may have impacted the findings. Specifically, one very common type of UB project—one which was located in an urban area, was hosted by a four-year public institution, and did not serve predominantly Native American, Asian, or Latino students—was only represented by one UB project in the sample but accounted for 26 percent of the total sample weight. This project, called Project 69, had below-average impacts and lacked many common UB program components, most notably the residential summer program. Its inclusion may have led to an understating of the actual impact of UB. Re-analyses that reduced the relative weight of this project or removed it entirely found greater and more significant overall impact estimates.

- A recent study released by the Council for Opportunity in Education (2009) found that the research design issues introduced by Project 69, including unequal weighting, representation issues, and treatment and control group nonequivalence issues, had a particularly strong impact on findings regarding the attainment of a bachelor's degree. When this project was excluded and when the results were unweighted, UB was found to have a statistically significant, positive impact on the attainment of a bachelor's degree in the six years following expected high school graduation.[279]

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[279] Cahalan, 2009.

Contact Information

Program Contact
Office of Federal TRIO Programs
Higher Education Programs
Office of Postsecondary Education
US Department of Education
1990 K Street, NW, 7th Floor
Washington, DC 20006
202-502-7600
http://www.ed.gov/programs/trioupbound/index.html

Research Contact
Jacqueline Allen
Mathematica Policy Research, Inc.
PO Box 2393
Princeton, NJ 08543
609-799-3535
jallen@mathematica-mpr.com

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Upward Bound Math-Science

Population Served	High school students in Grades 9–12. At least two-thirds of each project's participants must be both low-income and first-generation college students. The program serves approximately 6,800 students per year.
Program Location	Nationwide
Type of Evaluation	Quasi-experimental study of high school and postsecondary outcomes. The retrospective analysis used administrative data to compare UBMS participants to matched nonparticipants. Outcomes measured at the student level.
Findings	Improved high school grades in math and science; increased likelihood of completing chemistry and physics in high school, enrolling in four-year institutions, majoring in math and science, and completing a four-year degree in math and science.
Elements of Success	■ Rigorous curriculum ■ Tutoring and academic support services ■ Physical program location on a college campus ■ Increased college counseling ■ Project-based learning ■ Low student-teacher ratio ■ Secondary-postsecondary partnerships ■ Expanded learning opportunities

Program Overview

The US Department of Education developed a math and science initiative within Upward Bound (UB) to address the underrepresentation of low-income and minority students in math and science careers. Added to the federal TRIO programs[280] in 1990, Upward Bound Math-Science (UBMS) provides grants to institutions to develop college preparatory programs geared toward these fields. Like regular UB, the program features academic enrichment opportunities offered after school and during the summer, and most projects are hosted by two- and four-year colleges and universities. UBMS is unique in its emphasis on applied math and science courses that include laboratory, computer, and field site experience.

Findings for the Mathematica Study

■ UBMS was associated with higher grades in high school math and science courses; the average GPA

Key Findings

Overall, the Mathematica evaluation found that UBMS was associated with improved high school grades in math and science, as well as an increased likelihood of completing chemistry and physics in high school, enrolling in four-year institutions of higher education, majoring in math and science, and completing a four-year degree in math and science. The RTI report found that increased length of participation in UBMS was associated with higher postsecondary enrollment rates.

in math courses increased from 2.7 to 2.8, and the average GPA in science courses increased from 2.7 to 2.9.[281]

■ Participants were 10 percentage points more likely to take chemistry and 15 percentage points more likely to take physics in high school than nonparticipants.

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[280] "TRIO" refers to a set of federally-funded programs authorized under Title IV of the Higher Education Act to help low-income Americans enter college, graduate, and move on to participate more fully in America's economic and social life.

[281] All findings in this section are statistically significant at the .01 level, unless otherwise noted.

AYPF's Policy Takeaways

STEM Preparation: Upward Bound Math-Science offers an encouraging example of a program that increases the number of students pursuing science, technology, engineering, and math (STEM) careers. Business and education leaders have drawn attention to the critical need to provide more students with strong preparation in the STEM disciplines if the United States is to remain competitive in an increasingly innovation-based global economy. Policy advocates have pointed to the particularly low numbers of students of color and women receiving advanced training in high-need fields like engineering. UBMS provides students from underrepresented groups with an intensive focus on key curricular areas, along with small class sizes, increased academic support, and project-based learning. Policymakers should invest in programs that incorporate these strategies to enhance STEM education.[282]

■ The program was associated with a particularly strong effect on high school grades and course-taking for Hispanic students. The rates at which Hispanics took chemistry and physics increased by 17 percent and 27 percentage points, respectively, while the rates at which African Americans took these subjects increased by 7 percent.[283]

■ UBMS participants had higher rates of enrollment in four-year colleges and universities (82 percent versus 71 percent). The percentage of students attending the most selective colleges rose from 23 percent to 33 percent.[284]
  ❏ The impact on enrollment rates and graduation from four-year colleges was particularly strong for women, while the impacts were insignificant for men.

■ UBMS was associated with a 10 percentage point increase in the rate at which students majored (or planned to major) in math or science fields.
  ❏ The effect on fields of study was stronger for males than for females.

■ Preliminary findings indicate that UBMS increased students' likelihood of completing a four-year degree in math or science from 6 percent to 12 percent.

Findings for RTI Study

■ The overall college enrollment rate of UBMS participants expected to graduate in 2004–05 was 86 percent.

■ College enrollment rates were positively associated with length of program participation. College enrollment for UBMS students who participated for 11 months or less was 80 percent, compared with 94.3 percent for students who participated for 36 months or longer.

■ Students who remained in the program until high school graduation had much higher college enrollment rates (95 percent) than those who left the program (81 percent).

■ 20 percent of UBMS participants enrolled in post-secondary education at the same institution that hosted their UBMS project.

Program Details

Program Population

■ As of Fiscal Year (FY) 2008, there were 116 UBMS projects nationwide serving 6,250 students. The average project size is 54 students per year.[285]

■ At the time of the Mathematica study, UBMS participants were 42 percent African American, 27 percent White, 15 percent Hispanic, 8 percent Asian, and 5 percent Native American.

■ As with regular UB, at least two thirds of each project's participants must belong to families classified as low-income (no greater than 150 percent of the poverty level) or be potential first-generation college students. The application process also considers interest in math or science.

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282 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.
283 The difference is statistically significant at the .05 level.
284 This finding is not statistically significant.

285 US Department of Education, 2008.

■ UBMS serves students in Grades 9–12 and tends to serve older students than the regular UB program does. For example, only 35 percent of UBMS participants enter the program prior to 10th grade, compared to 50 percent for UB participants.

■ Data reported by UBMS projects suggest that UBMS students enter the program with higher average grades than students in regular UB.

■ Participants are often recruited from other TRIO programs.

Program Components

■ Academic enrichment and college preparation activities take place during both the school year and the summer.

■ Most academic enrichment takes the form of single-subject classes, particularly in advanced science, technology, engineering, and math (STEM) courses such as Algebra II, geometry, precalculus, biology, physics, chemistry, and computer software. Many programs also provide classes in English and other subjects.

■ Courses often provide opportunities for students to reinforce their knowledge of the subjects they are studying in school through hands-on activities, experiments, field trips, and guest lectures, as well as site visits to employers in STEM fields.

■ The projects also provide assistance with college and financial aid applications, as well as tutoring in laboratory science and mathematics though precalculus.

■ The six-week summer program provides an intensive, residential experience on a college campus. Students live in dorms and take classes in a wide array of subjects, with an emphasis on math and science. Most students spend 29 hours per week in group instruction and 11 hours per week in tutoring, with an average of 240 academic hours per summer.[286]

■ UBMS projects tend to have lower participant-to-staff ratios than regular UB projects. Most staff

are highly educated and have experience in the fields of math or science.[287]

Cost/Funding

■ The UBMS appropriation was approximately $31 million as of FY 2008. The average cost per participant served was $4,990 per year.[288]

■ UBMS is funded by the US Department of Education, which also funded the Mathematica evaluation.

Evaluation of Upward Bound Math-Science

Evaluation Overview

Mathematica Study: In conjunction with its long-term evaluation of regular UB for the Department of Education, Mathematica Policy Research, Inc. also began conducting an evaluation of UBMS in 1997. This quasi-experimental study of high school and postsecondary outcomes was based on a random sample of students who participated in UBMS between 1993 and 1995. The retrospective analysis used administrative data to compare UBMS participants to matched nonparticipants, controlling for student background characteristics, educational achievement, and whether students had also participated in the regular UB program.

RTI Study: RTI was contracted by the Department of Education to prepare a report on UB and UBMS program outcomes for participants expected to graduate in 2004–05. This longitudinal analysis determines the postsecondary enrollment rates of UBMS participants, using data from 1999–2000 through 2005–06. This study does not include a comparison group.

Evaluation Population

Mathematica Study Population

■ The sample consisted of 689 UBMS participants and 988 comparison students from the regular UB evaluation conducted separately by Mathematica.

■ The evaluators note that the general UBMS population is statistically similar to the sample.

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[286] Olsen & Seftor, et al., 2007.

[287] Ibid.
[288] US Department of Education, 2009.

RTI Study Population

- The study population included the 2,936 UBMS participants who were expected to graduate high school in the 2004–05 school year and who attended one of the 98 percent of UBMS projects that submitted annual performance reports.

Evaluation Methodology

Mathematica Study

- The researchers selected a random sample of students who had participated in UBMS between 1993 and 1995 at the 65 UBMS projects that had operated in this period and continued to operate in the late 1990s.

- A matched comparison group was identified from members of the regular UB evaluation. These non-participants provided an accessible comparison group, as their outcomes had already been tracked for the other study.[289]

- The UBMS students who had not previously participated in regular UB were matched with members of the control group from the original UB evaluation (students who had applied to regular UB but were not selected for participation).

- The UBMS students who had previous exposure to UB were matched with members of the treatment group from the regular UB evaluation.

- The propensity score matching process controlled for student demographics, previous academic achievement, the level of science and math courses taken at the baseline point, and other sources. The researchers also used regression analysis to adjust for small remaining baseline differences between the treatment and control groups.

- Baseline data sources included high school transcripts and student surveys.

- Follow-up data collection consisted of a survey administered between April 2001 and December 2002, which examined outcomes five to seven

years after scheduled high school graduation. A small monetary incentive was given to participants who completed the survey. The response rate was 81 percent for UBMS participants and 76 percent for the comparison group.

RTI Study

- The researchers used UBMS projects' annual performance reports from 2000–01 to 2005–06 school years, as well federal financial aid information, to determine postsecondary enrollment rates.

Contact Information

Program Contact
Geraldine Smith
Team Leader, College and University Preparation Team (CUPT)
Office of Federal TRIO Programs
US Department of Education
1990 K Street, NW, Suite 7000
Washington, DC 20006
202-502-7600
geraldine.smith@ed.gov

Research Contact
Allen Schirm
Vice President and Director of Human Services Research
Mathematica Policy Research, Inc.
600 Maryland Ave., SW, Suite 550
Washington, DC 20024
202-484-4686
ASchirm@Mathematica-Mpr.com

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[289] The researchers acknowledge a selection bias, as treatment and comparison students were not necessarily similar in terms of career aspirations, or in interest or aptitude in math and science.

Washington State Achievers

Population Served	Students in 16 participating high schools. The scholarship portion of the program is offered to 500 eligible students from these schools each year, and these students also receive support services during the first two years of postsecondary education.
Program Location	Washington State
Type of Evaluation	Mixed-method study of early outcomes at all WSA schools, including a school-level, comparative analysis with similar schools. An earlier, comparative study used student-level survey data to compare student outcomes at WSA and non-WSA schools in one district.
Findings	Increased completion of a college-ready curriculum; increased likelihood of college enrollment, both for Achievers and for applicants.
Elements of Success	■ Rigorous curriculum ■ Smaller learning communities ■ Adult mentors ■ Increased college counseling ■ Scholarships ■ Financial aid assistance ■ Institutional partnerships

Program Overview

The Washington State Achievers (WSA) program was created by the Bill & Melinda Gates Foundation as a model that integrates high school reform, early college awareness, and college advising, mentoring, scholarships, and student supports. This program targeted 16 high schools in Washington State with large proportions of low-income populations and awarded five-year grants to redesign these schools based on the Gates Foundation's core beliefs and strategies, which emphasize personalized learning environments, rigorous curricula, and instructional improvements. The Gates Foundation collaborated with the College Success Foundation (CSF) to provide college scholarships, early college outreach, and mentoring to a select group of eligible students, known as Achievers, from these schools. The program's goal is to "provide economically disadvantaged and underrepresented students the educational and financial incentives necessary to enroll in the colleges and universities of their choice and to successfully complete four-year degree programs." The original WSA school reform grants were awarded from 2001–06.

According to the theory of change, the program's goal will be furthered by instructional improvements and structural changes in the school environment.

Key Findings

WSA schools increased their standard math course offerings and their honors/advanced English course offerings. Students at WSA schools were more likely to complete a college-ready curriculum. African American and Native American students at the WSA schools completed college entrance requirements at substantially higher rates than at similar schools. Recipients of the Achievers scholarship were more likely to enroll in college than similar peers, and those who applied for, but did not receive the scholarship, also had greater odds of college enrollment than similar peers who did not apply.

The conceptual framework also holds that the combination of broad reforms to promote a college-going culture and targeted interventions with a select group of students will increase the overall college enrollment and success rates for these schools.

AYPF's Policy Takeaways

Comprehensive Approach: The Washington State Achievers program provides an example of a multifaceted effort to increase college readiness by addressing academic, informational, financial, and social barriers through structural reforms, a rigorous curriculum, early college outreach, and the chance to earn a scholarship and receive mentoring support. All of these elements have been linked to improved student outcomes. Policymakers should consider the value of integrating financial assistance into other college access and success efforts.

Early Guarantees of Financial Assistance: Students who attend WSA high schools are given the opportunity to compete for the Achievers scholarship, and this incentive may influence more students to take the necessary steps to prepare for college. Additionally, the recipients are notified in their junior year that they are eligible for a substantial college scholarship. This early commitment may impact students' educational aspirations, academic preparation, and college choice and selection process during the remainder of high school.

Leveraging Multiple Funding Streams: WSA schools and the College Success Foundation draw upon multiple sources of federal and state funding, along with private foundation support. Policymakers can facilitate such resourceful solutions by ensuring that regulatory frameworks do not restrict partnerships and allow sufficient flexibility to support comprehensive college- and career-readiness programs.[290]

Findings from the Fouts & Associates (2007) Study

■ WSA schools increased advanced/honors English course offerings by 8 percentage points overall, while comparison schools did not increase these courses.[291]

■ Graduating seniors from WSA schools completed the course requirements for entrance to public four-year colleges at a higher rate (45 percent) than comparison students (37 percent).

■ Native American students at WSA schools completed college-entrance course requirements at a much higher rate (41 percent) than Native American students at comparison schools (18 percent). African American students at WSA schools also completed these requirements at a substantially higher rate (42 percent) than their peers (28 percent).

■ More students at WSA schools took SAT and ACT tests than their peers at comparison schools, but the difference was not statistically significant.

■ There were no differences between WSA schools and comparison schools in student attitudes toward school, high school graduation rates, college enrollment, or college persistence.

Findings from the St. John and Hu (2006) Study

■ Receiving the Achievers scholarship increased the average student's odds of attending college by 21 percentage points after controlling for background characteristics, achievement level, and aspirations.[292]

■ WSA also had a positive impact on the college enrollment rates of students who applied for, but did not receive, the scholarships; their odds of enrollment increased by 13 percentage points when compared with similar nonapplicants from the same schools.

■ Taking AP courses increased the odds of college enrollment by 17 percentage points.

Program Details

Program Population

■ The 16 selected WSA high schools had substantial low-income populations; an average of 48 percent of students were eligible for Free and Reduced Price Lunch (FRPL) as of baseline data collection,

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290 This section does not necessarily reflect the views of the researchers and program contacts; these are the interpretations of AYPF, based on the program and evaluation.

291 These differences could reflect unequal district graduation requirements during the study period. WSA schools' districts increased their graduation requirements in these subjects more than comparison schools' districts.

292 Results cited from this study are statistically significant at the .10 level.

and this percentage had grown to 55 percent by October 2008. Students of color comprised an average of 54 percent of the student populations during the 2007–08 school year.

■ The most recent class of Achievers, or scholarship recipients, includes 54 percent females and 78 percent students of color.[293] This group is much more ethnically diverse than the state average, as only 18 percent of Washington public university enrollees are students of color.

■ In order to be eligible for the scholarship, a student's family income must be among the lowest third of Washington State family incomes with modest family assets. The income cap for a family of four for the 2009 cohort was $52,500.[294]

■ The GPAs of Achievers in that cohort ranged greatly, from 0.90–4.0, with 99 percent of students possessing a 2.0 or higher GPA.

Program Components

High School Reform

■ Smaller Schools: 11 of the selected schools were large, comprehensive high schools that were redesigned to create smaller learning communities of no more than 400 students each. Five of the WSA schools were already small schools.

■ Reform Goals: Schools are expected to implement reforms consistent with the Gates Foundation's goals of "common focus, high expectations, personalized learning environments, respect and responsibility, time to collaborate, performance-based assessment, the use of technology as a tool, and the improvement of classroom instruction."

■ Advanced Courses: The schools increase the Advanced Placement (AP) and International Baccalaureate (IB) course offerings and promote student enrollment in these courses.

Early College Information

■ CSF implements early college information programs in the middle schools that feed into WSA high schools.

■ School-based CSF College Preparatory Advisors provide early outreach to Grades 8–10, and Higher Education-Readiness Opportunity (HERO) Advisors provide individual student academic monitoring, more intensive afterschool programs, test preparation, college visits, and other services to targeted groups, such as male students of color.

High School-to-College Transition Support

■ School-based CSF College Preparatory Advisors provide college-readiness and awareness programming in Grades 11–12. Services include college planning information and assistance with the college application and selection processes, college advising, financial aid planning, completion of the Free Application for Federal Student Aid (FAFSA), scholarship research, and family outreach.

■ Applicants who are not selected for the scholarship are identified as "College Bound" and are invited to participate in many of the offerings provided to the Achievers.

■ All Achievers participate in college placement testing shortly after their selection. The scores, as well as transcript evaluations by the college preparatory advisors, aid in the development of an Individualized College-Readiness Plan for each student. Students who score below grade level as juniors are monitored closely and retested in their senior year of high school.

■ The CSF JumpStart Program gives enhanced support for the first two years of college to those Achievers placed into developmental coursework after their senior year. The program provides funding for participants to attend developmental and college knowledge[295] courses during the

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[293] This class was selected in March 2009. Data from the College Success Foundation.
[294] Ibid.

[295] "College knowledge" refers to the contextual knowledge needed to understand the college planning, admission, and selection process.

summer immediately following their high school graduations.[296]

Scholarships

■ The program awards 500 college scholarships to eligible juniors from WSA schools each year.

■ The scholarship amounts are variable depending upon the individual Achiever's family income and assets, other aid received, and type of college attended. As of 2009–10, students at two-year Washington public colleges could receive up to $4,200, while those at four-year Washington public colleges could receive $6,750, and those at four-year Washington independent colleges could receive $9,500.[297]

■ The scholarship can be renewed for up to five years and may be used at an out-of-state college once the Achiever attains junior-level standing.

■ The scholarship does not have a minimum GPA for application or selection and many students whose grades are lower than those required for typical "merit" scholarship programs apply for this program. The Achievers are selected through a two-part process that assesses noncognitive traits such as goal-setting, ability to navigate social systems, resiliency in the face of challenges, and demonstrated leadership.

Mentoring

■ All Achievers are paired with a mentor during the senior year of high school and the first two years of college. The hometown mentors help high school students with the college application and selection process, researching and completing scholarship applications, and FAFSA completion. College mentors help with students' academic and social adjustment to college in the first two years.

Cost/Funding

■ The amount of the school redesign grants ranged from $180,400 to $1,140,000.

■ The majority of program costs, scholarships, and evaluations are funded by the Bill & Melinda Gates Foundation.

■ Federal GEAR UP grants are used by CSF to increase the early college outreach programming in high schools.[298]

■ Additional state funding for College Preparatory Advisors has been provided by the Washington Superintendent of Public Instruction and federal Smaller Learning Communities grants.

Evaluation of Washington State Achievers

Evaluation Overview

Fouts & Associates (2007): Fouts & Associates conducted the original evaluation of program implementation and high school-level outcomes for the Gates Foundation during the five-year grant period, from 2001–06. Each of the 16 schools submitted achievement data and received annual site visits that included focus groups, interviews, and student and teacher questionnaires. A supplemental comparison study incorporated a group of similar high schools in order to allow the researchers to compare school reform elements, course availability, and school-level performance at WSA and non-grantee schools.

St. John and Hu (2006): This study compared the college enrollment rates of four cohorts of graduates from WSA and non-grantee high schools in the Tacoma, Washington district. The researchers used student-level survey data from the University of Washington Beyond High School Project. They examined the impact of receiving the Achievers scholarship, as well as the overall effect of the scholarship possibility and other reforms on the nonrecipients from the same schools.

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[296] Early evaluation findings show that the Achievers who enrolled in Summer 2008 courses—and particularly those who enrolled at the same college they would attend in the fall—benefited from the additional support both academically and socially. See Solaegui, 2009.

[297] These maximum amounts represent a reduction from the prior year due to financial market volatility.

[298] GEAR UP is a federally-funded program that supports states and partnerships that provide college outreach and information to entire cohorts of low-income students. See the summary of GEAR UP in this compendium for more information.

Evaluation Population

Fouts & Associates

- The study population included all students at the 16 participating WSA schools, along with a comparison group of 16 similar high schools.

- The analysis of course offerings excluded specific courses for English-language-learner (ELL) students, special education courses, and academic dual enrollment courses offered through Washington's Running Start program.

St. John and Hu

- The study population consisted of four senior class cohorts from all Tacoma public schools (WSA and comparison schools). There were approximately 900 students in each graduating cohort. Approximately 75 percent of the population completed both stages of the survey.

- The total sample from all four cohorts included 7,101 students; 3,129 attended WSA schools, and 3,972 attended non-WSA comparison schools.

- Approximately one-fifth of the survey respondents in the 2004 cohort were Achievers scholarship recipients.

- WSA schools had larger populations of students of color (69 percent) than the Tacoma district average (49 percent).

Evaluation Methodology

Fouts & Associates

- The researchers identified a group of comparison schools that are similar to the 16 WSA schools. A list of 86 potential comparison schools was prepared on the basis of similar student demographics, academic achievement, and size. The researchers consulted with Gates Foundation personnel to select the final 16 comparison group sites from this list.

- Data collection took place in 2005 and 2006. Four of the comparison schools were replaced in the second year, as these original sample members were selected to receive Gates Model District Initiative funding.

- Data sources included student surveys, student transcripts, master schedules, SAT/ACT scores, National Student Clearinghouse data, teacher surveys, on-site interviews, focus groups, and classroom observations.

- Student surveys were distributed and collected by each school in the study. Completion rates were relatively low, at 69 percent for WSA schools and 53 percent for the comparison schools.

- Outcome measures included attitudes toward school, course-taking patterns, high school graduation, SAT/ACT scores, and college enrollment, attendance, and persistence.

St. John and Hu

- The researchers used survey data from the University of Washington Beyond High School Project, which had polled all Tacoma high school seniors about their postsecondary plans and also included a follow-up phone survey in the fall after the senior year. The data set included responses from four graduating cohorts from the classes of 2000, 2002, 2003, and 2004.

- The authors disaggregated the results of this survey comparing WSA and non-WSA schools and also compared scholarship recipients, unsuccessful applicants, and nonapplicants within WSA schools.

- The study used the 2000 cohort as a baseline year, because the students completed high school before the WSA program was initiated. The 2002 cohort had only the benefit of the scholarship, and the 2003 cohort had experienced the initial implementation of WSA reforms. Only the 2004 cohort had been influenced by the full effect of WSA reforms throughout their high school careers, and much of the analysis focused on this cohort.

- The study analyzed descriptive statistics on college enrollment and the completion of advanced courses; it also included a two-step logistical regression analysis that used family background, high school course-taking and grades, and career aspirations as predictors of enrollment.

Discussion

The findings in these evaluations represent very early implementation results. The class of 2004 was the first graduating class to have experienced WSA reforms during their full high school career, and the Fouts & Associates study notes that many of the changes in school practices did not take place until 2005 and 2006.

Contact Information

Program Contacts
Margot Tyler
Senior Program Officer
Bill & Melinda Gates Foundation
1300 I Street, NW, # 200
Washington, DC 20005
202-662-8125
Margot.tyler@gatesfoundation.org

Lorraine Solaegui
Director of Evaluation & Research
College Success Foundation
1605 NW Sammamish Road
Suite 100
Issaquah, WA 98027
425-416-2005
lsolaegui@collegesuccessfoundation.org

Research Contact
Jennifer Ramsey
Research Project Manager
Institute for Higher Education Policy
1320 19th Street, NW
Suite 400
Washington, DC 20036
202-861-8223 ext. 214
jramsey@ihep.org

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PART III

Participant Outcomes

Policy Recommendations

Participant Outcomes

The programs included in this compendium have a positive impact on young people's preparation for postsecondary success at various stages of their educational, professional, and personal development. Broadly speaking, they increase the number of young people who graduate from high school prepared to make informed decisions about education and training and ready to succeed in college and careers. Participants in these programs are more likely to be engaged in school, take advanced courses, apply for financial aid, enroll in college, earn postsecondary degrees, and find employment. These programs help demonstrate to policymakers and the general public that there are proven ways to help all youth become college- and career-ready. This section summarizes the range and patterns of the outcomes observed in the 23 included evaluations.

As the AYPF logic model (page 14) illustrates, the programs in the compendium measure various types of outcomes across the middle and high school levels, as well as into postsecondary education and careers. For example, many programs serving middle and high school students measure short-term outcomes such as attendance, course passing rates, achievement test scores, on-time promotion to the next grade, and high school graduation. Some of the evaluations in this compendium also collect data related to participants' planning for college and careers, including changes in educational or career aspirations, the acquisition of college knowledge, and applications for financial aid; others measure the program's impact on the development of personal resources, using indicators of student engagement, health and wellness, and feelings of self-efficacy. A few of the evaluations of high school-level programs also track the progress of former participants into postsecondary education and careers.

Programs serving students in postsecondary education strive to impact intermediate outcomes in the areas of academics, careers, and the development of personal resources. Commonly measured outcomes include enrollment, persistence, credit accrual, degree completion, employment status and earnings, and academic self-concept and student engagement in the college environment.

Following the logic model, AYPF maintains that the long-term outcomes of effective college- and career-readiness systems are career success, the capacity for lifelong learning, and civic engagement. Only one evaluation in the compendium, Career Academies, tracked study participants into the phase of long-term outcomes by examining career success eight years after expected high school graduation. This evaluation also measured personal resources pertinent to early adulthood, such as independent family formation.

The majority of findings in these evaluations were observed through quantitative data analyses of indicators such as test scores, credits accrued, and graduation rates. Several studies also used student surveys to collect quantitative data on more subjective outcomes, such as educational aspirations and interests. Qualitative data sources included interviews and focus groups designed to assess program implementation and school climate.

> These programs increase the number of young people who graduate from high school prepared to make informed decisions about education and training and ready to succeed in college and careers.

The most common outcomes measured in the compendium can be organized into the categories of Secondary-Level Academic Outcomes, Planning for College and Careers, Postsecondary Academic Outcomes, Career-Related Outcomes, and Developing Personal Resources. These categories are discussed in greater detail below and provide further evidence of the valuable role that such interventions play in helping all young people be prepared with the knowledge, skills, abilities, and personal resources necessary for long-term success. For an overview of the different types of outcomes demonstrated by each of the programs, see the **Table of Demonstrated Positive Outcomes** on the following page.

Table of Demonstrated Positive Outcomes—Overall Findings

Program	Secondary Level Findings		Postsecondary Level Findings		All Ages
	Academic Outcomes	**Planning for College & Careers**	**Academic Outcomes**	**Career-Related Outcomes**	**Developing Personal Resources**
After School Matters	✔				
AVID	✔	✔			
Career Academies	✔			✔	✔
Citizen Schools	✔				✔
Communities in Schools	✔				
Digital Bridge Academy			✔		✔
Diploma Plus	✔				✔
Dual Enrollment in Florida and New York	✔		✔		
Early College High School	✔	✔			✔
Enhanced Math in Career and Technical Education (CTE)	✔				
First Things First	✔				✔
GEAR UP	✔	✔			
Hillside Work-Scholarship Connection	✔				
KIPP	✔				✔
National Guard Youth ChalleNGe	✔		✔	✔	✔
Opening Doors and Enhanced Opening Doors, Chaffey College			✔		
Opening Doors Learning Communities, Kingsborough Community College			✔		✔
Project GRAD	✔				
Talent Development High School	✔				
Talent Search	✔	✔	✔		
Upward Bound	✔	✔	✔	✔	
Upward Bound Math-Science	✔		✔		
Washington State Achievers	✔		✔		
Total Number of Programs	**20**	**5**	**9**	**3**	**9**

Secondary-Level Academic Outcomes

The most commonly measured and observed findings were academic outcomes in middle or high school. Overall, 20 evaluations measured academic outcomes at the secondary level, and all 20 demonstrated evidence of effectiveness. For a detailed table of the various types of academic findings at the secondary level demonstrated by the different programs, see the **Table of Disaggregated Academic Findings** on page 172.

Eleven of these programs increased high school graduation rates, increased rates of GED attainment, or reduced the number of students who dropped out of school. These programs run the gamut from comprehensive school reform models and out-of-school-time programs to dual enrollment opportunities. For example, First Things First was associated with a large increase in graduation rates in Kansas City, Kansas, and schools implementing Communities in Schools were more successful at reducing their dropout rates than comparison schools. Nine of the programs improved achievement test scores; KIPP schools were particularly successful in raising middle school math performance, and AVID students outperformed their peers in high school reading and math. Eight programs increased attendance rates, including After School Matters and Talent Development.

Six evaluations, including Citizen Schools, Diploma Plus, and Talent Development, found that the programs increased students' likelihood of passing their classes and end-of-course exams. Hillside Work-Scholarship Connection, Upward Bound Math-Science, and Citizen Schools were associated with improvements in student grades. Many of the evaluations also measured the programs' impacts on the academic steps that are considered part of a college-preparatory track. Seven evaluations found an increase in the number of students who completed a core academic curriculum, including Project GRAD and Washington State Achievers. The evaluations of Early College High Schools, GEAR UP, Upward Bound, and AVID found that participants increased their likelihood of enrolling in, or passing, advanced courses. Finally, AVID and Talent Search were associated with higher rates of participation in SAT, ACT, IB, or AP exams.[299]

Planning for College and Careers (Secondary Level)

Many of the programs in the compendium aimed to increase postsecondary access, and five evaluations specifically examined behaviors and contextual knowledge related to planning for postsecondary education; all five had a positive impact in this area. Talent Search and Upward Bound were both associated with higher rates of application for financial aid, which is a particularly important precursor to college enrollment for low-income students. Several programs were designed to provide information about the college planning and admission processes, particularly for students from underrepresented groups, and the evaluations of AVID and GEAR UP measured the attainment of college knowledge[300] and demonstrated effectiveness in this area. GEAR UP was also associated with an increase in parents' college knowledge and participation in the college planning process. Finally, Early College High Schools were found to raise young people's educational aspirations, and graduates planned to enroll directly in college at a higher rate than the national average.

Postsecondary Academic Outcomes

Overall, 10 evaluations measured college-level academic outcomes, including enrollment, persistence, grades, credit accumulation, and degree completion, and nine demonstrated a positive impact. Six college-readiness and college access programs serving high school students ultimately increased college enrollment rates, including the federal TRIO programs, dual enrollment in Florida and New York City, Washington State Achievers, and National Guard Youth ChalleNGe. In some cases, the programs had an impact on the type of institution of higher education attended and the type of degree pursued; the Upward Bound and Upward Bound Math-Science (UBMS) evaluations found an increased likelihood of enrollment in selective colleges and universities. Participants in UBMS and dual enrollment in Florida and New York increased their likelihood of pursuing a bachelor's degree.

One college-level intervention, Opening Doors Learning Communities at Kingsborough Community College, accelerated the rate at which students passed placement exams and moved beyond remedial-level coursework. The Opening Doors programs, Digital

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299 Washington State Achievers was also associated with higher rates of SAT and ACT test-taking, but the findings were not statistically significant.

300 "College knowledge" refers to the contextual knowledge needed to understand the college planning, admission, and selection process.

Table of Disaggregated Secondary-Level Academic Findings

Program	Attendance	Graduation Rates, High School Diploma Rates, or Reduced Dropout Rates	Completing/Being On-Track for a Core Academic Curriculum	Course-Passing Rates	Achievement Test Scores	Enrollment In/Passing Advanced Courses	Secondary School Grades	On-Time Promotion	Participation in SAT, ACT, AP or IB Exams
After School Matters	✓	✓		✓					
AVID			✓	✓	✓	✓			✓
Career Academies		✓	✓						
Citizen Schools	✓	✓		✓	✓		✓	✓	
Communities in Schools	✓	✓			✓				
Diploma Plus		✓		✓					
Dual Enrollment in FL and NYC		✓							
Early College High School	✓	✓	✓	✓	✓	✓		✓	
Enhanced Math in CTE					✓				
First Things First	✓	✓			✓				
GEAR UP						✓			
Hillside Work-Scholarship Connection		✓					✓		
KIPP	✓				✓				
National Guard Youth ChalleNGe		✓	✓						
Project GRAD	✓		✓		✓			✓	
Talent Development	✓	✓	✓	✓	✓			✓	
Talent Search		✓	✓						
Upward Bound			✓			✓			✓
Upward Bound Math-Science			✓				✓		
Washington State Achievers			✓						✓

Bridge Academy, dual enrollment, and Talent Search had a positive impact on college grades and the accrual of college credits. Interestingly, the evaluations of UBMS and dual enrollment found that the program increased the likelihood that participants would pursue a field that was related to their high school coursework. Opening Doors at Chaffey Community College demonstrated success in moving struggling students off probation. Of the four evaluations that were able to track study participants through college degree completion, three—Upward Bound, UBMS, and Talent Search—had a significant, positive impact.

Career-Related Outcomes (Postsecondary)

Only four evaluations measured career-related outcomes, and three demonstrated statistically significant impacts in this area.[301] Both Career Academies and National Guard Youth ChalleNGe increased participants' rates of employment following high school graduation and completion of an intensive dropout recovery program, respectively. The Career Academies study also demonstrated long-term, positive effects on participants' earnings and the number of months and hours that young people worked, and found that participants were more likely to be employed in a field related to their course of study in high school. Upward Bound increased participants' likelihood of earning a vocational certificate or industry credential.

Developing Personal Resources (All Ages)

Nine evaluations measured outcomes related to the development of personal resources, at either the secondary or postsecondary level, and all nine demonstrated positive outcomes on at least one indicator. Positive impacts at the secondary level ranged from increased leadership activities and recognition for success (Career Academies) to improved health and wellness (National Guard Youth ChalleNGe). National Guard Youth ChalleNGe was also found to reduce youth engagement in risky behaviors, as participants decreased their incidence of arrests.

Five evaluations used various indicators to measure student engagement, interest, effort, and perceptions of the school environment at both the high school and college levels, and all demonstrated positive results. Diploma Plus students expressed greater interest and effort in their classes, and felt safer and more supported than at their previous schools. Early College High School students were also found to have fairly high levels of engagement and interest in school, while First Things First and KIPP students were more likely to feel supported by their teachers than their peers at traditional schools. At the postsecondary level, Opening Doors Learning Communities at Kingsborough Community College increased students' participation and engagement in their studies, as well as their feelings of integration into the college community. Several programs targeted self-efficacy and academic self-concept as important personal qualities for college- and career-readiness and postsecondary success, and the evaluations of Early College High School, Digital Bridge Academy, and National Guard Youth ChalleNGe demonstrated positive impacts in these areas.

With regard to the goal of increasing self-sufficiency for older youth, Career Academies were found to increase former participants' rates of custodial parenting, living with a spouse or partner, and establishing independent households by eight years after their expected high school graduation.

Findings Related to Participation Intensity and Duration

A number of the evaluations examined the importance of the frequency and length of time that youth participated in the programs, or the number of courses that they completed, in order to determine if larger doses of the program led to stronger effects. Overall, six evaluations found that increased participation did in fact lead to greater outcomes. For example, students who participated in Upward Bound and Upward Bound Math-Science for an additional year greatly increased their likelihood of enrolling in postsecondary education, and those who took more than one College Now dual enrollment course in New York City had higher college grades than those who enrolled in only one course. Program completion also appears to make a difference. Students who stayed in Upward Bound through graduation were more likely to enroll in a four-year college and more likely to complete a postsecondary degree.

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301 The Enhanced Math in CTE evaluation found a positive impact on students' scores on tests of applied mathematics, but the result was not statistically significant.

Conclusion

The included evaluations demonstrate that there are numerous ways to significantly improve young people's chances of achieving their goals through high-quality programs designed to enhance their college- and career-readiness and success. Although interventions at different stages of the educational pipeline target varying short-term and intermediate-term outcomes, success at each level brings students one step closer to the finish line.

The various evaluation outcomes were grouped into five overarching categories: Secondary-Level Academic Outcomes, Planning for College and Careers, Postsecondary Academic Outcomes, Career-Related Outcomes, and Developing Personal Resources. Of the 23 evaluations in the compendium, 20 demonstrated success in academic indicators at the secondary level, five demonstrated success in indicators of planning for college and careers, nine demonstrated success in academic indicators at the postsecondary level, three demonstrated success in career-related indicators, and nine demonstrated success in indicators related to personal resources. When the evaluations were able to track participants' success at both the high school and college levels, they all demonstrated a lasting, positive impact on participants' academic or career-related outcomes, which further supports the claim that early and targeted interventions can be linked to lifelong benefits. Moreover, the more students participate in these effective programs, the greater the gains that they receive.

Policy Recommendations

Preparing students to be ready for and successful in college, careers, and civic engagement is a complex undertaking that requires many steps and supportive inputs over several years. It is not a one-time event and could perhaps be described as a "messy" process, as the path is not always clear or direct. There are many factors that contribute to young people's readiness for and success in college and careers, including their skill and knowledge level, their ability to set goals and plan for the future, their personal development and well-being, and their financial situation. For students who naturally have high levels of these resources (because of family situation, educational background, and resilience, for example), the path to college and careers might be smooth and direct. But for students who lack this academic standing, social capital, financing, and support systems, finding the route to college and a good career can seem an overwhelming task.

Because the route to college and careers can be circuitous and varies for each student, AYPF developed the logic model presented earlier in this publication as a way to help policymakers and practitioners better conceptualize and explain the overall process of preparation and understand how the various systems, programs, and providers need to be connected. The model spells out the skills, knowledge, and dispositions that are needed to be successful in college and careers and describes the many outcomes and expectations for students. The logic model also lays out the types of services that youth need and shows the multitude of providers that can deliver those services. Because it is a complex undertaking, the logic model brings coherence to all the moving parts and provides a conceptual framework for thinking about college- and career-readiness.

The logic model can be used to help policymakers identify and differentiate what services and programs certain students or subgroups of students might need so they can ensure that services and programs are equitably available throughout every community. For instance, the logic model demonstrates that communication skills, goal-setting, and motivation are all needed in order to reach long-term outcomes. If youth are not developing these foundational skills in school, then policymakers can think about how to provide opportunities for youth to develop these skills, either by reforming schools or by drawing upon resources of other community providers.

The logic model can also help policymakers better understand how various systems, programs, and funding streams can be aligned to the goals of college- and career-readiness and help policymakers identify the preconditions that need to be in place to lead to positive outcomes for all young people. Lastly, policymakers and program providers can use the logic model in evaluating their overall effectiveness in helping youth reach positive outcomes.

Policy Guidelines for College- and Career-Readiness

AYPF has developed a number of guidelines for developing college- and career-readiness policies based on the 23 evaluations in this publication and the logic model. These guidelines can be used to inform national, state, and local policy, and can also help inform the work of practitioners.

Policymakers at the national and state levels are in key positions to help create an overall framework and expectation of college- and career-readiness for all students. They can help establish system-wide goals, based on the long-term outcomes identified in the logic model, and hold all the various providers accountable to meeting those goals. Setting up common and long-term goals across programs and systems is a difficult undertaking, but moving toward shared accountability for youth outcomes, across various funding streams, should result in greater coherence and ultimately more resources targeted at a common challenge. This should also result in improved services for students, more comprehensive approaches, and fewer opportunities for youth to fall through the cracks as they transition from one program, system, or level to another. Finally, programs will be working toward the same goal, with the same framework, and each program will see how it fits into a larger whole.

From the review of the evaluations, AYPF suggests the following general guidelines for policy:

■ Develop a comprehensive plan with various agencies, systems, and programs to ensure that a continuum of services, from middle school to college completion, is provided to all youth across the community, and that targeted services are made available to the youth who need them most.

■ Hold all providers accountable for shared outcomes that lead to career success, civic engagement, and the capacity for lifelong learning.

■ Support collaboration among providers to address the needs of students in a comprehensive manner by allowing greater flexibility in funding, reducing barriers to coordination, and supporting the role of intermediaries that help to pull services and providers together.

■ Ensure that the full range of education and youth service providers, such as afterschool, alternative education programs, employers, colleges, community-based organizations, and social services, are involved as partners in the college- and career-ready system.

■ Place a greater value on the attainment of not only academic skills, but also the full range of knowledge, skills, abilities, and personal resources that are necessary for career success, civic engagement, and lifelong learning. Promote the development and use of assessments that measure more than academic skills, including the competencies that are valued by employers.

■ Support initiatives that use time to increase learning opportunities that occur during out-of-school hours or that use the school-day hours differently with the purpose of adding time for learning and skill development in nonacademic areas. Some of these approaches could involve the blending of secondary and postsecondary learning opportunities to accelerate learning.

■ Ensure that youth who drop out of middle or high school have opportunities to reconnect to education that lead into college and career pathways, and that the programs are targeted to their needs and status.

■ Build the capacity of the adults within the various systems so they have a commitment to high expectations for all youth and the skills to provide high-quality services to young people based on their needs and interests.

■ Collect data from various systems over time to assess progress toward long-term outcomes and use the data to improve programs and services.

If policymakers adopt these guidelines, they should be on their way to creating a college- and career-readiness system; however, there are a number of more specific actions they can take to create the preconditions for this type of systemic approach. The themes discussed below are largely drawn from the Elements of Success identified from the 23 evaluations and address: Instituting a Culture of High Expectations for All Students and Setting Clear Goals; Creating the Environment for Comprehensive Partnerships and Cross-Systems Collaboration; Using Time Differently; Building the Capacity of Leaders and Adults in the System; Effective Assessment and Use of Data; Adequate Resources; Supporting Innovation; High-Quality Research; and College Completion.

Instituting a Culture of High Expectations for All Students and Setting Clear Goals

Policymakers play a key role in creating a culture of high expectations for all students and in being clear about what outcomes they hope to see from publicly-funded programs. Legislators can ensure that various pieces of legislation share common objectives leading to college- and career-readiness for all youth, and they can repurpose legislation to ensure a focus on the long-term goals of career success, civic engagement, and capacity for lifelong learning.

Specifically, governors (as some are doing) can create statewide initiatives to raise awareness of the need to better prepare all youth for postsecondary education and build public support for such goals. Federal and state administrators of various publicly-funded programs (e.g. education, workforce, economic development, and family and social supports) can agree to operate under common goals and high expectations and ensure that language and goals across programs are consistent and supportive of helping all young people become ready for college and careers. Policymakers should ensure that the K-12 curriculum is aligned with entry-level college work and that the academic expectations for college are made clear to families and students in the middle grades so they know what it takes to prepare for higher education.

Another approach to building a college- and career-ready framework would be to require programs that serve youth through alternative education or nontraditional settings to expand their focus on college completion. National and state policymakers could ensure that programs supported through K-12, alternative education, or workforce funding intentionally direct and connect students with postsecondary education. For example, policy could require alternative education programs to create linkages to higher education so that youth not only earn a GED or high school diploma but also have the opportunity to earn postsecondary education credits.

Creating the Environment for Comprehensive Partnerships and Cross-Systems Collaboration

Most of the programs in the compendium provide supports in more than one area, and many of them are comprehensive programs that provide academic, planning, and personal development supports. These programs, which draw upon the resources available throughout the community, help demonstrate that a comprehensive approach to preparing young people is important. The programs are based on the concept (consistent with the logic model) that success is dependent on many variables, and one shaky variable (e.g. not having money to pay for postsecondary education) can halt progression to college and careers. Many of the successful programs included in this compendium have strong partnerships and cross-systems relationships and demonstrate the value of such partnerships through improved outcomes.

Partnerships and cross-systems collaboration should be encouraged and supported through policies in a variety of ways. Policymakers, particularly at the federal level, can allow increased flexibility between programs to make it easier to collaborate. Funding requirements can be waived or changed to allow dollars to be better targeted to certain services based on student needs, or in some cases eligibility requirements can be amended. Certain rules and regulations at both the federal and state levels can be relaxed to promote collaboration, and reporting and data submissions can be simplified. If programs have shared accountability, common outcome measures could be used more frequently. Legislation should also ensure recognition of and support for intermediary organizations that often organize and sustain community-wide and cross-systems partnerships.

With regard to the transitional stages, policy should enhance partnerships that focus on the middle school to high school transition, the high school to

college transition, and the transition from education into the workplace. Policymakers can support these important steps from one developmental stage to the next in various ways. Programs that expose middle school students and their families to rigorous high schools and to the expectations of college can be supported, either by schools or by community-based organizations. High schools and colleges can partner to offer summer bridge programs for high school students who are first generation or low-income students.

Allowing students to participate in dual or concurrent enrollment and earn college credit is an effective way to help students gain college knowledge and see themselves as college students. Creating effective dual enrollment programs requires strong collaboration between high schools and colleges and puts higher education in a more prominent role in the college-ready agenda. If colleges participate in dual enrollment programs, they should also be held accountable for the college enrollment and success of those students, along with high schools. Policies can facilitate these types of partnerships, while the lack of clear policy can hinder their formation or slow their expansion. Funding formulas that encourage dual enrollment by ensuring both high schools and colleges receive resources linked to participating students offer the most equitable way to finance these programs. Policymakers should also ensure that low-income students are not prevented from participating in dual enrollment programs because of the costs of tuition, fees, books, and transportation. If colleges have prerequisites, attention needs to be paid to ensure that the entrance requirements do not negatively affect certain groups of students. Policies should ensure that all students can take advantage of dual enrollment by providing the necessary supports. Policymakers should also ensure that credit transfer and articulation policies are transparent and consistent.

Another key area for collaboration is to allow youth to experience work of some sort outside of school. Programs like internships, community service, service learning, and apprenticeships are valuable sources of learning for youth. Policy can support increasing the number of counselors or job advisors to find community placements for young people, and funding and incentives can be provided to build links between work-based and school-based learning or pay for internships.

In order to expand and sustain community-wide collaboration, leaders, staff, and adults across the

programs need to know about the other programs and systems and what they offer so they can help create the right intervention to match the student's need. In many cases, intermediary organizations at the local level can provide this type of expertise so that principals, teachers, college faculty, or employers do not have to take on that challenge. Intermediary organizations should be eligible for funding to promote such efforts and make it easier for the various institutions to work together.

Using Time Differently

Many students will need more time in structured or semi-structured activities to develop the range of skills they need to be successful. Policies should incentivize and support programs and services to develop expanded learning opportunities, such as longer school days and years; flexible scheduling for programs that might occur in the afternoon and evening, on the weekend, or during the summer; and programs that use technology more creatively to allow virtual learning at any time.

Policies, particularly at the state level, should also address issues around the number of hours that students must be seated in a classroom (which can restrict participation in programs like dual enrollment or internships) and the number of hours required for graduation (as there is no correlation between seat time and actual learning). Programs that blend high school and college (like Early College High Schools) and allow students to progress more quickly should be supported.

Related to the issue of using time differently is the recognition that becoming college- and career-ready is a process that takes years. As such, policymakers must take into account that this is a long-term undertaking and not expect changes in only one or two years. Initiatives should be supported for five to 10 years, to allow the systems to be built and sustained, and to track student progress.

Building the Capacity of Leaders and Adults in the System

As stated earlier, it is important to have clear goals and to ensure strong, visionary leadership that pushes boundaries and seeks innovative ways of supporting young people in meeting these goals. Leaders and staff need professional development opportunities that allow them to build the capacity of their programs and see how they fit into a continuum of services for young people. Leaders and staff also need to set the expectation that every young person

can become college- and career-ready and successful. Many adults come to the education field with these inherent beliefs, but not all adults who work with youth hold the belief that every young person can meet high expectations. Therefore, changing the culture of educational institutions to a college-going and career-ready culture requires opportunities for adults in the system to see that it is possible for all students to achieve. Educators must also be given the tools to help them. Teachers, in particular, need to have the skills to meet the differentiated learning needs of diverse students, but many of them have not been exposed to such strategies and tools. Helping teachers learn how knowledge is applied and placed in context also engages students and proves effective with many types of learners. Professional development should be closely linked to the specific learning needs of the students, and embedded in the instructional approach and throughout the teaching profession. Leaders, teachers, counselors, and other youth providers also need to know how to use data effectively to inform and guide instructional approaches. Federal and state funding for professional development should be targeted at meeting these needs.

Funding is desperately needed to support more counselors in high schools, and counselors need to be well-informed about the career options that exist and the various pathways to careers. Additional counselors and advisors are needed to support students in general as they plan for their future, but particularly at the transitional stages.

Effective Assessment and Use of Data

There are a number of ways that policy can support better use of assessments and data to improve student outcomes. First, if common outcomes of career success, civic engagement, and capacity for lifelong learning are agreed upon, data systems will need to be developed to measure progress toward those goals. At this time, such data systems do not exist, and it is a rare system that even tracks students to college completion and career success. Data systems must not only track the progress of students through high school and into postsecondary education, but also to completion and into the labor market, to ensure that the ultimate goal of career success is met. The ongoing efforts by the federal government and the states to build longitudinal data systems are commendable, and these activities need to be pushed to be as comprehensive as possible. Not only do they need to be longitudinal, they need to measure a wider range of outcomes. Federal and state governments

should continue their efforts to ensure the accurate counting and reporting of high school dropouts and high school graduates, as well as college persistence and completion rates. The federal government can help support cooperative efforts across states to develop data systems, platforms, and reporting technologies in a cost-effective manner, rather than expecting every state to do its own development.

Federal and state policy can support the development and sharing of other assessment- and data-related initiatives. Formative and summative student assessments should be used to drive instruction and interventions, and all stakeholders should be trained in analyzing such data and sharing information with students, families, and communities. Early warning systems should be put into place to identify the students with the greatest need for particular interventions. All data and assessment systems should be disaggregated by student demographics.

If the attainment of skills beyond traditional academic knowledge is considered valuable, assessments need to be developed to measure those skills. The federal government could support the development of assessments that measure more than core academics and include skills important to college and career success, such as critical thinking and problem solving, technical skills, and noncognitive skills. Some of these alternative assessments might be performance-based. Given the challenges in implementing wide-scale performance-based measurement systems, support from federal and state policymakers to support the research and development of these types of assessments would be very useful. Policy should also recognize that there needs to be flexibility in the use of assessments, acknowledging the vast diversity of students. Schools that serve students who are overage and under-credited for their grade level, for example, should be allowed more flexibility in measuring and meeting performance targets.

Adequate Resources

Although this publication focuses less on financial aid and paying for college, because many of the evaluated programs did not involve financial aid, the authors recognize that financial barriers are severe for many students and must be addressed. It is critical to provide students and their families information about college financing as early as possible. Programs should be available for middle-grade students, and families should be made aware of the range of financial resources available. Programs that provide early guarantees of financial assistance can encour-

age students to work hard, knowing that support is available. Funding for programs like dual enrollment should be available, especially for qualified, low-income students. Opportunities for youth to earn money through internships, apprenticeships, or work-based learning can also help.

Once students are enrolled in college, they can often face hidden costs, such as those related to textbooks, transportation, laboratory-based coursework, and living expenses. Programs that provide support to cover some of these unexpected costs often make the difference between college completion and dropping out and should be supported.

Supporting Innovation

Federal and state policymakers can support communities, schools, and colleges in trying new approaches to help young people prepare for college and careers, such as supporting school/college blends, accelerated learning strategies, expanded learning opportunities, performance-based approaches, and school-community partnerships. Policy could also support and encourage community-wide accountability systems and cross-systems collaboration to ensure students are provided with the full range of services needed.

High-Quality Research

As noted previously, the quality and paucity of research on education and youth programs limited the programs that could be profiled in this publication. Without high-quality research and program evaluations, it is often difficult to determine which interventions are effective, if programs are effective with all types of students or certain groups of students, and under what conditions they operate most effectively. In the interest of space, the recommendations for research will not be repeated. The Methodology and Research Notes chapter details AYPF's suggestions for Improving Evaluation Research (see page 23).

College Completion

Most federal and state education programs do not consider long-term student outcomes, nor are they held accountable for those outcomes. Programs are generally concerned with meeting near-term goals, such as increasing test scores or graduation rates. Although these near-term outcomes are important, it is equally important to hold programs accountable for meeting long-term goals like completion of postsecondary certificates or degrees and career success. The K-12 and higher education systems should share responsibility for these longer-term goals and be mea-

sured against them.

Although the major focus of this compendium is on programs that helped improve secondary education outcomes, also included are three programs that have helped young people persist in postsecondary education. The lessons learned about student success from those programs parallel many of the lessons learned from effective secondary school programs. College students, just like high school students, need academic and social supports in order to thrive and complete their studies, and they need to have caring adults in their lives who provide direction, counseling, and support. Policies that improve high school graduation are a part of the journey to success, but not the whole answer. Policymakers need to ensure that young people, particularly first-generation

and low-income students who enter postsecondary education, have the supports they need to reach their educational goals and dreams.

Closing

Although the United States faces a challenge in preparing all young people to graduate high school ready for college and career success, there is a growing body of knowledge about what it takes to help youth become ready and succeed. The programs summarized in this compendium demonstrate various successful approaches in serving youth and provide evidence that it is possible. Policymakers can use this information to develop effective systems, programs, and supports to help youth at various stages of their educational and personal development be prepared for the future.

PART IV

MY Ticket to College

Matrix of Included Programs and Evaluations

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
After School Matters (ASM)	High school students from 63 public schools, with some offerings for students up to age 21. Chicago, Illinois.	ASM provides high school students with a variety of opportunities for work-based learning through paid apprenticeships in the arts, technology, sports, communications, and other fields. The program emphasizes the development of workplace readiness and allows youth to pursue their unique interests.	Quasi-experimental study compared the academic outcomes of students who participated in ASM (Participants) with those who applied to ASM and did not participate (Applicants) and those who did not apply and did not participate (Nonparticipants). A subsample was used to determine ASM's impact on graduation and dropout rates.	Overall, students who participated in ASM missed fewer days of school and failed fewer courses than similar classmates. Increased length and intensity of ASM participation was also associated with higher graduation rates and lower dropout rates.	■ Work-based learning ■ Connections to internships ■ Financial incentives ■ Adult mentors ■ Youth voice ■ Institutional and community partnerships ■ Expanded learning opportunities
AVID	Students in Grades 4–12. AVID operates in more than 4,000 schools in 45 states and 15 countries. Nationwide program; evaluations took place in Texas.	AVID is a college-readiness program that operates as either a whole-school initiative or a pullout program. AVID participants enroll in advanced college-preparatory classes, and AVID offers a set of pedagogical tools that can be implemented by teachers across all disciplines, as well as transferable study strategies for students.	Quasi-experimental analyses of school-level comparisons between 10 AVID and 10 non-AVID high schools, as well as student-level comparisons of matched AVID, GEAR UP, and control group students at two schools.	Participants had higher scores on end-of-course exams and state assessments and were more likely to be on-track to complete a college-preparatory curriculum. AVID was associated with increased rates of enrollment in advanced courses and higher levels of college knowledge. AVID schools improved their performance ratings at a greater rate than non-AVID schools, and more students in AVID schools took AP or IB exams than students in the comparison schools.	■ Rigorous curriculum ■ Instruction in academic success behaviors ■ Tutoring and academic support services ■ Increased college counseling ■ Embedded professional development ■ Strong/effective leadership of reform effort

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
Career Academies	High school students. There are more than 2,500 Career Academies nationwide, typically existing within larger high schools. Nationwide program; evaluation took place in California, the District of Columbia, Florida, Maryland, and Pennsylvania.	Career Academies are smaller learning communities (SLCs) organized around a career theme, usually existing within larger high schools. The Academies integrate academic and vocational curricula, using the context of the career theme, and usually provide work-based learning opportunities with employers and community partners.	Longitudinal, experimental study that spanned over 11 years of data collection. This study examined the short- and long-term outcomes of a cohort of students from Career Academies and randomized control groups from nine different high schools across the country. Participants were tracked for eight years after expected high school graduation. Data sources included high school transcripts, test scores, and surveys. Outcomes were measured at the student level.	At the high school level, Career Academies increased the likelihood of completing the required credits for graduation. Increased retention and completion of a core academic curriculum for high-risk students. Increased likelihood of participating in positive youth development activities. At the postsecondary level, outcomes included significant, sustained increases in former participants' earnings and overall months and hours of employment. Labor market impacts were particularly concentrated among young men and youth who had been in the high-risk subgroup. Increased rates of family formation and establishing independent households by eight years after expected high school graduation.	■ Smaller learning communities ■ Adult mentors ■ Work-based learning ■ Applied and contextual curriculum ■ Employer partnerships

Matrix of Included Programs and Evaluations *(cont.)*

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
Citizen Schools (CS)	Students in Grades 6–8 at participating middle schools. The program exists on 44 school campuses in 21 communities, and serves approximately 4,500 students. Programs in California, Massachusetts, New Jersey, New Mexico, New York, North Carolina, and Texas. The evaluation took place in Boston, Massachusetts.	Citizen Schools provides educational enrichment, career exposure, and early preparation for high school and college through a structured extended day program in public middle schools. Citizen Schools programs complement classroom learning by engaging students in experiential learning projects led by adult citizen volunteers and supported by a staff of professional educators. The program includes academic support, apprenticeships in a variety of fields, and "community explorations" that involve fieldtrips and service learning.	Quasi-experimental, longitudinal study. Five cohorts of former Citizen Schools participants were tracked since their 8th-grade year, along with a matched comparison group of nonparticipants from the same schools. Results were disaggregated by students' intensity and length of participation in the program.	Middle school outcomes included improved attendance, on-time promotion rates and academic achievement. High school outcomes included higher rates of selection and persistence in a high-quality high school; improved high school attendance and academic achievement, particularly in math. Improved rates of on-time promotion to the 10th grade; higher rates of on-time graduation than district averages.	■ Tutoring and academic support services ■ Personal relationships ■ Early college exposure ■ Project-based learning ■ Cultural/community awareness ■ Institutional and community partnerships ■ Expanded learning opportunities
Communities in Schools (CIS)	Students in Grades K–12 in approximately 3,300 schools. The program is in 27 states and the District of Columbia.	CIS is an integrated student services model that features coordinated partnerships between public schools and local, community-based organizations addressing students' multiple psycho-social, health, and academic needs. CIS schools feature prevention and support services for the entire student body, as well as targeted and sustained individual interventions for particular students facing a variety of academic and nonacademic risk factors.	The National Evaluation consists of multiple studies, including a quasi-experimental, longitudinal study comparing school-level outcomes at CIS sites and matched non-CIS schools. The evaluators analyzed baseline data prior to CIS implementation at each school, as well as three years of follow-up data.	CIS schools made greater progress in reducing dropout rates and raising on-time graduation and attendance rates than comparison schools. The schools that implemented the most components of the CIS model increased academic performance in math and had the greatest improvements in graduation rates. The positive impact on graduation and attendance rates was most pronounced in urban schools serving communities of color. Schools serving predominately Latino students and those in rural areas saw the greatest gains in academic achievement.	■ Tutoring and academic support services ■ Personal relationships ■ Family involvement ■ Comprehensive social support services ■ Individualized services ■ Institutional and community partnerships ■ Expanded learning opportunities ■ Strong/effective leadership of reform effort ■ Data-driven decision-making

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
Digital Bridge Academy (DBA)	Community college students who are considered at risk of college failure. Approximately 25–29 students participate each semester at each site. The program was founded at Cabrillo College in Santa Cruz County, California and has been expanded to other California community colleges.	DBA is a full-time, one-semester community college program focused on academic acceleration, college success skills, and preparation for knowledge-based careers. Participants enroll full-time during the program semester, and take all of their classes together as a cohort. The curriculum emphasizes self-efficacy, teamwork, decision-making skills, project-based learning, and research on local social justice issues. The "Accelerated" version of DBA was offered during the first three semesters of the program, and included a college credit-bearing English course, even for students who were assessed at the remedial level, effectively skipping the remedial English sequence.	The Community College Research Center evaluation was a retrospective, multivariate analysis of the outcomes of nine cohorts of DBA participants. The evaluators used a comparison group of non-DBA students who attended Cabrillo College during the same semester and used statistical analyses to control for a variety of demographic and background characteristics of participants. The Higher Education Evaluation and Research Group evaluation was mixed-method. Data sources included student surveys administered at the beginning and end of the program semester. The study included a comparison to the general population of DBA students.	DBA students earned more college credits over two years and had higher one-semester and two-semester persistence rates than comparison students. Participants also had higher rates of full-time enrollment in the first post-program semester. The "accelerated" DBA program was associated with a positive impact on transfer credits and rates of passing associate-level and transfer-level English courses. DBA participants felt more likely to graduate with a degree after participating in the program and reported increases in indicators of self-efficacy.	■ Rigorous curriculum ■ Accelerated learning ■ Smaller learning communities ■ Project-based learning ■ Cultural/community awareness ■ Civic engagement

Matrix of Included Programs and Evaluations (cont.)

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
Diploma Plus (DP)	High school students who have dropped out or are at risk of dropping out. 3,260 students were served in 2008–09. DP schools were in five states in 2008–09, with expansion in progress in four additional states. Evaluations in New York, Massachusetts, Rhode Island and California.	DP schools are small alternative high schools that integrate dropout recovery and prevention programs with college- and career-readiness initiatives. Instead of traditional grade levels, DP students move through three "phases" of the curriculum, which emphasizes project-based learning. The final phase serves as a link between high school and postsecondary education.	The Brigham Nahas evaluation was a mixed-method study that used school records, surveys, and case studies. No comparison group. The New York City findings compared outcomes from the city's four DP schools with the overall data from New York "transfer schools," or those serving overage and under-credited students. Data sources included school records from multiple school years.	Diploma Plus students' program completion and graduation rates were higher than the average rates for alternative high school programs. In New York, DP schools had higher retention rates and Regents exam passing rates than other similar schools. Participants reported higher rates of engagement, effort, and interest in their DP classes than in their previous schools, and felt that the program helped them plan for postsecondary success.	■ Culture of high expectations ■ Smaller learning environments ■ Early college exposure ■ Earning college credits ■ Project-based learning ■ Civic engagement ■ Embedded professional development ■ Secondary-postsecondary partnerships ■ Employer partners

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
Dual Enrollment (DE) in Two States: Florida and New York City	High school students. 34,000 students participate in dual enrollment each year in Florida, and approximately 19,000 participate in the College Now dual enrollment program in New York City. Evaluations in Florida State and New York City, New York.	DE provides high school students with the opportunity to take college courses while still in high school and to gain dual credit at both levels. DE has become an increasingly popular mode of instruction for career and technical education (CTE) programs, reflecting a broader movement to integrate CTE courses with college preparation and provide students with more options for pathways to postsecondary education and living-wage jobs. New York City and Florida both have large, well-established DE programs that include CTE offerings. Florida has some of the most expansive DE legislation in the country, allowing all students who meet eligibility criteria to dually enroll and requiring school districts to enter into partnerships with local community colleges. Florida has also developed a unique regulatory framework for DE. The City University of New York's (CUNY) College Now program is the largest urban district dual enrollment program in the country, and it is free to all New York City public high school students.	The Community College Research Center (CCRC) evaluation was a comparative, retrospective study that used large, longitudinal datasets from Florida and New York City to examine the short- and long-term effects of DE participation on student outcomes for all students, as well as for CTE students in particular. The outcomes of former CTE concentrators who dually enrolled were compared with the outcomes of similar CTE concentrators who did not dually enroll, and the study also disaggregated results by student subgroups. The CUNY study was a quantitative, longitudinal evaluation that compared the outcomes of former College Now students enrolled at CUNY with other CUNY students who did not dually enroll in high school.	The CCRC Study found that participation in DE in Florida was associated with increased likelihood of high school graduation, enrollment in postsecondary education, persistence in college, improved college grades, and the accumulation of college credits. CTE students experienced the same advantages from dual enrollment as non-CTE students. DE had a particularly strong effect on postsecondary enrollment for males and low-income students. There were similar, but less consistent results for the New York City College Now program. New York City CTE students who had dually enrolled were more likely to pursue a bachelor's degree, had higher first-year college GPAs, and accumulated more college credits than their similar peers. The CUNY study found that former College Now students had higher first-year college GPAs and faster credit accumulation than the general population of entering college students, as well as increased persistence to a third semester in college.	- Rigorous curriculum - Early college exposure - Earning college credits - Alignment between high school and postsecondary requirements - Secondary-postsecondary partnerships

Matrix of Included Programs and Evaluations *(cont.)*

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
Early College High School (ECHS)	High school students; some Early College schools also include the middle grades. The model targets students from underrepresented groups and serves approximately 43,000 students nationwide. ECHSs are currently operating in 24 states and the District of Columbia.	ECHSs are small schools that aim to directly connect all students with a college experience and allow them to simultaneously earn high school and college credit in a supportive environment. They offer all students the chance to earn both a high school diploma and an associate's degree, or 1–2 years of transferrable college credit, through partnerships with institutions of higher education. The Early College High School Initiative (ECHSI) aims to develop new ECHSs for students from groups that are historically underrepresented in higher education.	The ECHSI Evaluation is a mixed-method study including comparisons of school-level outcomes with district averages and student-level outcomes with national averages. The SERVE Center study of North Carolina's ECHS initiative is a longitudinal, experimental study analyzing differences in student-level outcomes between randomly assigned treatment and control groups.	The ECHSI Evaluation found that ECHSs outperformed district averages on assessment tests and expected on-time graduation rates. The most positive outcomes, with regard to academic achievement, attendance, and on-time promotion rates were associated with ECHSs located on college campuses. ECHS graduates planned to enroll in college at a higher rate than the national average, and were particularly more likely to plan to enroll in two-year colleges. The SERVE Center study found that 9th-grade students at two North Carolina ECHSs progressed in a college preparatory curriculum at higher rates than the control group.	■ Rigorous curriculum ■ Instruction in academic success behaviors ■ Accelerated learning ■ Culture of high expectations ■ Tutoring and academic support services ■ Smaller learning communities ■ Early college exposure ■ Earning college credits ■ Secondary-postsecondary partnerships
Enhanced Math in Career and Technical Education (CTE)	High school students in CTE classes. The national demonstration program included approximately 4,000 students in 69 schools. The demonstration program was in 12 states.	The Math-in-CTE model was designed to build more explicit, contextual math instruction into CTE curricula and to evaluate its impact on student achievement. The program brings together math and CTE teachers to identify embedded math in career-related courses. After learning about the instructional strategy through professional development, the CTE and math teachers partner in the development of their own lesson plans.	Experimental design with random assignment of teachers to control and experimental groups; student achievement findings were aggregated at the classroom level. Pretest and posttest results were analyzed, and changes in the average scores of the treatment group classes were compared with changes in the control group classes.	Students in the Math-in-CTE classrooms scored higher on traditional math assessments and college math placement tests than their peers in traditional classrooms. This increase in academic math ability did not have any negative impact on students' attainment of occupational knowledge; most Math-in-CTE classrooms also had higher scores on tests of technical ability.	■ Applied curriculum ■ Embedded professional development ■ Professional learning communities ■ Common planning time

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
First Things First (FTF)	Students in Grades K-12. The model serves all students in participating schools, and targets low-performing, high-poverty school districts. Evaluation sites in Kansas, Missouri, Texas, and Mississippi.	FTF is a comprehensive school reform model focused on improving organizational structures, interpersonal relationships, and classroom instruction and on building capacity at the school and district levels. The hallmark elements of the model are smaller learning communities, a family and student advocate system, and instructional improvement efforts driven by enhanced teacher professional development and leadership support.	The MDRC evaluation was a mixed-method, interrupted time-series evaluation which compared changes seen in FTF schools with similar groups of schools that did not implement FTF in Kansas City, Kansas and in three expansion sites. The Youth Development Strategies, Inc. evaluation was a longitudinal, mixed-method study of the impact of FTF on school-level outcomes in Kansas City, Kansas. The study compared Kansas City outcomes to statewide averages.	In Kansas City, FTF schools saw large gains in a variety of academic outcomes, such as reading and math performance, attendance and graduation rates, and improvements in school climate. These gains were sustained over several years and were pervasive across the district's schools. Similar gains were not observed in comparable schools in the rest of the state. The impact was particularly pronounced for reading scores and graduation rates. In the expansion sites, results were less consistent and conclusive, although statistically significant improvements in reading were registered at one Houston high school.	■ Accelerated learning ■ Smaller learning communities ■ Advocacy systems ■ Embedded professional development ■ Common planning time ■ Block scheduling ■ District-wide commitment to reform ■ Active, long-term commitment by technical assistance providers ■ Data-driven instruction

Matrix of Included Programs and Evaluations (cont.)

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
GEAR UP	Middle and high school students in low-income schools. More than 700,000 students are served each year. Nationwide program.	GEAR UP provides federally-funded matching grants for services designed to enhance the college preparation of entire cohorts of low-income students along the pathway from middle school to the postsecondary transition. The unique service delivery model relies upon partnerships between local school districts, institutions of higher education, and at least two other organizations. The grants are made for six years, and the projects' comprehensive, school-based services begin no later than the 7th grade. Program activities may include tutoring, mentoring, college counseling, and financial aid assistance.	The National Evaluation is a longitudinal, quasi-experimental evaluation of school-level outcomes for students from GEAR UP and comparison middle schools. The comparison schools were selected from the same or nearby districts, based on demographics and grade span, and statistical analyses controlled for other differences between the GEAR UP and comparison schools. The most recent evaluation report presents interim findings, focusing on impacts at the end of middle school.	GEAR UP improved middle school students' and parents' knowledge of the college admissions process, and increased parental involvement in education. GEAR UP students were more likely to take advanced science courses in the middle grades, and the program was associated with increases in the overall rate of enrollment in advanced courses for African American students.	■ Family involvement ■ Early college exposure ■ Increased college counseling ■ Institutional partnerships ■ Secondary-postsecondary partnerships ■ Expanded learning opportunities
Hillside Work-Scholarship Connection (HW-SC)	Students in Grades 7–12 at risk of dropping out of school. Participants also receive services for up to two years after high school graduation. Approximately 2,200 students participate each year. The program takes place in Rochester and Syracuse, New York.	HW-SC is a comprehensive dropout prevention and college- and career-readiness initiative directed by a community-based social service organization. The program provides social, academic, and employment supports for students from Grade 7 through the first two years after high school graduation. The model features school-based Youth Advocates (YAs) along with afterschool programming and job placements.	Three longitudinal, quasi-experimental studies of the impact of program participation on graduation rates. Participant outcomes were compared with a matched comparison group of nonparticipants from the Rochester City School District. Outcomes were measured at the student level.	HW-SC participants had higher graduation rates than students in the comparison group, and the program was particularly effective at raising the graduation rates of African American students. Female participants had higher high school grades than matched nonparticipants. Graduation rates and grades were positively correlated with job placement and personal contact with YAs.	■ Tutoring/academic support services ■ Adult mentors ■ Family involvement ■ Connections to employment ■ Financial incentives ■ Comprehensive social services ■ Institutional partnerships ■ Employer partnerships ■ Expanded learning opportunities

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
KIPP Schools	Primarily middle school students in Grades 5–8, though elementary and high schools now represent one-third of the network. As of 2009, there are 82 KIPP schools serving more than 20,000 students. KIPP schools are in 19 states and the District of Columbia. Evaluations in the San Francisco Bay Area, California; Baltimore, Maryland; and Memphis, Tennessee.	KIPP is a national network of free, open-enrollment public schools. KIPP schools emphasize a rigorous academic curriculum and a culture of high expectations and college-going. Core components of the KIPP model include a longer school day (approximately nine hours), mandatory summer and Saturday school, a behavior management system, and professional development for school leaders.	The SRI study used a mixed-method design with data from five KIPP San Francisco Bay Area schools, using three cohorts of students. The study included school-level comparisons between three of the schools and similar schools in their district. The Center for the Social Organization of Schools evaluation was a longitudinal, quasi-experimental study of student-level outcomes for Baltimore KIPP students and a comparison group of students from the same feeder elementary schools. The Center for Research in Education Policy study was a mixed-method, longitudinal evaluation. Memphis KIPP students were individually matched with comparison students from nearby schools. School climate was also assessed and compared with national norms.	Achievement gains outpaced comparison schools and the national average, and KIPP students scored higher than the comparison groups in many cases. These impacts were most pronounced in Grades 5–6 and in mathematics. Attendance rates for students at the Baltimore KIPP school were higher than those of comparison students. School climate was generally positive.	■ Tutoring and academic support services ■ Accelerated learning ■ Culture of high expectations ■ Smaller learning communities ■ Early college exposure ■ Longer school day and year ■ School-level autonomy ■ Extensive selection and training of school leaders ■ Data-driven programming

Matrix of Included Programs and Evaluations (cont.)

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
National Guard Youth ChalleNGe	Youth ages 16–18 who have dropped out of high school and are unemployed. Each program serves approximately 200 students per year. Programs in 27 states, the District of Columbia, and Puerto Rico.	A dropout recovery program that aims to reconnect youth with opportunities for school completion, postsecondary education, and careers. The cornerstone of the 17-month program is an intensive 20-week residential experience in a "quasi-military" environment, often located on a military base. This phase is preceded by an orientation and assessment period. The final, "postresidential" phase features one year of structured mentoring, with the goal of helping youth to remain committed to their plans for continued education, employment, or military service. The curriculum is based on the principles of positive youth development.	Experimental design in which applicants were randomly assigned to the program and control groups. The first report presents early findings from a nine-month follow-up survey, when program participants had recently begun the Postresidential Phase.	Youth who were given the opportunity to participate in ChalleNGe were more likely to have earned a high school diploma or a GED during the first nine months of the study than the control group. The ChalleNGe participants were more likely to be enrolled in college courses and to be employed, and were less likely to have been arrested. The program also produced a positive impact on health and self-efficacy.	■ Teambuilding ■ Adult mentors ■ Connections to employment ■ Comprehensive social support services ■ Individualized programming ■ Community service
Opening Doors and Enhanced Opening Doors at Chaffey College	Community college students ages 18–34 on "academic probation" or "progress probation." Rancho Cucamonga, California.	An intervention for community college students on probation due to low grades or inadequate progress. The program featured a "College Success" course that addressed academic success behaviors and college knowledge, along with increased exposure to the college's academic supports. In a revised program called Enhanced Opening Doors, the College Success course was required and the program expectations were more fully enforced.	A longitudinal, experimental study using an interrupted time series design. Study participants were randomly assigned to the program and control groups. The Opening Doors demonstration took place during the Fall semester of 2005, and student-level outcomes were tracked for four semesters. The Enhanced Opening Doors demonstration took place during the 2006–07 academic year, and outcomes were tracked for two semesters.	While the original Opening Doors program did not significantly impact academic outcomes, the Enhanced Opening Doors program increased the number of credits earned by participants, their likelihood of earning a GPA above 2.0, and their likelihood of passing all of their classes. The Enhanced Opening Doors participants increased their likelihood of moving off of probation during the two-semester program period.	■ Instruction in academic success behaviors ■ Tutoring/academic support services ■ Advisory systems

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
Opening Doors Learning Communities at Kingsborough Community College	Community college students in their first semester; ages 17–34. Approximately 770 students were served during the Demonstration Period. Brooklyn, New York.	A learning communities program for entering community college freshmen. First-semester college students are placed into clusters of up to 25 students, with whom they share their academic courses and an orientation course. The students also receive enhanced academic counseling and tutoring, along with vouchers to defray the costs of textbooks.	A longitudinal, experimental study in which study participants were randomly assigned to the program and control groups. The evaluation used an interrupted time series design; the researchers collected student-level data on participants before the beginning of their college experience and at the end of each of four semesters.	Opening Doors improved participants' course-passing rates, average number of credits earned, and GPAs during the program semester. Few of these academic outcomes persisted during additional semesters. Participants passed more quickly through developmental English requirements. Program participants were more satisfied with their overall college experience.	■ Tutoring/academic support services ■ Smaller learning communities ■ Personal relationships ■ Advisory systems ■ Financial assistance ■ Comprehensive social support services ■ Team teaching ■ Effective leadership of the reform effort
Project GRAD	Students in Grades PreK-12 and into the first year of college. More than 134,000 students are served nationwide. The evaluation focuses on high school students. The program is in 13 sites nationwide. Evaluations took place in Houston, Texas; Columbus, Ohio; and Atlanta, Georgia.	A comprehensive school reform model that targets its interventions throughout "feeder systems" of elementary, middle, and high schools. The program aims to instill a college-going culture at all levels of the educational system with an emphasis on family involvement. The program's core strategies include improving school climate, enhancing learning opportunities, and building school-level capacity for management. High school students have the opportunity to receive a partial college scholarship, and they participate in Summer Institutes based on college campuses.	A quasi-experimental study comparing Project GRAD schools to nearby schools with similar prior achievement and demographics. The study included the flagship Houston high school plus expansion sites in other Houston schools, Columbus, and Atlanta. The Columbus and Atlanta schools were in earlier stages of implementation, and the evaluation includes early outcomes.	Project GRAD significantly increased the number of students completing a core academic curriculum on time in one Houston high school. Other positive findings at the implementation sites included increased numbers of credits earned, increased performance on standardized tests, and improved attendance and on-time promotion rates, though these results were not statistically significant.	■ Tutoring and academic support services ■ Instruction in academic success behaviors ■ Family involvement ■ Safe, supportive climate ■ Early college exposure ■ Scholarships ■ Comprehensive social services ■ Expanded learning opportunities

Matrix of Included Programs and Evaluations (cont.)

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
Talent Development High School (TDHS)	High school students in Grades 9–12. The model serves all students in 113 participating schools. TDHS sites are located in 15 states. Evaluations in Baltimore, Maryland; Philadelphia, Pennsylvania; and Newark, New Jersey.	A comprehensive school reform model that aims to restructure large high schools that struggle with persistently low student achievement, discipline problems, and high dropout rates. Schools are reorganized into smaller learning communities, including Ninth Grade Success Academies that offer targeted support for the 9th-grade year, as well as career academies for the older grades. All students take a college preparatory curriculum, with double doses of English and math to provide opportunities for accelerated learning.	Quasi-experimental, interrupted time series design with school-level analyses of outcomes. The MDRC evaluation examined the replication and early results of the model in five Philadelphia schools. The CRESPAR study evaluated the impact of the 9th-grade reforms in Baltimore as well as expansion sites. Both studies included similar comparison schools.	TDHS sites increased the average number of credits that students earned in the 9th grade, with a particularly strong impact on the percentage of students earning an algebra credit, and they improved their rates of promotion to the 10th grade. TDHS was also associated with an increase in 9th-grade reading and math achievement scores. Early graduation outcomes indicated an increase in graduation rates, but this finding was not statistically significant.	■ Instruction in academic success behaviors ■ Accelerated learning ■ Smaller learning communities ■ Embedded professional development ■ Team-teaching ■ Common planning time ■ Block scheduling ■ Active commitment by technical assistance providers ■ Data-driven instruction and decision-making
Talent Search (TS)	Students in middle and high school. At least two-thirds of each project's participants must be both low-income and first-generation college students. More than 360,000 students are served each year. Nationwide program; evaluations in Texas, Florida, and Indiana.	TS is one of the federal TRIO programs, and it offers college counseling, including guidance on college preparatory course selection, and assistance with the process of obtaining financial aid. TS projects are typically organized by a host college or university, and grantee institutions work with a target group of middle and high schools. Many projects offer TS activities during the regular school day, while other activities take place after school or during the summer.	A retrospective analysis of the outcomes of former Talent Search participants, compared with matched peers from the same schools. The evaluators used large longitudinal data sets from three states: Florida, Indiana and Texas. The study also relied on student enrollment data from Talent Search projects in each state.	Across all three states, the study found that Talent Search participants were more likely to have applied for federal financial aid and to have enrolled in a public college or university. TS participation was particularly associated with increased enrollment in two-year colleges. The Florida study found that TS participants were more likely to have taken the SAT or ACT exam, and were also more likely to have completed a two-year degree by the end of the study period.	■ Tutoring and academic support services ■ Early college exposure ■ Increased college counseling ■ Financial aid assistance ■ Secondary-postsecondary partnerships ■ Expanded learning opportunities

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
Upward Bound (UB)	High school students, ages 13–19. At least two-thirds of each project's participants must be both low-income and first-generation college students. Approximately 65,000 students participate each year. Nationwide program.	UB is one of the federal TRIO programs. It provides high school students with college-preparatory academic and nonacademic enrichment courses, along with guidance in the college search and application process. Two-thirds of UB projects are hosted by four-year colleges and universities. Projects often include summer academic programs held on the college campus, many of which are residential programs, along with courses provided during out-of-school-time during the academic year.	A longitudinal, experimental study. UB applicants were randomly assigned to program and control groups, and student-level outcomes were tracked. The sample design was stratified to overrepresent some less common types of UB projects, and findings were weighted to reflect each project type's prevalence in the total population of UB projects nationwide. The final report analyzed data collected approximately seven to nine years after the study participants were scheduled to graduate from high school.	At the high school level, UB had a small, positive impact on credit accumulation across the overall sample. It had a larger, statistically significant effect on high school credits earned by students with lower initial academic expectations and those at greater levels of academic risk. UB increased participants' likelihood of earning a postsecondary certificate or license from a vocational school. The length of UB participation and program completion were positively associated with increases in the likelihood of enrolling in a four-year institution and the likelihood of earning a bachelor's degree. UB had positive impacts on postsecondary enrollment and completion rates for specific subgroups, such as students who initially had lower academic expectations and those that were not on track with college preparatory coursework in the 9th grade.	■ Rigorous curriculum ■ Tutoring and academic support services ■ Physical program location on a college campus ■ Secondary-postsecondary partnerships ■ Expanded learning opportunities

Matrix of Included Programs and Evaluations *(cont.)*

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
Upward Bound Math-Science (UBMS)	High school students in Grades 9–12. At least two-thirds of each project's participants must be both low-income and first-generation college students. The program serves approximately 6,800 students per year. Nationwide program.	As an initiative within Upward Bound, UBMS provides grants to institutions of higher education to develop college preparatory programs focused on math and science careers. Like regular UB, the program features academic enrichment opportunities offered after school and during the summer. Most projects are hosted by four-year colleges and universities. UBMS is unique in its emphasis on applied math and science courses that include laboratory, computer, and field site experience.	A retrospective analysis comparing the secondary and postsecondary outcomes of former UBMS participants to those of matched nonparticipants, controlling for student background characteristics, educational achievement and whether or not students had also participated in the regular UB program.	The Mathematica evaluation found that UBMS was associated with improved high school grades in math and science, as well as an increased likelihood of completing chemistry and physics in high school, enrolling in four-year institutions of higher education, majoring in math and science, and completing a four-year degree in math and science. The RTI report found that increased length of participation in UBMS was associated with higher postsecondary enrollment rates.	■ Rigorous curriculum ■ Tutoring and academic support services ■ Physical program location on a college campus ■ Increased college counseling ■ Project-based learning ■ Low student-teacher ratios ■ Secondary-postsecondary partnerships ■ Expanded learning opportunities

Program	Population Served/ Program Location	Program Description	Type of Evaluation	Outcomes	Elements of Success
Washington State Achievers (WSA)	High school students. All students in the 16 participating high schools are included in the high school reform activities. The scholarship portion of the program is offered to 500 eligible students from these schools each year. Scholarship recipients receive services through the first two years of postsecondary education. Washington State.	WSA integrates high school reform, early college awareness, college advising, mentoring, college scholarships, and student supports in college. The program awarded five-year grants to high schools in Washington State with large low-income populations to redesign their schools based on the principles including personalized learning environments, rigorous curricula, and instructional improvements. A select group of eligible students, know as Achievers, receive substantial college scholarships, early college outreach, and mentoring during the older grades and the first two years of college.	The Fouts & Associates evaluation was a mixed-method study of WSA schools throughout Washington State. A supplemental comparison study incorporated a group of similar high schools and measured school-level outcomes. St. John and Hu conducted a comparative evaluation of four cohorts of graduates from WSA and non-grantee high schools in the same district. The researchers used student-level survey data to examine the impact of receiving the Achievers scholarship, as well as the overall effect of the scholarship possibility and other reforms on the other students in the WSA schools who did not receive the scholarship.	The WSA schools increased their standard math course offerings and their advanced English course offerings. Students at the WSA schools were more likely to complete a college-ready curriculum. Native American and African American students at the WSA schools completed college entrance requirements at substantially higher rates than their peers at similar schools. Recipients of the Achievers scholarship were more likely to enroll in college than similar peers, and those who applied for, but did not receive the scholarship also had greater odds of college enrollment than similar peers who did not apply.	■ Rigorous curriculum ■ Smaller learning communities ■ Adult mentors ■ Increased college counseling ■ Scholarships ■ Financial aid assistance ■ Institutional partnerships

Glossary of Terms

21st Century Community Learning Centers (21st CCLC)
The 21st CCLCs were created under the Elementary and Secondary Education Act. This federal grant program supports the creation and implementation of community learning centers that provide academic enrichment opportunities during hours outside of school for children, most significantly for students who attend low-income, low-performing schools. The 21st CCLCs assist students in meeting state as well as local standards in core academic subjects. They also provide students with a wide array of enrichment activities and programs to supplement their academics during the school day. The 21st CCLCs also offer educational services (literacy classes, etc.) to the families of participating children.

Academic Success Behaviors
Academic Success Behaviors refers to the study skills and other effective learning habits, such as self-monitoring and discipline, that are needed to meet the demands of college-level coursework.

Advanced Placement (AP)
AP courses, overseen by the College Board, 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, 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)

American College Testing Program (ACT)
The ACT is a college entrance exam that assesses high school students' general educational development and their ability to complete college-level work.

The American Recovery and Reinvestment Act (ARRA)
ARRA is a 2009 government economic stimulus plan. The overall goals of the ARRA are to stimulate the economy in the short term and invest in education and other essential public services to ensure the long-term economic health of the United States.

The State Fiscal Stabilization Fund (SFSF) is part of ARRA and includes $48.6 billion to be used in education reform. (http://www.ed.gov/policy/gen/leg/recovery/factsheet/stabilization-fund.html)

Career and Technical Education (CTE)
CTE includes organized educational programs offering sequences of courses directly related to preparing individuals for paid or unpaid employment in current or emerging occupations requiring training other than a baccalaureate degree. Programs include competency-based applied learning, which contributes to an individual's academic knowledge, higher-order reasoning, problem solving skills, and occupational-specific skills necessary for economic independence as a productive and contributing member of society. (http://www.ed.gov/offices/OVAE/CTE/perkins.html)

Charter School
A charter school is 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).

College Knowledge
College knowledge is a term that refers to the contextual knowledge needed to understand the complex college admission and selection processes, the options available to help pay for postsecondary education, the academic requirements for college-level work, and the cultural differences between secondary and postsecondary education.

Comprehensive School Reform Program (CSR)
The CSR Program began in 1998 and was authorized

as Title I, Part F of the Elementary and Secondary Education Act, which was signed into law on January 8, 2002. The CSR Program was an important component of the No Child Left Behind Act. Its goals included helping to raise student achievement by assisting public schools across the country to implement effective, comprehensive school reforms that are based upon scientific research and effective practices. CSR built upon and leveraged ongoing state and local efforts to connect higher standards and school improvement. It helped to expand the quality and quantity of school-wide reform efforts that enable all children, particularly low-achieving children, to meet challenging academic standards. The program did not receive full funding in Fiscal Year 2008, and it now consists of a Clearinghouse, which provides support for comprehensive school reform activities. (http://www.ed.gov/programs/compreform/2pager.html)

Dual Enrollment

Dual enrollment programs allow 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, et al., 2004)

Early College High School (ECHS)

ECHSs are small schools that aim to directly connect all students with a college experience and allow them to simultaneously earn high school and college credit. These schools offer all students the chance to earn a high school diploma and an associate's degree or comparable college credit. (www.earlycolleges.org)

English Language Learner (ELL)

Individuals living in the United States who have a limited ability to read, speak, write, or understand English and do not speak English as their primary language can fall under the category of being English language learners (ELLs) or having limited English proficiency (LEP). Other terms commonly found in literature include language minority students, English-as-a-second-language (ESL) students, English-as-a-second-or-other-language (ESOL) students, and culturally and linguistically diverse (CLD) students.

Expanded Learning Opportunity (ELO)

ELOs, particularly for older youth, occur in a 24/7 environment; draw upon the resources of the community; blur the lines between schools and other valuable teachers, such as colleges, community organizations, museums, and employers; and incorporate virtual learning when appropriate. They include traditional afterschool activities and an academic focus, but also incorporate activities such as internships, independent studies, classes on college campuses for high school students, and wraparound social supports. (http://www.aypf.org/documents/AYPF_ELOs_w-cvr.pdf)

Free Application for Federal Student Aid (FAFSA)

The FAFSA is a form required by the government for application to any Federal Student Aid program. Federal Student Aid, an office of the US Department of Education, ensures that all eligible individuals can benefit from federally-funded or federally-guaranteed financial assistance for education beyond high school. It is used to determine the expected family contribution based on family financial information. A FAFSA is used to determine the specific Federal Student Aid programs that can contribute to a student's total financial aid package and in what proportions. Many universities also use the information to determine other grants and scholarships. (http://federalstudentaid.ed.gov/about/index.html)

Free and Reduced Price Lunch (FRPL)

FRPL is an indicator that reflects the percentage of K-12 public school children enrolled in the Free-and-Reduced-Price-Meal Program at a school. A child's family income must fall below 185 percent of the Federal Poverty Level (or $37,000 for a family of four in 2006) to qualify for reduced-cost meals, or below 130 percent of the Federal Poverty Level ($26,000 for a family of four in 2006) to qualify for free meals. Not all eligible children are enrolled in the program, so FRPL numbers do not reflect all low-income school-age children. (http://www.kidsdata.org/topictrends.jsp?csid=0&t=23&i=1&ra=3_132&link=&)

Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP)

GEAR UP is a discretionary grant program designed to increase the number of low-income students who are prepared to enter and succeed in postsecondary education. GEAR UP provides six-year grants to states and partnerships to 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. *See the profile of the GEAR UP program included in this publication.*

General Educational Development (GED)

GED describes 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. (National Center for Education Statistics, 2005).

Grade Point Average (GPA)

GPA is a numeric average of academic performance on a 0-to-4-point scale. The GPA is the ratio of grade points earned to credit hours attempted.

International Baccalaureate (IB) Diploma Program

The IB Diploma Program is a two-year curriculum, taught by high school faculty, aimed at students ages 16-19. The IB Diploma is offered as a college preparatory program in select US and international schools, which are authorized after a two-year review process. The curriculum contains six subject groups, and students usually take three subjects at a higher level (240 teaching hours) and three at a standard level (150 teaching hours). Core components include an extended essay; a theory of knowledge course; and Creativity, Action, and Service (CAS) hours. Standardized exams are administered in May each year and graded on a scale of 7. Some US universities and most international institutions offer course credit for scores of 6 or higher. (http://www.ibo.org/diploma/)

Longitudinal Data Systems

Longitudinal data systems track the progress of individual students through their education and training lifetimes—from prekindergarten through postsecondary education and employment. (http://www.dataqualitycampaign.org/files/Publications-Creating_Longitudinal_Data_Systems-Lessons_Learned_by_Leading_States.pdf)

National Assessment of Educational Progress (NAEP)

NAEP is a nationally representative and continuing assessment of what America's students know and can do in various subject areas. Assessments are conducted periodically in mathematics, reading, science, writing, the arts, civics, economics, geography, and US history. NAEP assessments are administered uniformly, so results serve as a common metric for all states and selected urban districts. NAEP provides results on subject-matter achievement, instructional experiences, and school environment for populations of students and groups within those populations, but does not provide scores for individual students or schools. (http://nces.ed.gov/nationsreportcard/about/)

Program for International Student Assessment (PISA)

The Organization for Economic Cooperation and Development's (OECD) Program for International Student Assessment (PISA) is a collaborative effort among the Member countries of the OECD to measure how well young adults, at age 15 and therefore approaching the end of compulsory schooling, are prepared to meet the challenges of today's knowledge societies. The assessment is forward-looking, focusing on young people's ability to use their knowledge and skills to meet real-life challenges, rather than the extent to which they have mastered a specific school curriculum. PISA is the most comprehensive and international effort to date to assess student performance and to collect data on the student, family, and institutional factors that can help to explain differences in performance. (http://stats.oecd.org/glossary/detail.asp?ID=4817)

Scholastic Assessment Test (SAT)

The SAT is 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.

Smaller Learning Communities (SLC) Program

The SLC program awards discretionary grants to local educational agencies (LEAs) to support the implementation of SLCs and activities to improve student academic achievement in large public high schools with enrollments of 1,000 or more students. SLCs include structures such as freshman academies,

multi-grade academies organized around career interests or other themes, "houses" in which small groups of students remain together throughout high school, and autonomous schools-within-a-school, as well as personalization strategies, such as student advisories, family advocate systems, and mentoring programs. (http://www.ed.gov/programs/slcp/index.html)

Science Technology Engineering, and Math (STEM) Education

STEM refers broadly to the academic disciplines of Science, Technology, Engineering, and Math. STEM disciplines are seen as key to the country's ability to prepare youth with the skills and knowledge to succeed in the jobs that are emerging in the 21st century. Because of this, in recent years, awareness of the need to strengthen the nation's STEM professions has emerged in many sectors of society and has taken the form of federally-funded programs, as well as state-level initiatives targeted for specific state-based industries.

TRIO

TRIO is a series of federally funded programs authorized under Title IV of the Higher Education Act to help low-income Americans enter college, graduate, and move on to participate more fully in American economic and social life. Originally referring to a set of three programs (Upward Bound, Talent Search, and Student Support Services) included in the Higher Education Act of 1965, the term TRIO has been kept, even though the legislation now includes several additional programs. Although student financial aid programs help students overcome financial barriers to higher education, TRIO programs are intended to help students overcome class, social, and cultural barriers to higher education. (http://www.coenet.us/ecm/AM/Template. cfm?Section=What_is_TRIO&Template=/CM/HT-MLDisplay.cfm&ContentID=6618)

What Works Clearinghouse (WWC)

The WWC was established in 2002 by the US Department of Education's Institute of Education Sciences to provide educators, policymakers, and the public with a central source of scientific evidence of what works in education. The WWC is administered by the Department, through a contract to a joint venture of the American Institutes for Research and the Campbell Collaboration. To provide information needed by decision-makers, the WWC reviews and reports on existing studies of interventions (education programs, products, practices, and policies) in selected topic areas. WWC reviews of the evidence apply a set of rigorous standards that follow scientifically valid criteria for determining the effectiveness of these interventions. (http://ies.ed.gov/ncee/wwc/)

Research Terminology

Effect Size
The effect size is a measure of the difference between two variables in a statistical population or sample. In experimental or quasi-experimental research designs, the effect size refers to the difference between the average scores of two groups in comparison to the overall variation in the scores of the groups. This can be thought of as the average percentile standing of the average treatment group participant relative to the average comparison or control group participant.

Experimental Design
Experimental designs are considered to be the most "rigorous" of all research designs. This type of design creates two groups that are equivalent to one another; one group of subjects is provided the intervention while the other is not. The most common approach is to use random assignment of subjects to treatment and control groups. When study participants are randomly assigned, all systemic, preprogram differences between the two samples disappear, and any differences in outcomes can be attributed to the impact of the program.

Quasi-Experimental Design
Quasi-experimental design is a scientific research method primarily used in the social sciences. Quasi-experiments share many of the characteristics of experiments, but they do not involve a random assignment methodology. They compare subjects or groups of subjects using a variety of designs and statistical procedures to ensure that the treatment and comparison groups are similar across certain variables, but researchers are not able to control for all pre-intervention differences.

Statistical Significance
Statistical significance is the likelihood that a finding or a result is caused by something other than chance. A "statistically significant difference" means that the observed effect was not simply due to chance. For example if the threshold for statistical significance is set at 5 percent probability ($p < 0.05$), the result is at least 95 percent likely to be accurate, and this result would be produced by chance no more than 5 percent of the time.

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About the Authors

Sarah Hooker, Program Associate, joined the American Youth Policy Forum (AYPF) in 2008. Ms. Hooker identifies and researches issues, policies, and programs for AYPF's publications and learning events, and convenes policymakers for site visits, Capitol Hill forums, and roundtable policy meetings with a special focus on college- and career-readiness for groups that are historically underrepresented in higher education. She also has a particular interest in the educational outcomes and college success of English language learners and immigrant students, and facilitates the sharing of information and best practices related to these growing and underserved populations.

Ms. Hooker has a background in policy research, advocacy, and program development related to educational equality, immigrant integration, and the social service systems impacting low-income children and communities. She previously coordinated a college outreach program for Latino students in Chicago and directed advocacy efforts on policy regarding access to higher education. She contributed to the capacity-building of the National Alliance of Latin American and Caribbean Communities and helped to develop the First Latin American Community Migrant Summit in 2007. Prior to her work in Chicago, she developed a program to reconnect homeless parents with opportunities for continuing education and occupational training at LA Family Housing.

Ms. Hooker received her BA from Pomona College in Claremont, California and her MA from the School of Social Service Administration at the University of Chicago.

Betsy Brand, Executive Director of AYPF, is a leading expert in how to improve the lives of young people through education and workforce 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 Executive 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 Federal Government on issues relating to vocational-technical and adult education and workforce development; directed the White House Task Force on Literacy; increased programmatic collaboration with the Departments of Labor, Health, and Human Services, Commerce, and Housing and Urban Development; and implemented and oversaw the management of the Carl D. Perkins Vocational Education and Adult Education Acts.

Prior to her service at the US Department of Education, Ms. Brand spent 12 years working for the US Senate and the US House of Representatives, covering a wide range of legislation, including the Elementary and Secondary Education, Perkins, Adult Education, Individuals with Disabilities Education, Higher Education, and Workforce Investment Acts.

Ms. Brand received her BA from Dickinson College in Carlisle, Pennsylvania.

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Success at Every Step: How 23 Programs Support Youth on the Path to College and Beyond (2009)
This publication describes 23 programs that have been proven to help young people successfully complete high school and be prepared for success in postsecondary education and careers. These programs represent a wide range of interventions, including school-wide reform initiatives, community-based afterschool services, work-based learning opportunities, and college access programs. From an analysis of the included programs, the report identifies common programmatic and structural elements that may contribute to their effectiveness and summarizes key outcomes. The publication also sets forth a logic model that illustrates the complexity of the process for youth to develop the foundational knowledge, skills, abilities, and personal resources required for success in careers, lifelong learning, and civic engagement, as well as the various systems and service providers that support youth at each step of the developmental pipeline. The report concludes with policy recommendations on how policymakers can support college- and career-readiness for all students. *online and in print, $15*

Learning Around the Clock: Benefits of Expanded Learning Opportunities for Older Youth (2009)
This publication identifies and describes Expanded Learning Opportunities (ELOs) that improve academic performance, college and career preparation, social and emotional development, and health and wellness outcomes for underserved youth. The term "expanded learning opportunity" is used to describe the range of programs and activities available to young people that occur beyond regular school hours. ELOs include traditional afterschool activities with an academic focus, but also incorporate activities such as internships with employers, independent study in alternative settings, classes on college campuses for high school students, and wraparound support services. The underlying message drawn from our review of the evaluations is that ELOs deserve ongoing and expanded support as a major contributor in the preparation of youth for postsecondary education, careers, and civic engagement. *online and in print, $15*

Helping Youth Succeed Through Out-of-School-Time Programs (2006)
The publication reviews current research on out-of-school time (OST) programs, especially with regard to their effectiveness; explores the range of OST activities as employed by various youth-serving sectors; considers the untapped possibilities of OST programs to meet the needs of young people, including academic enhancement, career and college preparation, leadership development, and civic engagement; and provides policy guidance on how to sustain high quality OST programs as part of a system of supports for older youth. *online and in print, $5*

The College Ladder: Linking Secondary and Postsecondary Education for Success for All Students (2006)
This report profiles 22 schools, programs, and policies that allow high school students to take college classes during high school with the potential to earn college credit and ease the transition to postsecondary education. This compendium provides information to policymakers and practitioners regarding the type, structure, and outcomes for students who participate in programs that allow them the opportunity to earn college credit and demonstrates the value of such programs to students. *online and in print, $15*

Whatever It Takes: How Twelve Communities Are Reconnecting Out-of-School Youth (2006)
This publication 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. It provides background on the serious high school dropout prob-

lem and describes in-depth what twelve communities are doing to reconnect dropouts to education and employment training. Descriptions of major national program models serving out-of-school youth are also included. *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 only*

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), this report 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 only*

Enhancing High School Reform: Lessons from Site Visits to Four Cities (2005)

Summarizes successful practices and policies of a number of innovative high schools visited by national policymakers on recent site visits. AYPF introduced these policymakers to the reform-minded leaders of transformed high schools to help them understand the challenges and possibilities of high school redesign. *online only*

Transforming the American High School: Lessons Learned and Struggles Ahead (2004)

From October 2000-April 2004, AYPF provided learning experiences for policymakers considering strategies to create more effective learning environments for youth, particularly disadvantaged youth, that lead to increased academic achievement and better preparation for further learning and careers. AYPF organized speaker forums, field trips, discussion groups, and roundtables and produced publications for policymakers and practitioners. The report summarizes what was learned from these educational events. *online only*

Lessons Learned About Effective Policies and Practices for Out-of-School-Time Programming (2003)

Compiled from site visits by policymakers, discusses the challenges to out-of-school-time program implementation, including issues of going to scale, state and local roles and responsibilities, funding and sustainability, the role of intermediaries and advocates, and the relationship between OST programming and academic achievement. Offers tips on how communities can provide OST activities that are both effective and responsive to local needs. Illustrates numerous uses and public policy solutions to which OST programming has been applied, including leverage for school reform initiatives, opportunities for teacher professional development, expanded resources for schools and communities, sites for school-based services, reinforcement of mutual school and community interests, and outlets for individual/group expression, extended youth development, community culture, and community education. *online only*

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 pro-

grams 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 roundtable discussions that offered policy recommendations and practical advice on how to structure contextual teaching and learning and alternative assessments. *online and in print, $8*

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*

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 only*

Summary of the WIA Learning Exchange for Youth Systems (2003)

In April 2002, a General Accounting Office (GAO) report to Congress outlined challenges faced by state and local Workforce Investment Act (WIA) youth program implementers. To address these challenges a series of Peer Learning Exchanges focused on three areas of youth programming that needed improvement: 1) recruitment and retention of out-of-school youth; 2) strengthening the connection among WIA partners, particularly between the education and the workforce communities; and 3) documenting competencies and gains through appropriate assessments and credentials. Second, the Exchanges identified and promoted promising practices in local and state workforce investment areas about successful implementation of youth-related WIA provisions. Finally, the Exchanges aimed to develop a model for the delivery of system-wide technical assistance by incorporating visits to exemplary WIA sites, communicating practical experiences, and fostering learning networks. Summarizes key findings from the Learning Exchanges. *online only*

Finding Fortune in Thirteen Out-of-School-Time Programs (2003)

A compendium of evaluation summaries makes the case that participation in OST programs improves outcomes for youth in academic achievement improvement and higher developmental outcomes and contributes to the evidence needed to make reasoned decisions regarding the future of after school and out-of-school-time OST programming. *online only*

Rigor and Relevance: A New Vision for Career and Technical Education (2003)

What should the role of the federal government be in Career and Technical Education (CTE)? AYPF organized a series of discussion groups with a diverse range of individuals to focus on this question. The paper provides a vision of reformed CTE, with career pathways, links to business, stronger connections from high school to postsecondary education, and more challenging academics. *online only*

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***

Raising Minority Academic Achievement (2001)

The culmination of a detailed, two-year effort to find, summarize, and analyze evaluations of school and youth programs that show gains for minority youth across a broad range of academic achievement indicators. The report provides an accessible resource for policymakers and practitioners interested in promoting the academic success of racial and ethnic minorities from early childhood through postsecondary study. ***online and in print, $8***

High Schools of the Millennium: Report of the Workgroup (2000)

High schools are out of date and need to be redesigned to meet the needs of today's youth. The report argues for a new vision of high school, one that uses all the resources of the community to create smaller learning environments, to engage youth in their striv-

ing for high academic achievement, to support them with adult mentors and role models, and to provide them with opportunities to develop their civic, social, and career skills. ***online only***

Raising Academic Achievement: A Study of 20 Successful Programs (2000)

Twenty youth programs that are profiled in this report succeeded in raising test scores, retention rates, graduation rates, and other measures of academic performance. The report analyzes the strategies used and summarizes the program contents. ***online only***

Looking Forward: School-to-Work Principles and Strategies for Sustainability (2000)

Organized around Ten Essential Principles to assist policymakers, practitioners, and the wider community in thinking about ways to sustain successful school-to-work approaches, the Principles represent a distillation of critical elements of the School to Work Opportunities Act: improving the school experience for young people, expanding and improving work-based learning opportunities, and building and sustaining public/private partnerships. Also identifies federal legislation and national programs that support these gains, as well as actions for leadership at the local, state, national, and federal levels. ***online only***

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Johns Hopkins University

ANDREA BERGER
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Group
Academy for Educational Development

ROBERT SMITH
Superintendent (former)
Arlington Public Schools

AMY STARZYNSKI
Partner
Education Counsel

JAMES STONE
Director
National Research Center for Career and
Technical Education
University of Louisville

MALA THAKUR
Executive Director
National Youth Employment Coalition

JOEL VARGAS
Senior Project Manager
Jobs for the Future

BOB WISE
President
Alliance for Excellent Education

JEN WORTH
Program Manager, Center for Workforce
Development
American Association of Community Colleges

AMERICAN YOUTH POLICY FORUM