

Preparing Wisconsin's Youth for Success in the Workforce



Wisconsin Family Impact Seminars

*A project of the School of Human Ecology, the School of Social Work,
and the College of Letters and Science at UW-Madison
in collaboration with Cooperative Extension at UW-Extension*

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First Edition

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Phyllis M. Northway**

Purpose and Presenters

In 1993, Wisconsin became one of the first states to conduct Family Impact Seminars modeled after the seminar series for federal policymakers. The Wisconsin Family Impact Seminars provide objective, high-quality research on family issues to promote greater use of research in policy decisions and to encourage policymakers to examine policies and programs through the family impact lens. Family Impact Seminars highlight the consequences that an issue, policy, or program may have for families. Because of the success of the Wisconsin Family Impact Seminars, the Policy Institute for Family Impact Seminars, established at the University of Wisconsin-Madison/Extension, is now helping 21 states and the District of Columbia conduct their own Seminars.

The Family Impact Seminars are a series of presentations, discussion sessions, and briefing reports that provide timely, solution-oriented research on family issues for state legislators and their aides, Governor's office staff, legislative service agency staff, and state agency officials. The Seminars provide objective, nonpartisan research and do not lobby for particular policies. Seminar participants discuss policy options and identify common ground where it exists.

“Preparing Wisconsin's Youth for Success in the Workforce” is the 31st Wisconsin Family Impact Seminar. For information on other Wisconsin Family Impact Seminar topics or on Seminars in other states, please visit our web site at <http://www.familyimpactseminars.org>.

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Briefing Reports

Each Family Impact Seminar is accompanied by an in-depth briefing report that summarizes the latest research on the topic and draws implications for families and for state policymakers. Since 1993, 31 seminars have been conducted on topics such as corrections, evidence-based budgeting, growing the state economy, jobs, long-term care, Medicaid, prisoner reentry, school funding, and workforce development. For a list of the seminar topics and dates, please visit the Wisconsin Family Impact Seminar web site at <http://www.familyimpactseminars.org> (enter a portal and click on State Seminars). Each seminar has a page on which you can view the list of speakers, download a briefing report, and listen to the audio of the seminar presentations.

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Executive Summary

Young people have been hit harder by unemployment than any other age group in the current recession. Unemployment among 16- to 24-year-olds has doubled over the past decade, with low-income, minority teens especially hard hit. For decades, efforts have been made to reform K-12 education, promote college enrollment, and enhance work-based learning. Yet academic achievement and college graduation rates have failed to improve. Many U.S. employers still complain that today's young adults do not have what it takes to succeed in the 21st century labor market. This report presents cutting-edge research on the most effective, evidence-based strategies for preparing our youth for success in the workforce. Two approaches in particular offer some of the strongest evidence for improving the life prospects of youth—early childhood education and Career Academies for making high school more engaging and career-relevant. Working together, youth, families, schools, employers, and policymakers can ensure that today's generation of youth do not get left behind in the global economy.

In the first chapter of this report, William Symonds from the Pathways to Prosperity Project at Harvard University provides an overview of the factors that influence youth workforce success and strategies states are using to create more and better career pathways for students. The United States is no longer a global leader in education. Many of our youth are not developing the skills they need to prosper in the 21st century economy. Unless we equip youth with the education and workforce skills they need to succeed, we are in danger of leaving millions of young people on the sidelines, severely jeopardizing our nation's ability to remain competitive in a global economy. Harvard's 2011 *Pathways to Prosperity* report challenges the prevalent mentality that a four-year college degree is the best path for all students, and argues instead that we need to create multiple pathways for youth to succeed. These pathways must combine rigorous academics with strong career/technical education and work-based learning that provide the skills and credentials youth need in today's changing labor market. All this will involve intensive collaboration between youth, families, schools, employers, and policymakers. Multiple local, state, and national initiatives are described that hold promise for improving economic and life outcomes for struggling youth.

The second chapter of this report by Dr. James Kemple of New York University describes Career Academies, one of the best-studied and most successful models for helping youth transition into work and family life. Over the last 40 years, Career Academies have become a widely used high school reform that aims to keep students engaged in school and prepares them for successful transitions to postsecondary education and employment. Career Academies are organized as small learning communities within high schools that combine academic and technical curricula around a career theme. They also work with local employers to provide career-based learning opportunities. Since 1993, MDRC has been conducting a rigorous evaluation of the Career Academy approach in a diverse group of nine high schools across the United States. Career Academies have been shown to improve labor market outcomes, especially for young men. Eight years after scheduled graduation,

young men in Career Academies had earned an average total of nearly \$30,000 more than their peers. In addition, young men in Career Academies were more likely to be married, to be custodial parents, and to be living independently with their children.

In the third chapter, Dr. Timothy Bartik of the W.E. Upjohn Institute for Employment Research shows how investing in children at the earliest stages of life can have lasting effects on children's future employment outcomes. High-quality early childhood programs provide sizable benefits to state and local economies. For each \$1 invested in high-quality early childhood programs, a state economy will get a \$2 to \$3 return on investment, measured by increased jobs or earnings for state residents. Such benefits are similar in magnitude to what states would get from investing in well-designed business incentives. Benefits come mainly from the effects on child participants, who are more likely to be educated, trained, and employed as adults. In addition, when stable, affordable, high-quality child care is available, parents are able to improve their productivity by putting in more work hours, missing fewer work days, experiencing less stress, and/or pursuing education. Ensuring that early childhood programs are of high quality is key to fully realizing their benefits. Although it can be a challenge to finance early childhood programs up front, states can capitalize on several substantial short-term benefits that these programs produce. Over the long term, these programs will pay for themselves.

The final chapter by Dr. L. Allen Phelps of the University of Wisconsin-Madison overviews the efforts Wisconsin already has in place to help prepare youth for the workforce. Since establishing the nation's first apprenticeship program in 1911, the State of Wisconsin has sponsored an array of programs designed to prepare youth for workforce success. For more than a century, Wisconsin has supported a two-tier or dual strategy designed to address workforce preparation and development priorities, with a largely separate focus on preparing youth for college versus careers. The current economic slowdown has heightened the importance of providing high-quality job preparation for youth and adults in all education and training settings, from K-12 through graduate and professional schools. This chapter overviews promising career preparation options for high school students in the state, including the Youth Apprenticeship Program, Project Lead the Way, Youth Options, and Dual Credit opportunities. Although a relatively high percentage of the state's young adult population (18-24) either has a degree or is enrolled in postsecondary education, a lack of data exists on how and why these students are not succeeding in college and/or in the economy. Such information is vital to improving the state's workforce productivity.

Families are the cornerstone for preparing youth to succeed in the workforce and in adult life. Families are key to producing the human capital that businesses need to remain competitive and innovative. Human capital in today's knowledge-based economy requires both hard and soft skills, which are shaped, to a large extent, by socialization that occurs early in family life and in early childhood programs. Families are also pivotal in encouraging older youth to explore career choices and to set high educational and career goals. Families are increasingly important given the prolonged transition to adulthood in recent years, with youth requiring far more time to complete their education, secure employment, form stable families, and

establish financial independence. This strains the resources of parents at the same time that it limits the earnings potential of youth and impedes economic growth. In turn, young people's preparation for the workforce affects their family life. When youth are exposed to career-related experiences during high school, this can improve their labor market prospects and ease their transition into marriage and family life. Two key economic development tools that policymakers have at their disposal are strengthening today's families and providing youth with the education and workforce skills needed to build strong families tomorrow.

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What Contributes to Youth Workforce Success and How States are Responding

by William C. Symonds
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The United States is no longer a global leader in education. Many of our youth are not developing the skills they need to prosper in the 21st century economy. Unless we equip youth with the education and workforce skills they need to succeed, we are in danger of leaving millions of young people on the sidelines, severely jeopardizing our nation's ability to remain competitive in a global economy. Harvard's 2011 Pathways to Prosperity report challenges the prevalent mentality that a four-year college degree is the best path for all students, and argues that we need to create multiple pathways for youth to succeed. These pathways must combine rigorous academics with strong career/technical education and work-based learning that provide the skills and credentials youth need in today's changing labor market. All this will require significant changes in our existing approach to education. It will involve intensive collaboration between youth, families, schools, employers, and policymakers. Multiple local, state, and national initiatives hold promise for improving economic and life outcomes for struggling youth.

In recent years, the U.S. has taken an increasingly academic approach to high school. The goal of preparing students to attend four-year colleges is widely seen as the preferred pathway to success. Despite decades of promoting this approach, we have seen little improvement in academic achievement and have been unable to get more than 30% of young adults to earn a bachelor's degree by their mid-20s. What's more, young adults who fail to earn a bachelor's degree often feel like second-class citizens. The *Pathways to Prosperity* report argues that as a nation we must adopt a broader, more holistic approach to education and youth development. The report discusses several innovative national and state initiatives that are far more successful in preparing youth to prosper as adults. Successful systems offer students multiple pathways to success, through relevant and rigorous curricula and hands-on, work-linked learning experiences.

The *Pathways to Prosperity* report resonated deeply with employers, educators, and state officials across the nation struggling with high unemployment rates, perceived skills mismatches, and the devastating effect of the financial crisis on young people. Since its release, I have been invited to about two-thirds of the states, both Red and Blue states, encompassing every region of the country, to present the report's findings and strategies. The immense amount of interest may stem from the current employment landscape: Getting a job is now the number one concern of Americans, yet unemployment remains high in the current recession. Youth in particular have been hit harder than any other age group. Unemployment among 16- to 24-year-olds has doubled over the past decade, and this figure does

Youth have been hard hit in the current recession, with unemployment among 16- to 24-year-olds doubling over the past decade.

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not account for the many young adults who have dropped out of the labor market entirely.¹ Low-income minority teens have been hit especially hard, even though they are the very youth who are most likely to struggle in school and who most need jobs if they are to form and maintain stable families.² Just 9% of low-income black teens and 15% of low-income Hispanic teens are employed, compared to 41% of upper middle-income white teens.

The drastic hit to youth employment has dire implications for youth development. Employment in the teen and young adult years has positive effects on future employment and earnings prospects. Teens with good high school work experiences are more inspired to stay in school, graduate, and adopt ambitious goals. The lifetime earnings gap between those with a high school education and those with a college degree is now estimated to be nearly \$1 million and growing.³ What's more, low-income youth who cannot find work may be more likely get into trouble with the law or have children out of wedlock.

These consequences have ripple effects on family and child well-being. In recent decades, lower-income groups have experienced declines in marriage. Today, more than half of all children born to women under 30 are born out of wedlock. Unfortunately, single parents are much more likely to struggle with poverty, which threatens the life chances of children.⁴ At the same time, economic and demographic changes have contributed to a prolonged transition to adulthood for youth. Youth today require far more time to complete their education, secure employment, form stable families, and establish financial independence. This prolonged transition affects the lifetime earnings potential of youth and strains their parents who must continue to support their young adult children.⁵ Expanding education and training opportunities for young people, especially through multiple pathways that lead to earlier educational and employment success, can streamline the transition to adulthood, ease family burdens, and improve child outcomes.

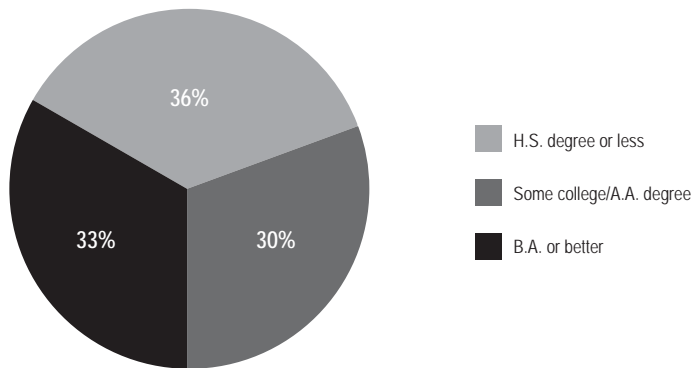
How can we best prepare our youth to become full participants in American society? In this chapter, I first discuss what youth need to succeed in today's workforce. What skills are required by the 21st century labor market and what do employers see as lacking in today's graduates? Next, I present a new vision for how to prepare youth for the workforce, one that involves multiple pathways to success. I consider the intertwined roles of youth, family, schools, employers, and policymakers in creating these pathways. Finally, I describe promising state and national initiatives that point the way toward achieving these goals.

What Do Youth Need to Succeed in Today's Workforce?

The U.S. economy is projected to add some 47 million job openings over the 10-year period ending in 2018.⁶ Nearly two-thirds of these new jobs will require education beyond high school. But despite popular beliefs, only about half these jobs will require a four-year degree or higher. The rest will require two years or less of college: the kind of education provided by Wisconsin's Technical College System. As Figure 1 illustrates, 36% of jobs will still be available to people with a high school degree or less. The problem is that these jobs typically offer low

pay and few benefits, and they will continue to decrease in number. Over the past few decades, all of the net job growth in America has been generated by positions requiring at least some postsecondary education. Successfully completing a postsecondary degree offers young adults the best insurance that they will find work. Yet because the majority of young adults do not earn even an associate's degree, much less a bachelor's degree, we face an ever-rising population of less educated teens and young adults who are persistently disconnected from both education and employment.

Figure 1. Level of Education Required for Projected Job Openings for 2008-2018



Adapted from *Pathways to prosperity: Meeting the challenge of preparing young Americans for the 21st century* (p. 7). Adapted with permission. Source: March CPS data various years; Center on Education and the Workforce forecast of educational demand to 2018.

Even amidst high unemployment rates, U.S. employers complain that today's young adults are not equipped with the necessary skills and qualifications to fill the job openings they do have. In large-scale surveys of employers, respondents report that more than half of high school graduates are "deficient" in such skills as oral and written communication, critical thinking, and professionalism.^{7,8} Leading companies such as Microsoft, Apple, Cisco, and Pearson have been equally critical of what they see as obsolete and outmoded approaches to education, and are calling for more focus on the development of such "21st century skills" as problem solving, creativity, and communication.⁹ Our schools have doubled-down on teaching academically-oriented "hard skills" (e.g., reading, writing, math, and science), while often giving little attention to the "soft skills" that employers demand (e.g., professionalism, creativity, and decision-making).

Our intense focus on an academic approach to learning may help explain the extraordinarily high dropout rates we are witnessing in our high schools. Although academic and socioeconomic factors certainly play a role in why students drop out, many high school dropouts are actually middle achievers from middle-income families. Large numbers of students say they dropped out because they felt their classes were not interesting, and that high school was boring. In other words, they didn't believe high school was relevant, or providing a pathway to achieving their dreams. Too many can't see a clear, transparent connection between their program of study and tangible opportunities in the labor market.

Over the past few decades, all of the net job growth in America has been generated by positions requiring at least some postsecondary education.

Rethinking How We Prepare Youth for Success in the Workforce

It is long past time that we reexamine the relevance of our educational system to the 21st century economy. It's time to broaden the range of high-quality options that we offer to our young people. Evidence detailed in the *Pathways to Prosperity* report and my other writing suggests several key principles and strategies that we can draw from successful approaches in other states and countries. These are some of the most important elements of such systems:

- 1) Multiple Pathways.** In order to truly prepare all youth for success, it is critical that we offer and promote multiple pathways to success. To start, the pathways to all major occupations should be clearly defined from the beginning of high school (or earlier). Young people and their families should be provided with detailed information about the patterns of course-taking and other experiences that would best position them to gain access to certain jobs. Students can then make informed decisions about which pathway to pursue, and retain the freedom to change course. We need to emphasize the importance of work experience in preparing youth for adulthood and elevate the status of pathways other than the traditional college preparatory track. Many Americans still stereotype vocational education as narrow training for “dead-end” jobs, when today’s cutting-edge career and technical education bears little relation to this old model. Today’s best vocational programs do a better job of preparing many students for college and career than traditional academics-only programs. Well-designed systems equip students with a comprehensive set of competencies, including technical and critical thinking skills, personal traits (e.g., reliability and self-confidence), and social competencies (e.g., the ability to form good relationships). These skills enable students to prosper as adults.
- 2) Extensive Employer Engagement.** High-quality career and technical education cannot succeed without the extensive involvement of employers. If career pathways for youth are to be detailed beginning in high school, employers need to be deeply engaged in the process. Employers can play a vital role in providing career guidance by talking to students about the opportunities available in today’s economy. Employers are also essential for defining the qualifications needed to enter the field, setting standards, developing relevant curriculum, and providing on-the-job training opportunities. Businesses might make substantial financial investments in youth preparation programs, as they recognize the benefits to the bottom line of being involved in such efforts. Employers would benefit from training an eventual pipeline of employees who have already proven themselves on the job and who have relevant skills. In addition, studies suggest that, even when students are paid, the value of work done by student apprentices or interns often exceeds the labor costs.¹⁰
- 3) Ample Opportunities for Work-Based Learning.** The incorporation of work-based learning into traditional education systems is another key strategy for success. Growing evidence shows that work-linked experiences, such as job shadowing, service-learning, internships, and apprenticeships, are extremely effective. They increase student engagement and help them develop skills,

Many Americans stereotype vocational education as narrow training for “dead-end” jobs, when today’s best vocational programs do a better job of preparing students for college and career than academics-only programs.

attain degrees, and eventually, succeed on the job. These opportunities allow students to learn and practice skills on state-of-the-art equipment under the supervision of knowledgeable trainers. Students develop essential soft skills in real-world environments, such as learning to cooperate in teams and dealing with customers. Internships and apprenticeships, where students are more immersed in the workplace, allow students to contribute to a business or organization while they are learning, and help facilitate their transition into more permanent employment. The U.S. already recognizes the value of work-based learning in our highest-status professions. Surgeons, for instance, must complete lengthy residencies. Yet when it comes to younger students, we often overlook the immense value of these experiences.

- 4) **Comprehensive Career Counseling.** The best systems make career counseling a high priority, including scheduling career guidance into the school day. Comprehensive career guidance educates students about the broad labor market and then helps them make informed choices about the careers for which they are best suited. In our current system, most students receive little or no career guidance. One reason is that there are few school counselors. Nationally, the ratio of high school students to counselors is about 500 to 1. And these school counselors typically spend much of their time dealing with the psychological and social challenges faced by teens, rather than offering career guidance. Many of these counselors don't have a comprehensive understanding of labor market opportunities and consequently steer students toward only a limited range of options. Often, they offer little advice beyond "go to college," even if students don't have a clear reason for going to college or the means to pay for it. This is a major reason why the U.S. now has the highest college dropout rates in the advanced world. Given these challenges, we should move toward considering career guidance as a separate profession from psychological and social counseling. Career guidance professionals should be well trained and have access to a wide range of up-to-date materials on labor market opportunities.

Growing evidence shows that work-linked experiences, such as job shadowing, service-learning, internships, and apprenticeships, are extremely effective.

Youth, Families, Schools, Employers, and Policymakers Play Important Roles

Making multiple pathways known and available to youth requires a coordinated, concerted effort by all interested stakeholders. Youth, families, schools, employers, and policymakers all hold interacting roles and responsibilities in the process.

- **Youth** can be inspired to explore their options, and then set high educational and career goals. Youth should be encouraged to pursue education beyond high school. With guidance, youth can develop a realistic understanding of the career opportunities open to them, along with strategies on how to reach their career goals.
- **Families** are key to producing the human talent that businesses require to remain competitive and innovative. Human capital in today's knowledge-based economy requires hard and soft skills. Soft skills are shaped, to a large extent, by socialization that occurs early in family

Human capital in today's knowledge-based economy requires hard and soft skills, which are largely shaped by socialization that occurs early in family life and in early childhood programs.

life and in early childhood programs.^{11,12} Supporting families and high-quality early childhood programs are key economic development tools (see chapter by Timothy Bartik in this report). Families are also pivotal in helping youth determine their career choices. They often advise youth about potential career paths and provide support for them to pursue postsecondary training. Having fewer family resources and less exposure to a variety of career choices may limit economic mobility for youth.

- **Schools**, particularly at the middle and high school levels, must inform students about the different roads to success. Schools can introduce students to career opportunities and lay out the pathways necessary to get there. They should offer rigorous, work-linked learning alternatives to traditional education that are relevant and challenging. Also, efforts should be made to enhance career guidance and counseling.
- **Employers** can contribute to these efforts in new and innovative ways. For starters, businesses can encourage employees to serve as career guides and mentors to students. Also, employers are in the best position to define occupational qualifications and identify skills gaps that exist locally and for their industry. They should play a prominent role in developing relevant and rigorous programs of study. They can also provide work-based learning opportunities, including internships and apprenticeships.
- **Policymakers** can support evidence-based education reforms that promote multiple pathways to success. For instance, policymakers can insist that schools make career planning an integral part of the educational experience, by requiring students to develop “pathway plans.” Policymakers also play an important role in setting education standards, establishing graduation requirements, and supporting work-based learning.

Through innovative partnerships between schools, employers, policymakers, and other organizations, states and communities can promote multiple pathways for youth to succeed in postsecondary education and employment. Broad-based collaborations that support multiple pathways can help shift the overall culture toward fully recognizing the importance of career training for youth. Such approaches might also elevate the image of technically-demanding careers that don't require four-year college degrees.

What States are Doing to Prepare Youth for the Workforce

Better preparing youth for success in the workforce does not require re-inventing the wheel. States are already implementing a number of promising approaches. (For further examples of Wisconsin's efforts in this area, see chapter by L. Allen Phelps in this report.)

Wisconsin. Communities across the state have expressed strong interest in better preparing youth for workforce success. Several Wisconsin communities have responded to the *Pathways to Prosperity* report and are working to implement the report's ideas. I have given more than a dozen presentations across Wisconsin, including Fond du Lac, the Fox River Valley, Madison, and the Milwaukee area. These presentations have been jointly hosted and sponsored by educational institutions and business associations. For example, Fond du Lac invited me to speak in response to a 2011 local study that found more than half of current employees plan to retire within the next 15 years. Yet the study found that many students are not aware or interested in the employment opportunities available, especially those in manufacturing – the dominant industry in Fond du Lac. The result is that Fond du Lac faces a looming skills gap that, if unmet, could have severe repercussions for the future of the community. At the December 2011 meetings I attended, community leaders resolved to use the strategies and recommendations laid out in the *Pathways* report to preemptively address this gap.

Several Wisconsin communities have expressed interest and are working to better prepare youth for workforce success.

Illinois. In direct response to the *Pathways* report, the State of Illinois has launched the *Illinois Pathways Initiative*, a comprehensive effort to improve career education for high school students in promising, high-growth career areas. Under the initiative, the state is encouraging the development of “learning exchanges.” These exchanges will bring together education, business, labor, and other organizations to develop high-quality programs of study, as well as opportunities for work-based learning. The Illinois effort was formally launched by Gov. Pat Quinn and other state leaders in February, 2012. And in September, the Governor announced the state would fund scale-up of learning exchanges in agriculture, health sciences, information technology, manufacturing, and research and development. *Illinois Pathways* focuses on: (1) better supporting local schools, postsecondary institutions, and programs to enable learners to explore their academic and career interests in Science, Technology, Engineering, and Math (STEM) fields; and (2) improving coordination of public and private investment in supporting the development of a competitive workforce.

The initiative is funded by several million dollars in Race to the Top funding and is overseen by a partnership between the State of Illinois' lead education and economic development agencies.

Programs of Study are organized around major career clusters, and will include high-quality curricula as well as opportunities for work-based learning experiences. The initiative establishes an infrastructure for the STEM Learning Exchanges which will coordinate planning and investment, aggregate and share resources, and identify training and skills gaps.¹³ This coordination at the statewide level better connects and serves local programs within similar career clusters. Ultimately, Illinois hopes that it will be able to bring other states into this partnership, which could be an opportunity for collaboration with Wisconsin.

Washington. In early 2012, the Washington State Legislature considered legislation called the *Career Pathways Act*, which aims to increase career exploration opportunities for students and promote multiple pathways for career success. The legislation intends to make career exploration a routine part of middle and high school instruction. It directs schools to include career and technical education as part of basic education and to offer programs of study in specific occupational cluster areas, which students can then select as a career goal or major. It facilitates increased opportunities for workplace learning and for business-school collaboration. It encourages businesses to offer internships for high school students and teachers, and to provide mentors in schools. The legislation also emphasizes the validity, dignity, and economic value of non-college career pathways equally with four-year college pathways. For instance, it would require all education and workforce agency materials to include information about multiple career pathways across all levels of postsecondary education and to emphasize the value of these pathways. Information about employment prospects and earnings would be broken down by type of degree and career major. Furthermore, the bill would amend the definition of “postsecondary education” to include apprenticeship, career training, community and technical college, or university education.¹⁴ While the legislation was not ultimately approved in 2012 (it passed the House, but not the Senate), leaders intend to bring it up again early in the 2013 session.

New York. In order to obtain a prestigious “Regents” high school diploma in New York State, students are required to pass statewide, standardized Regents Examinations in five subjects, including English, Math, Science, American History, and Global Studies. But in an era in which many argue students should be “college and career ready,” these academic tests are hardly a measure of career readiness. The state is thus evaluating a proposal to increase the number of pathways to graduation by allowing students to substitute a rigorous career assessment for one of the academic exams. The change would allow students to substitute a relevant, approved STEM or Career and Technical Education assessment for the traditional Geography and World History Regents exam. The Board of Regents is working with a national expert board to identify and approve technical assessments that would cover the wide range of careers while retaining the traditional level of rigor. The Pathways Project has been helping the Board to review the rigor of selected technical assessments and establish which assessments could be included on the approved list. The Board is also examining how student performance on selected technical assessments can be used for school accountability purposes.¹⁵

Indiana. Indiana has examined its educational approach in light of the evolving skill requirements for high wage and high demand industries in the state. An assessment commissioned by Indiana’s Education Roundtable demonstrated that the needs of Indiana’s economy and the output of its public education system were not well aligned. The Roundtable is working to increase alignment and strengthen technical training in the state. They are building on the state’s College and Career Pathways program, which provides an aligned sequence of secondary and postsecondary courses leading to industry-recognized credentials, certifications, or degrees for high wage, high demand careers in Indiana. High school students are offered dual credit opportunities that allow them to complete core high school

requirements early and enroll in postsecondary courses on a track that will lead to a meaningful postsecondary credential. The Roundtable is also working to create a network of regional partnerships that bring together leaders in business, workforce development, K-12 and higher education, and civic/youth-serving organizations. These partnerships are charged with promoting education-workforce quality and economic growth in a region, by strengthening academic foundations for high school students; bridging high school and postsecondary education; and connecting education with emerging economic growth and employment opportunities.^{16,17}

Oklahoma. Oklahoma's CareerTech system is often cited as a leading workforce development model throughout this country and the world. CareerTech provides rigorous, competency-based curriculum, education, and training in a variety of fields. Unlike many other states, these Oklahoma centers often mix high school students in classes with older adults. Programs are developed with the input of industry professionals and customized to incorporate the knowledge and abilities needed to master an occupation. Thus, students are learning the very skills employers are seeking in the workplace. The system is funded through a property tax. The business community strongly supports this tax because of the system's success in providing education and training that meets local business and industry needs. The system is accessible to almost every citizen in the state and boasts a high rate of success in job placement; over 90% of participants move into employment positions, continuing education, or the military.¹⁸

CareerTech integrates four broad service areas to address state workforce development needs:

- 1) *Technology Centers* operating throughout the state offer a variety of hands-on career and technical educational options to high school students and adults. Training is aligned with the needs of local business and industry partners. High school students who live in a technology center district can attend programs tuition-free and often can earn college credits in a variety of career majors through their training. Though adults must pay for courses, the cost is often very reasonable.
- 2) *Comprehensive Schools* serve students in grades 6-12 at 550 sites throughout the state. Nearly half of Oklahoma's high school students are enrolled in CareerTech classes ranging from broad career exploration programs to career-specific courses. Programs of study are organized around one of eight cluster areas and provide relevant, hands-on experiences that keep students engaged in school and help them develop skills for adult success.
- 3) *Skills Centers* offer specialized, occupational training to adult and juvenile offenders through 16 centers operating within state correctional institutions. Some centers also administer dropout recovery programs for disconnected high school students. Participants are trained in several industry clusters. After release, graduates are connected to employment

Oklahoma's CareerTech system is accessible to almost every citizen in the state and boasts a high rate of success in job placement.

Skills Centers offer specialized, occupational training to adult and juvenile offenders through 16 centers operating within state correctional institutions.

and support services. Evaluations show that an impressive 75% of released program graduates have not been re-incarcerated five years later.

- 4) *Business and Industry Services* work to identify industry needs, provide resources, and offer training programs for local businesses. Services include instructional support to develop, publish, and administer assessments and other materials for CareerTech programs that are aligned with industry certifications and standards.

National Initiatives for Moving *Pathways to Prosperity* Forward

Given the immense interest and response to the *Pathways* report, we are working to move the conversation and action forward, through two main initiatives at the national level.

National Pathways to Prosperity Network. We are working closely with a network of states to build career pathways systems for high school students. We are collaborating with Jobs for the Future, an organization working to align education with today's high-demand careers. The network currently includes six states— Illinois, Missouri, Massachusetts, Maine, North Carolina, and Tennessee—who are committed to deeply engaging with employers and educators to build a statewide pathways system. State systems will convene and engage a coalition of key public and private sector leaders and will incorporate critical pathways elements:

- Employers committed to providing learning opportunities at the workplace and supporting the transition of young people into the labor market;
- Career pathways with clear structures, time lines, costs, and requirements, that integrate high school and community college curricula and align with labor market needs;
- An early and sustained career information and advising system strong enough to help students and families make informed choices about educational career paths; and
- Local or regional intermediary organizations to provide the infrastructure and support for the development of such pathways.

National Pathways to Prosperity Conference. The Pathways to Prosperity Project will host a national conference at Harvard in March 2013, which will bring together national leaders and state teams who are interested in the pathways ideas and want to work toward developing career pathways systems in their states.

William C. Symonds directs the Pathways to Prosperity Project, which is based at the Harvard Graduate School of Education. The Pathways Project released a major report in February, 2011, outlining promising solutions to our increasing national failure to prepare many young adults for success. To date, Symonds has

spoken on the report in over 30 states, and is working with several states that are currently implementing the Pathways vision for better preparing their young people for work. Symonds helped create the Pathways Project while he was a senior fellow at Harvard's John F. Kennedy School of Government in 2007-08. Prior to that, he spent nearly 25 years as a senior correspondent and bureau chief for "Business Week Magazine." During his career at Business Week, he covered business in the U.S. and abroad, and led bureaus in Pittsburgh, Denver, Boston, Toronto, and Rome, Italy. He also served as Business Week's chief education correspondent for many years, and wrote extensively about the role of U.S. business in school reform.

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Glossary

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Apprenticeship (training)

Apprenticeship is an educational method featuring on-the-job training.

“Apprentices are employees at the firms and organizations where they are training, and combine productive work along with learning experiences that lead to demonstrated proficiency in a significant array of tasks. The programs usually...require students to complete course work that includes math, verbal, and occupation-specific content...The course work is generally equivalent of at least one year of community college. In completing apprenticeship training, workers earn a recognized and valued credential attesting to their mastery of skill required in the relevant occupation.”¹

Associate's Degree

A two-year program combining “technical skills with general education, such as math, communications, and social sciences.”²

Career and Technical Education (CTE)

Education focusing on job-specific technical skills related to a particular career pathway. CTE incorporates core academic skills with employability skills (such as critical thinking and responsibility), and the application of such skills within a work context.³

Dual Credit

Dual credit or dual enrollment allows a high school student to earn both high school and postsecondary credits for the same course.⁴

Hard Skills

Technical or academically-oriented skills, such as math, literacy, or science skills, often confirmed by standardized tests, assessments, or certifications.⁵

Industry Clusters

“Industry clusters are geographic concentrations of competing, complementary, or interdependent firms and industries that do business with each other and/or have common needs for talent, technology, and infrastructure.”⁶

Job Shadowing

An activity that “pairs a middle or high school student with an employee—often called a mentor—at the employee’s workplace...Students can see for themselves how the skills they are learning in school are applied to a career and ask their mentors specific questions about their jobs.”⁷

Postsecondary Education

Education that occurs after the completion of high school, generally leading to a degree, credential, or certification in an academic, career-oriented, or professional field.

Service-Learning

Service-learning “integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities.”⁸

Soft Skills

“Nontechnical skills, abilities, and traits required to function in a specific employment environment: delivering information or services to customers and co-workers; working effectively as a member of a team; learning or acquiring the skills necessary to perform a task; inspiring the confidence of supervisors and management; and understanding and adapting to the cultural norms of the workplace.”⁹

Vocational Education

Education designed to train people in job-specific skills. Vocational and Career and Technical Education are sometimes used interchangeably; however, Career and Technical Education tends to imply an extension of traditional vocational education

that incorporates cutting-edge technology and a broad range of skills important to the global economy.¹⁰

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Career Academies: An Evidence-Based Approach to Preparing Youth for Adult Success

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One of the best-studied and most successful models for helping youth transition into work and family life is Career Academies. Over the last 40 years, Career Academies have become a widely used high school reform that aims to keep students engaged in school and prepares them for successful transitions to postsecondary education and employment. Career Academies are organized as small learning communities within high schools that combine academic and technical curricula around a career theme. They also work with local employers to provide career-based learning opportunities. Since 1993, MDRC has been conducting a rigorous evaluation of the Career Academy approach in a diverse group of nine high schools across the United States. Career Academies have been shown to improve labor market outcomes, especially for young men. Eight years after scheduled graduation, young men in Career Academies had earned an average total of nearly \$30,000 more than their peers. In addition, young men in Career Academies were more likely to be married, to be custodial parents, and to be living independently with their children.

Over the last century, U.S. policymakers have worked with educators to build public education that will produce graduates with work-relevant skills who are ready to compete in a global economy. Vocational education policies and programs have been enacted to benefit high school and postsecondary students, such as the Vocational Education Act, the Carl D. Perkins Career and Technical Educational Improvement Act, and the School-to-Work Opportunities Act.¹ Despite these efforts, the U.S. seems to be losing ground internationally. When compared to other industrialized nations, high school graduation rates have fallen from 1st place in the 1970s to 13th place in the last decade. Moreover, those students who graduate are less prepared for postsecondary education and labor opportunities than ever before.²

Why Consider Career Academies?

The time seems right for Career Academies for three reasons:

- 1) The labor market for high school-age youth has continued a dangerous decline since the 1990s. By 2008, only about one third of young people ages 16 through 19 held jobs, compared with 45% in 2000.³ The labor

When compared to other industrialized nations, high school graduation rates in the U.S. have fallen from 1st place in the 1970s to 13th place in the last decade.

prospects of young men of color, particularly African-Americans, have declined even more steeply.⁴

- 2) Increasing attention is paid in high schools to high-stakes academic testing and college preparation. This has lessened the focus on other high school goals, including youth development and preparation for postsecondary employment.
- 3) The Career Academy model predates many popular reforms and offers a comprehensive approach that incorporates the best of other initiatives (e.g., school-to-work initiatives, small learning communities, and efforts to combine academic rigor and real-world relevance). The business community has a reinvigorated interest in supporting high school improvement and in helping young people gain access to high-quality learning opportunities in the workplace.

Career Academies offer a systematic approach to addressing the challenges young people face as they prepare for postsecondary education and the world of work.

What are Career Academies?

The Career Academy approach has taken root in a rapidly increasing number of high schools, with an estimated 7,000 academies across the country in 2010.

Career Academies were first developed almost 40 years ago with the aim of restructuring large high schools into small learning communities. The goal was to create better pathways to further education and workplace opportunities. Since then, the Career Academy approach has taken root in a rapidly increasing number of high schools, with an estimated 7,000 academies in schools across the country in 2010.⁵ Career Academies operate as schools within schools and typically serve between 150 and 200 students from grades 9 or 10 through grade 12. On average, about 30 to 60 students are enrolled per grade. Career Academies are defined by three core components:

- 1) **They are organized as small learning communities to create a more supportive, personalized learning environment.** Groups of students take the same courses together over several years, ideally with the same teacher the entire time.⁶
- 2) **They combine academic and career/technical curricula around a career theme to enrich teaching and learning.** Career Academies nationwide offer a range of occupational themes, including business and finance, health sciences, high-technology areas, pre-engineering, public service, travel and tourism, and video technology. An important facet of Career Academies is voluntary recruitment – students enroll in the career themes that interest them.
- 3) **They establish partnerships with local employers to increase students' awareness of career options in a given field.** These private sector partners may inform curriculum and standards, teach and interact with students, provide career awareness and development activities, and

offer opportunities for internships and jobs.⁷ In addition, they may help to provide funding for these programs.

Why is the Career Academies Evaluation Reliable?

MDRC, a well-respected social policy research organization, has been conducting an evaluation of the Career Academy approach since 1993. This study is rigorous for several reasons.

Large, Diverse Sample. The study included 1,764 students from nine high schools across the United States. Each school was located in or near a large urban school district. Locations included Baltimore, MD; Miami-Dade, FL; Pittsburgh, PA; Socorro, TX; San Jose, Santa Ana, and Watsonville, CA; and Washington, DC. Compared to school districts nationally, these schools had substantially higher dropout rates, unemployment rates, percentages of low-income families, and percentages of ethnic minority students. The participating Career Academies served a cross-section of the student populations and tended to reflect the diverse ethnic, gender, and socioeconomic characteristics of their host high schools. More than 50% of the sample was Hispanic and another 30% was African-American.

Students came to the programs with varying levels of school engagement; some were doing well in school, and others appeared at risk of dropping out or ending their education after high school. The goal for the “motivated” students was to prepare them for college while providing career-related learning experiences. The goal for the “at-risk” students was to reengage them, providing them with more applied learning experiences and encouraging them to develop higher aspirations for education and employment. For analysis purposes, the study divided the students into groups at high, medium, and low risk of dropping out of school based on several indicators (e.g., eighth-grade attendance rates and grades, falling behind on progress toward graduation, being retained in a prior grade, or having transferred schools two or more times).⁸

Random Assignment Research Design. The Career Academies Evaluation is one of the few studies of a school reform initiative that uses a rigorous random assignment design. Because so many eligible and appropriate students applied for the program, approximately 55% of applicants were randomly selected to enroll in a Career Academy. Academy students were compared to a nontreatment group, consisting of the remaining 45% of students who received the high schools’ regular education programs. The outcomes for the non-Academy group are the best indicators of how students in the Academy group would have fared if they had not had access to the program.

Long-term (Longitudinal) Research Design. The Career Academies Evaluation used data from high school transcripts and surveys administered during high school and at three points during the eight years following students’ scheduled graduation from high school. The latest findings are based on data collected from 1,428 youth who completed a follow-up survey eight years after graduating from high school. We can have a high degree of confidence that the findings are reliable

We can have a high degree of confidence that the findings are reliable given the length of the study and the high response rates.

because of the extensive length of time that the students were followed, and the high response rates (about 81% of the original sample).

Have Career Academies Been Successful?

Short-Term Indications of Success

Data collected during high school showed that Academy students were more likely than non-Academy students to:

- report high levels of interpersonal support from teachers and peers;
- build a high school transcript that combined academic and career/technical courses;
- be employed during high school, and be employed in jobs that were connected to school and that incorporated “high” levels of work-based learning; and
- be exposed to a range of career awareness and development activities.

For students who entered the program at high risk of dropping out, the Academies increased the likelihood of staying in school through the end of the 12th grade year, improved attendance, and increased the number of credits earned toward graduation. For students at medium or low risk of dropping out, the Academies increased career and technical coursetaking and participation in career development activities without reducing academic coursetaking.

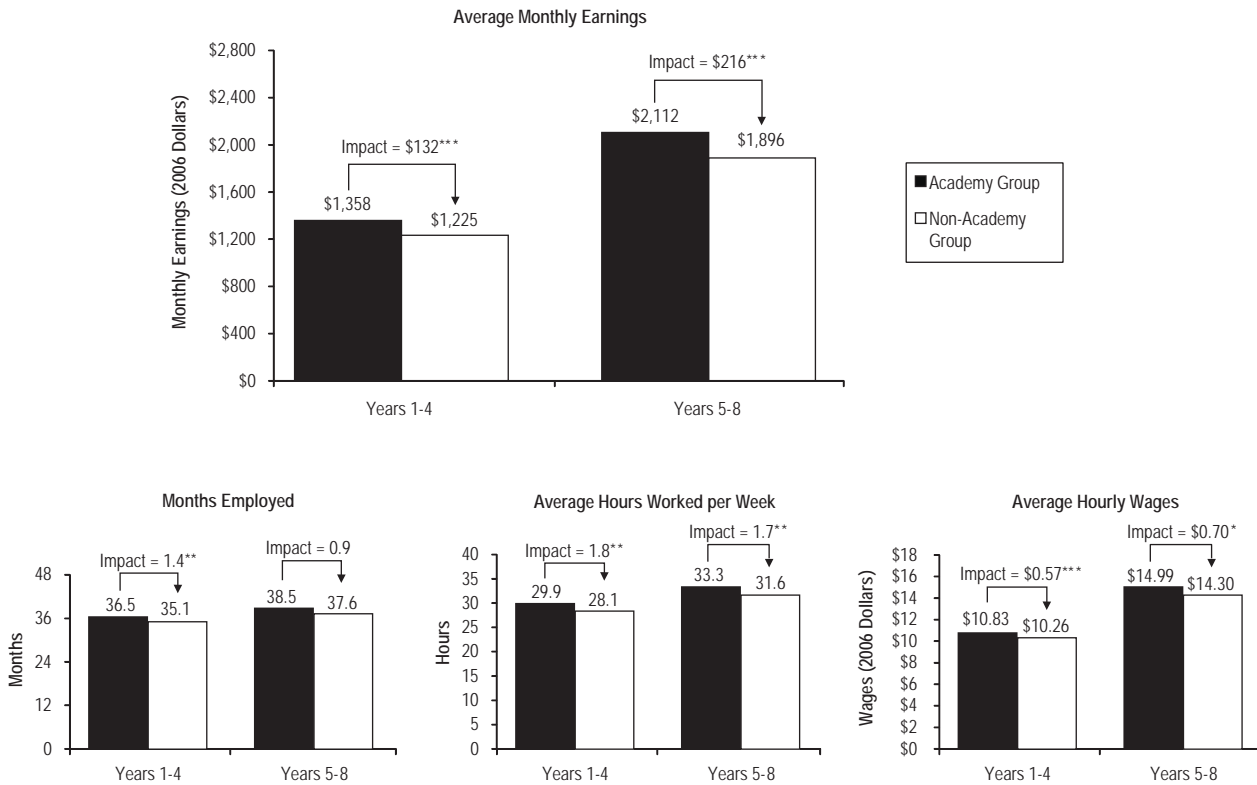
One important finding was related to the structure of employer partnerships within a Career Academy. Each program’s partnership with local business or industry varied: some were highly structured and others were more loosely arranged. Some Career Academies employed a non-teaching staff person as a liaison between the employers and the students; some added that responsibility to the load of their teachers. Students in Career Academies with highly structured employer partnerships or support for non-teaching staff who served as liaisons reported higher levels of participation in career awareness and work-based learning activities than those in Career Academies that had less-structured partnerships or coordinators with teaching responsibilities.

Career Academies produced positive and sustained impacts on average monthly earnings eight years after the program ended.

Long-Term Labor Market Outcomes

- 1) Remarkably, the Career Academies produced positive and sustained impacts on average monthly earnings exhibited eight years after the program ended (see Figure 1).

Figure 1. Impacts on average monthly earnings and components of earnings for the full sample.



Adapted from *Career Academies: Long-term impacts on labor market outcomes, educational attainment, and transitions to adulthood* (p. 13). Adapted with permission. Source: MDRC calculations from the *Career Academies Evaluation Four-Year Post-High School Follow-Up Survey* ($N = 1,458$) and the *Eight-Year Post-High School Follow-Up Survey* ($N = 1,428$). Notes: Earnings and wages are reported in 2006 dollars. Measures reflect averages over the first and second 48-month periods following scheduled high school graduation. Statistical significance levels are indicated as: *** = 1 percent; ** = 5 percent; and * = 10 percent.

For each participant, Career Academies produced an average increase in earnings of \$132 per month during the first four years of the follow-up period and \$216 per month in the final four years. This amounts to an additional \$2,088 in earnings per year and a total net increase of \$16,704 (in 2006 dollars) for each participant in the Academy group across the eight-year follow up. These differences are statistically significant, meaning it is very unlikely that the differences arose by chance. As shown in Figure 1, the increases in monthly earnings were driven by increased number of months employed, hours worked per week, and hourly wages in the Academy group. Interestingly, Academy members were more likely to be working in a job that was directly related to the subjects and themes they studied during high school. What's more, Academy group members indicated that their current choice of occupational field was influenced by their high school experiences.

For each participant, Career Academies produced an average increase in earnings of \$132 per month during the first four years of follow up and \$216 per month in the final four years.

Over eight years, young men in Career Academies earned an average of nearly \$30,000 in additional real earnings in 2006 dollars.

- 2) The Academy impacts on labor market outcomes were concentrated among young men in the study sample. Impacts for young women were not significant.

During the eight years after scheduled graduation, the Career Academy produced an average increase of \$311 in real monthly earnings per participant for young men (compared to \$86 for young women). This amounts to an increase of \$3,722 in annual earnings. Over eight years, this totals nearly \$30,000 in additional real earnings (in 2006 dollars) for males in the Academy group. The Academy programs also produced sizable increases in number of months employed, hours worked per week, and hourly wages for young men. To put this effect into perspective, research has estimated that two years of community college increases annual earnings for young men by 11-12%, compared to having only a high school diploma.⁹ Career Academies produced a 16% increase in earnings over the non-Academy groups. This difference does not mean that Career Academies can or should serve as a substitute for postsecondary education for young men, but it does highlight the size of the labor market impact of Career Academies. Although the labor market outcomes for young women in the program were generally positive, they were not statistically significant.

- 3) Impacts on labor market outcomes varied among the three risk subgroups, but were not statistically significant.

The most consistently positive impacts accrued to the high-risk subgroup. However, these students were also the most likely to leave the program before the end of their 12th grade year, meaning there was less time for the program to impact them.

Long-Term Education Outcomes

- 1) Importantly, Career Academies had no impact (positive or negative) on high school completion rates. However, the rates for both the Academy and non-Academy groups were higher than national averages.

Specifically, students in both the Academy and non-Academy group were substantially more likely to graduate from high school on time (about 75%) than similar students from similar districts across the country (about 65%). Yet we cannot conclude that Career Academies produced these results, because both the Academy and non-Academy groups had similar graduation rates. This may mean that Career Academies attract better-prepared or more highly motivated students.

- 2) Overall, the Career Academies had no impact (positive or negative) on postsecondary education enrollment and attainment rates.

By the end of the follow-up period, about 50% of the Academy group had earned a postsecondary credential. The non-Academy group had similar educational outcomes. This means that the substantial impacts on labor market outcomes for young men did not come at the expense of reducing their access to and completion of postsecondary education credentials.

- 3) Impacts on educational attainment for young men and young women did not vary. The program also did not differ in its overall impact on educational attainment for the high-, medium-, or low-risk subgroups.

Long-Term Family Formation Outcomes

The study also examined several indicators of a successful transition into adulthood. Career Academies had striking impacts on family formation.

- 1) Career Academies produced an increase in the percentage of young people living independently with their children and a spouse or partner. While these impacts were similar for both young men and young women, young men also experienced positive impacts on marriage and being custodial parents.

At the eight-year follow up, one-third of the Academy group was living independently with their children and a spouse or partner, compared with 27% of the non-Academy group. This represents a 23% increase in two-parent households over and above the rates for the non-Academy group. Of the Academy group, 38% were married and living with their spouse and 51% were custodial parents eight years after scheduled graduation. This amounts to a statistically significant increase in marriage rates of 4 percentage points and custodial parent rates of 7 percentage points, relative to the non-Academy group. The impacts on marriage and being a custodial parent were somewhat larger for young men than for young women. For young women, the Career Academies significantly decreased the percentage still living with a parent or guardian at the eight-year follow up by 9 percentage points.

What are the Limitations of the Career Academy Approach?

Career Academies had some impressive impacts on youth adult success, but there were some notable limitations. First, nearly one-third of the students who initially enrolled in the Academies left the programs before the end of high school. In fact, between students who left the program or who did not fully participate, over half the students who were initially selected to enroll in a Career Academy did not participate intensively in career awareness and development activities or were not involved in work-based learning activities. Students in the high-risk category left the program in the greatest percentages. (The evaluation results included all students who enrolled in the program, regardless of whether they remained in the program or fully participated.)

Additionally, the curricula and instructional strategies used in these Academies were generally similar to those offered in the rest of the high school and did not typically include integration of academic content and knowledge with career-related applications. Such integration would have taken greater investment in professional development for staff, and staff time to create new curricula. The Academies had no impact on standardized test scores.

Finally, it's important to acknowledge that the findings listed in this chapter are most likely to apply to Career Academies that are able to carefully implement the three core components of the model with integrity.

Young men who were in Career Academies were more likely to be married and to be custodial parents eight years after high school.

What is the Future of Career Academies?

The Career Academies Project: Linking Education and Careers. This project, funded by the Institute of Education Sciences of the Department of Education, grows directly out of the MDRC evaluation. It attempts to strengthen the work-based learning component of Academies along with enhancing college and career exploration activities. The goal is to institute a cohesive program consisting of curricula, resources, guides, and professional development to be embedded in Academies. This will ensure that all students understand the connections between what they learn in school and their future, make informed decisions about college and career, and acquire the skills to succeed in both. The program is now fully developed and is being piloted in 18 Career Academies in five cities. Data are being collected to measure both best practices and the program’s ability to influence key student outcomes. A final report, guides, and curricula will be available within the year.

Funding for Career Academies. Since the end of the School-to-Work Opportunities Act, Career Academies have struggled with providing work-based learning and career exploration experiences to their students, particularly the capstone internship experience. Federal funding has been proposed that would allocate \$1 billion to Career Academies over the course of three years. Grants of \$4 million would be available to states to distribute competitively to localities. The Department of Education proposes a definition of “Career Academy” that matches the core components outlined in this chapter (see page 16). Funding at this level could increase the number of Career Academies by 3,000 and serve an additional 500,000 students.¹⁰

What are the Implications for Policymakers?

According to two national organizations that support Career Academies (the National Academy Foundation and the Career Academy Support Network), only three high schools in Wisconsin currently operate recognized academies (see chapter by L. Allen Phelps in this report). According to the Wisconsin Department of Public Instruction, several other high schools in the state may be implementing Academies or similar approaches, but these efforts are not tracked. Given the findings of the MDRC evaluation, here are some directions for policymakers as they consider the role of Career Academies in the youth employment crisis in this country:

Only three high schools in Wisconsin currently operate recognized Career Academies.

- 1) This evaluation demonstrates clearly that career-related experiences during high school can improve students’ postsecondary labor market prospects and ease their transition into family life. These results can only be reliably achieved if the three components of the Career Academy model are implemented with integrity.
- 2) Despite initial fears, school-to-career education can be accomplished without compromising academic goals, or distracting students from postsecondary education.

- 3) Career Academies can successfully serve students who are at high risk of dropping out of high school, while improving prospects for all students. In fact, the high-risk subgroup experienced the most consistent and positive impacts on labor market outcomes. All of this occurred without a systematic decline in access to postsecondary education opportunities for the low-, medium- or high-risk students.
- 4) Career Academies are committed to serving a diverse group of students, but they can make greater efforts to recruit and retain a larger proportion of high-risk students. Additional funding may be required for these outreach efforts.
- 5) Because more than 80% of the young people in the Career Academies Evaluation were Hispanic or African-American, these findings may have implications for determining effective strategies to help improve the employment prospects of young men of color, who disproportionately struggle in the labor market.
- 6) Within Career Academies, the structure of employer partnerships has a significant impact on student experiences. Academies with more highly structured partnerships, or with non-teaching staff dedicated to coordinating the partnerships, consistently offered students more opportunities to experience career awareness and development activities.
- 7) Several school districts and school reform initiatives around the country are now attempting to convert entire high schools into clusters of Career Academies. Instead of giving students the option of enrolling in traditional general or vocational programs, these wall-to-wall Academies offer students a choice among different Academies that combine academic and career-related curricula. This approach maximizes enrollment by the high-risk students (because it's mandatory) while maintaining participation of a broad mix of students. These models have not yet been evaluated.

Career Academies are one of the few youth-focused interventions that have been found to improve the labor market prospects of young men. In fact, the MDRC evaluation demonstrates that Career Academies can improve labor market preparation and successful school-to-work transitions without compromising academic goals and preparation for college. Investments in Career Academies during high school can produce substantial and sustained improvements in youth labor market prospects and ease transitions into marriage and parenthood.

Career Academies are one of the few youth-focused interventions that improve labor market prospects for young men.

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This chapter was adapted from the following publications:

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Endnotes

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⁹ Marcotte, D. E., Bailey, T., Borkoski, C. & Kienzl, G. S. (2005). The returns of a community college education: Evidence from the National Education Longitudinal Survey. *Educational Evaluation and Policy Analysis*, 27(2), 157-175.

¹⁰ Duncan, A. (2012, July). *Remarks by U.S. Secretary of Education Arne Duncan at the National Academy Foundation NEXT Conference*. Washington, DC: U.S. Department of Education. Retrieved from <http://www.ed.gov/news/speeches/remarks-us-secretary-education-arne-duncan-national-academy-foundation-next-conference>

Glossary

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Career Academies

A widely used high school reform aiming to keep students engaged in school and prepare them for successful transitions to postsecondary education and employment. They utilize small learning communities, combine academic and technical curricula around a career theme, and establish partnerships with local employers to provide work-based learning opportunities.¹

Longitudinal Research Design

A research study that is conducted over a long period of time and measures the same variables at multiple points in time.

Postsecondary Education

Education that occurs after the completion of high school, generally leading to a degree, credential, or certification in an academic, career-oriented, or professional field.

Random Assignment Research Design

A research study that is conducted by splitting participants into two groups: a treatment group and a nontreatment group. The participants are split in such a way that each one has an equal chance of being assigned to the treatment (or the nontreatment) group. The study then measures the differences between the two groups after the treatment or program has been administered. This design gives the best assurance that differences between the two groups are due to the treatment or program, and not due to other factors.²

Randomized

A method of dividing research participants such that each participant has an equal chance of being assigned to the treatment group or the nontreatment group.

Small Learning Communities

“Large high schools have begun a push for smaller learning communities within the large campus. A smaller learning community might be divided by interests or simply a division made based on arbitrary factors. The goal of the smaller learning community is to offer more attention to students and give them a more targeted track for their future learning.”³

Vocational Education

Education designed to train people in job-specific skills.

Glossary Endnotes

^{1,2} Kemple, J. J., & Willner, C. J. (2008). *Career Academies: Long-term impacts on labor market outcomes, educational attainment, and transitions to adulthood*. New York: MDRC.

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Early Childhood Programs as an Economic Development Tool: Investing Early to Prepare the Future Workforce

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High-quality early childhood programs provide sizable benefits to state and local economies. For each \$1 invested in high-quality early childhood programs, a state economy will get a \$2 to \$3 return on investment, measured by increased jobs or earnings for state residents. Such benefits are similar in magnitude to what states would get from investing in well-designed business incentives. Benefits come mainly from the effects on child participants, who are more likely to be educated, trained, and employed as adults. In addition, when stable, affordable, high-quality child care is available, parents are able to improve their productivity by putting in more work hours, missing fewer work days, experiencing less stress, and/or pursuing education. Ensuring that early childhood programs are of high quality is key to fully realizing their benefits. Although it can be a challenge to finance early childhood programs up front, states can capitalize on several substantial short-term benefits that these programs produce. Over the long term, these programs will pay for themselves.

Many rigorous and reliable studies have demonstrated that early childhood programs produce very high returns on investment. For every \$1 spent on high-quality early childhood programs, \$8 to \$16 is returned to society, largely through reduced future costs of crime and government assistance.¹ But if there is any case to be made for early childhood programs as *economic development* programs, then these programs need to provide economic development benefits, which I define as per capita earnings for state and local residents. My research specifically analyzes how investments in early childhood programs benefit state and local economies through increased per capita earnings. Using this approach, I can directly compare the track record of early childhood investments to conventional economic development programs such as business tax incentives.

Early childhood programs are a policy area in which it makes sense to have state governments take a strong role. Many of the economic development benefits of early childhood programs are returned to the state. In this chapter, I describe three highly effective early childhood programs and calculate the economic development benefits that they produce for state economies. I address commonly asked questions about how these benefits are distributed, how they contribute to the entire state economy, and how they compare to the benefits of well-designed business incentives. I discuss the short- and long-term benefits of these programs, and offer some options for how states can capitalize on short-term benefits. I then overview which elements of early childhood programs determine quality, and present some considerations for Wisconsin.

Many of the economic development benefits of early childhood programs are returned to the state.

Timothy Bartik

Which Early Childhood Programs are Considered?

My analysis focuses on three well-studied early childhood programs: (1) universal prekindergarten (pre-K) education, (2) the Abecedarian early childhood program, and (3) the Nurse-Family Partnership home visiting program. These three programs have been rigorously evaluated and have long-term follow-up data available, which allowed me to reasonably calculate their economic development benefits. What's more, these are model early childhood programs, which allowed me to estimate which best practices of early childhood programs have economic development benefits. Below is a brief description of each program.

Universal Pre-K. The pre-K program examined in this study is modeled after the effective Chicago Child-Parent Center and Perry Preschool programs.^{2,3,4,5} The program would provide free pre-K education to all four-year-olds for three hours per day during the school year. It would have a class size of 20 children, a lead teacher who is certified, and a paraprofessional teacher's aide. The program would be universally available to all four-year-olds, but not mandatory. The analysis assumes that 70% of all four-year-olds actually participate.⁶

Abecedarian Program. The Abecedarian early childhood program was operated as a random-assignment experiment from 1972 to 1977 in Chapel Hill, North Carolina. Disadvantaged families received five years of free full-time and full-year child care and pre-K education (from 7:30 a.m. to 5:30 p.m., five days a week, 50 weeks a year). The program targeted high-risk families (e.g., single parents, low income, low education). Services began when the child was six weeks of age and continued until the child entered kindergarten. The program also included home visits every other week. The child care incorporated educational goals from the very beginning, but with a highly individualized curriculum. Child-staff ratios were small, ranging from 6 infants to 2 teachers in the first year to 14 preschoolers to 2 teachers in the fourth and fifth years. Teachers for children ages 0-2 were high school graduates, teachers for children ages 3-5 were college graduates, and salaries were comparable to those of public school teachers.^{7,8,9}

Nurses have proven more effective as home visitors than paraprofessionals because of their credibility with mothers and their health care knowledge.

Nurse-Family Partnership Program. The Nurse-Family Partnership home visiting program provides first-time mothers from disadvantaged backgrounds with 30 nurse visits, starting from when they are pregnant until their child turns two. On average, about 7 visits occur prior to the child's birth and 23 occur after, with each visit lasting about 75-90 minutes. The visits have three goals: (1) healthier prenatal care, (2) more responsive parenting, and (3) improved life chances for the mother (e.g., better spacing and planning of subsequent pregnancies; help for the mother in completing her education and finding work; and more constructive involvement of the father in the family). First-time mothers are targeted on the theory that they will be more receptive. Nurses have proven more effective as home visitors than paraprofessionals because of their credibility with mothers and their health care knowledge.^{10,11,12}

What are the Economic Development Benefits of these Programs?

I define state economic development benefits as the increase in earnings per capita of state residents. I consider how these early childhood programs affect the future earnings of state residents above and beyond program costs. Costs and benefits are calculated in terms of their present value, which represents past or future dollars in today's terms, adjusting for both changes in prices and for the discount that people impose on dollars in the future versus dollars today.

The economic development effects are calculated for operating these programs at full scale. For universal pre-K, "full scale" means sufficient space for all four-year-olds whose parents choose the program. Based on the experience of states that offer voluntary universal pre-K, such as Oklahoma, about 70% of all four-year-olds would enroll in a universal pre-K program. This universal pre-K program would have the largest number of participants of the three programs I consider. I estimate that if such a program were operational throughout the United States, it would have slightly less than 3 million participants.

The other two programs are targeted at disadvantaged families. For them, "full scale" means sufficient slots for all disadvantaged families. Therefore, fewer children would participate nationwide: about 600,000 children for the Abecedarian program and 400,000 children for the Nurse-Family Partnership program.

The three programs differ in spending per participant. The Abecedarian program, which provides free, high-quality, full-day and full-year child care for five years, is the most expensive. The net cost of the program per child is over \$60,000 (after adjusting for cost savings from reduced spending on other child care and pre-K). In comparison, the net cost per child for the other two programs is much less: \$10,000 for the Nurse-Family Partnership program and \$5,000 for universal pre-K (in present dollars). Combining enrollment size and costs, full-scale universal pre-K and Abecedarian programs would be far bigger than a full-scale Nurse-Family Partnership program. The Abecedarian program is bigger because of its high costs per participant, and universal pre-K because of its many participants. The Nurse-Family Partnership program has modest overall costs because of its smaller number of participants and lower cost per participant.

All three of these early childhood programs have healthy ratios of state economic development benefits to costs. My analysis finds that for each dollar invested, these programs create a return on investment of around \$2 to \$3 in increased earnings to state residents. More specifically:

- High-quality universal pre-K has a return of \$2.78 per dollar invested.
- An Abecedarian child care program has a return of \$2.25 per dollar invested.
- The Nurse-Family Partnership program has a return of \$1.85 per dollar invested.

For each dollar invested, these programs create a return on investment of around \$2 to \$3 in increased earnings to state residents.

I emphasize again that these “returns on investment” of \$2 to \$3 only consider the benefits of these programs for increasing the earnings of state residents. Benefits for former participants who move outside the state are disregarded. And benefits for state residents from lower crime are also not counted. My focus is on only the “economic development” benefits for state residents.

Because these three programs are of dramatically different scales, the sizes of their effects on a state’s economic development are quite different.

- Adopting a full-scale Abecedarian program would increase the present value of state residents’ earnings by 1.7%.
- Adopting a full-scale state universal pre-K program would increase the present value of state residents’ earnings by 0.75%.
- Adopting a full-scale Nurse-Family Partnership program would increase the present value of state residents’ earnings by slightly more than 0.1%.

Keep in mind that an increase of 1% or 2% in state per capita earnings is a large number. The long-term effects on the total U.S. economy would amount to an estimated hundreds of billions of dollars per year. My estimates are deliberately conservative. For instance, I do not include the benefits that could potentially occur when the higher earnings realized by state residents are then saved and reinvested into the economy. This means that these economic development benefits have the potential to become even larger over time.

These results suggest that you get what you pay for. Early childhood programs of modest scale are unlikely to have large overall economic development benefits. If state policymakers want large effects from investing in children, they need to make large investments in evidence-based programs with a high payoff.

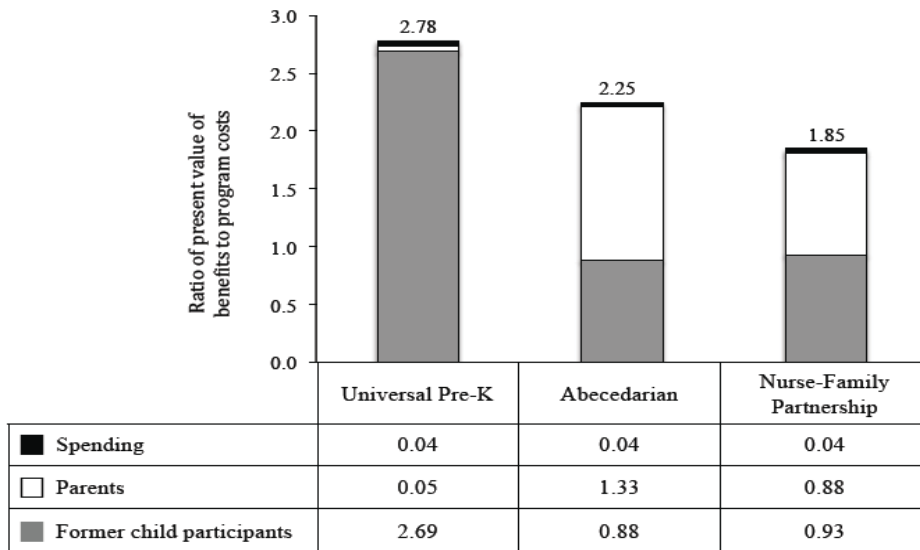
How Are the Economic Development Benefits Distributed?

Three aspects of these programs cause the increased state per capita earnings. Figure 1 graphically shows the breakdown of the various “transmission mechanisms,” (i.e., spending, parents, and child participants) through which these programs provide economic development benefits to a state’s residents.

- 1) **Employment effects on child participants.** The most important economic development benefits come from the impact of early childhood programs on their former participants. As adults, children in these programs have greater odds of being educated, employed, and trained in a specific occupation. What’s more, they have improved job skills and work attitudes. Many of these former child participants will stay in the same state or local economy as adults. The result is a local economy with a higher-quality labor supply. A higher-quality labor supply will attract more and better jobs to an area, leading to higher local per capita earnings.

As adults, children in early childhood programs have greater odds of being educated, employed, and trained in a specific occupation.

Figure 1. State Economic Development Benefits of Early Childhood Programs, Divided among Various Mechanisms for Causing Such Effects.



Adapted from *Investing in kids: Early childhood programs and local economic development* (p. 82). Adapted with permission. *Source:* Author's calculations. *Note:* For each early childhood program, this figure shows the ratio of effects on state residents' earnings to costs, in present values. The earnings effects are divided among three mechanisms for achieving such effects: 1) effects of spending more money on early childhood programs, 2) effects on parents of participants in these programs, and 3) effects on former child participants in these programs when they grow up and enter the labor force.

- 2) **Increased education or labor supply of parents.** With access to stable, affordable, high-quality child care, parents are able to improve their labor productivity by putting in more work hours, missing fewer work days, experiencing less stress, and/or pursuing education. Implementing early childhood programs positively affects the labor supply of parents, but the parental effects are generally smaller than effects on children. Not surprisingly, programs that provide more child care or that target families have larger effects on parents. The Abecedarian program provides five years of full-time and full-year free child care, and the Nurse-Family Partnership's program model emphasizes improving the life chances of mothers. Thus, roughly half of the benefits of these programs accrue through parents. In contrast, universal pre-K is too limited in scope and time (three hours a day for the school year for four-year-olds) to dramatically affect parents' earnings.
- 3) **Stimulation of the state economy.** Government spending on these programs leads to *multiplier effects*: early childhood programs will buy local supplies, pre-K teachers or other employees of early childhood programs will buy local goods and services, and so forth. Multiplier effects have political appeal in that the economic benefits are immediate. However, increased government spending on early childhood programs would require raising taxes, unless private or federal funding is available. Once one accounts for both taxes and spending, the multiplier effects of early childhood programs are modest. Most of the stimulative effects of spending are offset by the increased taxes.

Roughly half of the benefits from the Abecedarian and Nurse-Family Partnership programs accrue through parents.

The key to early childhood programs' long-term benefit is their effectiveness in improving not only hard skills, but also soft skills.

For both the parents and former child participants in these programs, only a portion of increased earnings occur because of increased educational attainment. Even after educational attainment is accounted for, these programs appear to have additional benefits to the labor quality of parents and children that increase employment rates and earnings. In addition, although the effects of these programs on children's standardized test scores tend to fade out over time, positive effects on employment continue into adulthood.

Why do these employment benefits persist? Nobel prize-winning economist James Heckman argues that the key to early childhood programs' long-term benefit is their effectiveness in improving not only hard skills, but also soft skills.¹³ Hard skills are skills such as math and literacy, typically measured by standardized tests. Soft skills are character skills and social skills, including self-confidence, how someone gets along with peers and authority figures, and the ability to plan. This is particularly important for businesses because soft skills are at least as important as hard skills in determining worker productivity, and such skills are increasingly demanded by employers.¹⁴ The development of soft skills and hard skills early in life leads to greater success in each subsequent grade, which then further accelerates the development of both soft skills and hard skills. As Heckman says, "skills beget skills."

How Do the Benefits from Early Childhood Programs Help the Entire Local Economy?

Do early childhood programs really benefit local and state economic development? Won't former child participants of these programs move away as adults? And how will better employment outcomes for participants translate into better outcomes for the economy as a whole?

Americans are not as mobile as we sometimes think. Over three-fifths of all Americans remain in their childhood state for most of their working life, and over half remain in their childhood metropolitan area for most of their working life. These percentages do not decline much for smaller or more economically distressed metropolitan areas. Thus, a large proportion of former childhood participants will stay in their home city or state, and they are more likely to do better as adults.

In addition, the entire local economy benefits from substantial spillover effects that result from increasing the average level of local skills. Having more highly skilled workers in an area allows employers to introduce new technologies more easily, and increases the overall competitiveness and productivity of local industries. For example, even if I am highly skilled, the productivity and competitiveness of my employer will be reduced if my co-workers are not skilled, or the workers at my employer's suppliers are not skilled. Therefore, what my employer can afford to pay me in wages will depend not only on my own skills, but also on the skills of other local residents.

How Do the Returns from Early Childhood Programs Compare with Business Incentives?

The returns from high-quality early childhood programs to state economic development are comparable to well-designed business incentives. Well-designed business incentives can produce a return of \$3.14 for each dollar invested. The returns from high-quality early childhood programs range from \$1.85 for a quality nurse home visiting program to \$2.78 for universal pre-K.

However, the returns on investment for early childhood programs are higher if looked at nationally than at the state level. Nationally, they range from \$2.47 for nurse home visiting to \$3.79 for universal pre-K. These national economic development benefits are higher because they count the increase in skills and earnings of program participants who as adults move to other states.

In contrast, well-designed business incentives have a return of only \$0.65 for each dollar invested when looked at nationally. Even well-designed business incentives reap part of their state returns by taking away jobs from other states. These programs benefit a state's earnings in part by reducing earnings in other states. But early childhood programs increase national economic productivity by improving the quality of America's workforce.

What Are the Long-Term vs. Short-Term Economic Benefits of These Programs?

The economic development benefits of early childhood programs are mostly long-term. Most of the benefits do not begin to show up until former child participants enter the labor force, and they are not fully realized until former participants enter their prime earnings years—at least 20 years later.

Taking a long view, high-quality early childhood programs will be self-financing. They have been found to significantly reduce criminal justice, special education, and other remedial education costs. They also reduce usage of welfare programs and increase tax revenue for the state and local economy.

However, in the short run, these positive effects are insufficient to cover costs. These programs will require sufficient investment to have large effects on the future workforce. Because these programs have high costs in the short-run, but reap benefits in the long-run, this raises the issue of whether our political system can mobilize support for enacting these programs.

One way to mobilize support for early childhood programs is to identify the possible short-term benefits. For instance:

- 1) Free child care and other services to parents increase parental labor supply, which can increase spending and stimulate the state economy.
- 2) High-quality early childhood programs have been shown to significantly reduce the percentage of children in K-12 special education. Savings in the costs of special education and other remedial education services in elementary

Taking a long view, high-quality early childhood programs will be self-financing.

school will have shorter time horizons. Special education placement for one student can cost \$10,000 per year, for up to 13 years when students are in the K-12 system. After 10 years, early childhood programs may be able to cover between 50% and 150% of their annual costs through reduced special education costs alone.

- 3) Early childhood programs can help attract parents to a local area and raise local property values. For example, we know from numerous, rigorous studies that parents and homebuyers are willing to pay higher prices for homes that are assigned to schools with higher elementary test scores. I estimate that for each \$1 in annual spending on high-quality pre-K, local property values will go up by \$13. Property value effects would be even greater, up to \$80 per \$1 invested, if parents fully understood how much early childhood education increased their child's future earnings.

For each \$1 in annual spending on high-quality pre-K, local property values will go up by an estimated \$13.

Moving from Analysis to Next Steps

In my book, I examine several strategies that can help garner support for early childhood investments. Of these options, I note two that are promising:

- Establish systems that regularly rate the scope, quality, and costs of state and local early childhood programs in a comparable way. Promote these quality rating systems to potential property owners. Such rating systems and promotion efforts would improve family awareness of the importance and quality of early childhood programs. As a result, high-quality early childhood programs would be more likely to increase property values in the short run.
- Support demonstration projects and experiments that add or link adult employment assistance, training programs, and other parental assistance programs to early childhood programs. We may find that even more comprehensive programs offer higher returns. Examine what works and what doesn't work, and which potential synergies there are in combining such efforts.

What Features of Early Childhood Programs Create the Strongest Effects?

In order to realize the high returns on investment that early childhood programs can provide to state and local economies, the programs must adhere to high quality standards and best practices. What do we mean by high quality? In my analysis, I estimate how much the program's return on investment would be affected by a number of education standards and best practices.

Class size. Studies suggest that class size is the key driver of quality, rather than the ratio of students to adults.^{15,16,17} I estimate that lowering a pre-K class size from 20 to 15 students would increase state economic development benefits by 83% of the original costs per participant. In other words, the original return on investment for pre-K of \$2.78 per dollar invested would go up to \$3.61 per dollar invested. After accounting for class size, lowering the student-to-adult ratio (by

adding a classroom aide, for example) does not seem to increase student progress in kindergarten classrooms or in child care centers for three- and four-year-olds.

Staff credentials. Specialized staff training and education in early childhood development tends to have positive effects on child outcomes.¹⁸ However, early childhood research shows mixed results for the effects on children of increasing the general educational credentials of staff, such as requiring a bachelor's degree.^{19,20,21,22,23} These effects may depend on several factors, such as the quality of the school granting the credentials, the specific major studied, and whether programs have sufficient funding to recruit and retain teachers with higher degrees. For example, increasing educational credential requirements may help increase teacher quality if accompanied by sufficiently high salaries to compete with public school teachers, but such credential requirements may be counterproductive if pre-K teacher salaries are so low that teacher turnover is high.

Teacher-student interactions. In two studies, pre-K classes in which teachers interacted with children more frequently to develop conceptual and thinking skills, and to provide higher-quality feedback, had modestly greater test score gains.^{24,25} Such test score gains predict modestly greater economic development benefits. Obtaining improvements in teacher-student interactions might require some improvements in training and management quality. My economic estimates indicate that such changes could likely be made at a low enough cost that the overall benefits of the program would increase.

Time intensity of services. Adding a second year of pre-K (e.g., adding age 3 to age 4) is likely to translate into significant state economic development benefits that exceed costs, although the benefit-cost ratio is not as large as for a single year of pre-K.²⁶ In contrast, having children spend more hours per day in pre-K increases economic development benefits,²⁷ but not enough to offset the increased costs. However, moving from a half-day to a full-day pre-K program may increase access to the program for some families, by providing full-day child care.

Targeted or universal eligibility. Targeting pre-K programs to those children most in need is likely to yield higher state economic benefits per dollar spent than universal eligibility. However, the evidence suggests that the benefits of pre-K are almost as strong for children from working- and middle-class families as they are for children from low-income families.²⁸ It seems likely that pre-K's benefits for the middle class are extensive enough that broadening pre-K services beyond a lower-income target group will have net economic development benefits.

Institution of delivery. No strong evidence exists that the quality of pre-K education is affected by which institutions deliver it, whether public or private. Oklahoma's near-universal pre-K system is mostly delivered through its public schools.²⁹ Georgia's extensive pre-K system is largely delivered through payments to private pre-K providers.³⁰ Both systems have significant evidence of success in improving educational outcomes. What is more important than the institutions that deliver pre-K is whether the program operates with sufficiently high quality standards for all service providers.

Evidence suggests that the benefits of pre-K are almost as strong for children from working- and middle-class families as they are for children from low-income families.

Considerations for Wisconsin

Wisconsin currently offers universal access to pre-K for four-year-olds, with funding allocated through the public schools. Districts may provide pre-K programs through the public school system or contract them out to Head Start agencies, private centers, or other community-based programs. These pre-K programs serve about two-thirds of the state's four-year-olds and 14% of three-year-olds. Wisconsin's pre-K system meets five out of ten quality benchmarks that were assessed in 2010-11 by the national State Preschool Yearbook.³¹ The state's public pre-K programs appear to have a solid infrastructure and strong quality standards. Less standardized information is available about child care and home visiting programs in the state, and the levels of access and quality for these programs may vary widely. More could be done to develop a coherent system of quality standards, training, accountability, and support for these areas.³² (For more information on the state of early childhood education in Wisconsin, see the National Institute for Early Education Research State Preschool Yearbook at nieer.org/yearbook, and the Wisconsin Council on Children and Families report at wccf.org/pdf/ece_planning_system_11-2009.pdf.)

One move toward improving quality in Wisconsin child care programs was the establishment of the YoungStar quality rating system.

One move toward improving quality in Wisconsin child care programs was the establishment of YoungStar in 2010. YoungStar is a statewide quality rating and improvement system used to evaluate participating child care providers. The system is meant to promote higher quality standards for state-funded, licensed child care providers and to provide standardized, quality-based decision criteria to help parents choose a program that is best for their children.³³ Further expanding, refining, and utilizing this program to improve child care quality in the state and to better inform parents and the public about the quality of programs could be one step toward underscoring the short-term benefits of investing in early childhood. (For more information, see the Wisconsin Policy Research Institute Report at wpri.org/Reports/Volume25/Vol25No2/Vol25No2.pdf.)

Given that Wisconsin already has universal pre-K for 4-year olds, along with efforts to improve ratings of child care quality, what are some options for moving forward? As outlined above, we know that more intensive early childhood programs can pay off for targeted groups, such as parenting assistance for first-time disadvantaged mothers (the Nurse-Family Partnership program), and comprehensive child care and preschool programs for low-income families (the Abecedarian program).

But such highly targeted programs run the risk of not providing broad enough benefits to a wide range of children. This is not simply an issue of political support. It is also an issue of advancing state economic development. Advancing state economic development requires affecting labor force quality for a sufficiently large share of the state's labor force, not simply helping the poor.

In keeping with Wisconsin's tradition of local control, one approach to combine targeting with broader assistance is to leave much of this up to local decisionmakers; the need for parenting assistance, child care assistance, and additional preschool may vary greatly in different areas of the state. If such local

programs are subject to regular rigorous evaluation, over time these programs may have increasing impact, which will generate both better economic returns and stronger public support.

One option for flexibly funding local early childhood efforts is North Carolina's effective Smart Start program. Under this model, state funds would be provided to local early childhood coordinating offices, perhaps organized at the county or intermediate school district level, that would provide a range of targeted services. For example, decisions would be made locally about parenting assistance programs, initiatives to improve local child care quality and provide additional child care assistance, and expansion of slots or funding for 3-year-old pre-K for families whose income or characteristics suggest that such services would be particularly helpful. Some local areas might choose to focus funding on low-income children in programs similar to the Abecedarian program, whereas other local areas might choose to devote the funds to more widespread assistance. A Wisconsin program of similar per capita scale to North Carolina's Smart Start would provide around \$100 million annually in state grants to local early childhood offices for providing targeted services.

Evaluations of North Carolina's Smart Start program suggest that it has been effective in improving educational outcomes. For example, a Duke University study was able to conduct a rigorous evaluation of Smart Start by exploiting the fact that the Smart Start program was gradually phased in, with some counties having high early funding, and other counties not getting program grants until later on.³⁴ This study found that the appropriate number of years later, 3rd grade test scores increased in targeted counties, and special education enrollment rates declined. The estimated effect of Smart Start was to increase average overall 3rd grade test scores by the equivalent of what students learn in 2 months. This is a remarkable effect on average test scores for all county children when we consider that the program typically only provides targeted services to a minority of the most at-risk students in each county. The predicted future earnings effects of this test score boost are such that each dollar invested in Smart Start would be returned manyfold. (For more elaboration on these calculations, see <http://investinginkids.net/2011/03/18/new-evidence-for-large-state-and-local-returns-from-investments-in-preschool-and-child-care-duke-university-study-of-north-carolina%E2%80%99s-programs/>.)

Conclusion

In sum, investments in high-quality early education programs produce state economic development benefits equaling two to three times program costs. These economic development benefits are of similar magnitude to the benefits of well-designed business incentive programs. Society will repeatedly benefit from adopting innovations that raise net incomes. The dilemma for policymakers is that most of the benefits of early childhood programs are realized many years after the initial investments have been made. Policymakers can help offset up-front costs through capitalizing on the short-term benefits of early childhood programs from reduced special education spending and increased property values. Policymakers

The economic development benefits of quality early childhood programs are of similar magnitude to the benefits of well-designed business incentive programs.

could also redistribute existing funding from less cost-effective programs to more effective early childhood investments. They should keep in mind that programs will only produce high payoffs if they are of high quality, and should work to ensure and promote quality in existing early childhood programs.

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Glossary

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Hard Skills

Technical or academically-oriented skills, such as math, literacy, or science skills, often confirmed by standardized tests, assessments, or certifications.¹

Multiplier Effects

Spending on businesses or programs often leads to an increase in economic activity, referred to as a multiplier effect. For example, if investments are made in early childhood programs, programs in the area will buy local supplies, teachers and other employees of the programs will buy local goods and services, and so forth, generating revenue in the local economy.^{2,3}

Paraprofessional

A person who is trained to assist professionals in a certain occupational field, but who does not hold professional licensure themselves.

Present Value

Present values represent past or future dollars in terms of present-day dollars, adjusting for both price changes over time and for the “discount” that people impose on future dollars versus dollars today. Future dollars are discounted because of most people’s preference to consume resources now rather than in the future. This discounting is separate from adjustments for inflation, which must also be taken into account.⁴

Random-Assignment Experiment

A research study that is conducted by splitting participants into two groups: a treatment group and a nontreatment group. The participants are split in such a way that each one has an equal chance of being assigned to the treatment (or the nontreatment) group. The study then measures the differences between the two groups after the treatment or program has been administered. This design gives the best assurance that differences between the two groups are due to the treatment or program, and not due to other factors.⁵

Return on Investment (ROI)

A measure to evaluate the efficiency of an investment, typically stated as the ratio between the overall benefits of the investment versus the overall costs of the investment.

Soft Skills

“Nontechnical skills, abilities, and traits required to function in a specific employment environment: delivering information or services to customers and co-workers; working effectively as a member of a team; learning or acquiring the skills necessary to perform a task; inspiring the confidence of supervisors and management; and understanding and adapting to the cultural norms of the workplace.”⁶

Spillover Effects

Spillover effects occur when the costs or benefits of an action affect third parties who are not directly involved. For example, if an education program increases the skills of some workers in a local area, workers that are not involved in the program may still be affected, for instance by benefiting from increased wages in the area. Even if workers from the program are highly skilled, the productivity and competitiveness of their employer will be reduced if the other workers are not skilled, or if workers at the employer's suppliers are not skilled.⁷

Glossary Endnotes

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Wisconsin Efforts to Prepare Youth for Success in the Workforce

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Since establishing the nation's first apprenticeship program in 1911, the State of Wisconsin has sponsored an array of programs designed to prepare youth for workforce success. For more than a century, Wisconsin has supported a two-tier or dual strategy designed to address workforce preparation and development priorities, with a largely separate focus on preparing youth for college versus careers. The current economic slowdown has heightened the importance of providing high-quality job preparation for youth and adults in all education and training settings, from K-12 through graduate and professional schools.¹ This chapter overviews promising career preparation options for high school students in the state, including the Youth Apprenticeship Program, Project Lead the Way, Youth Options, and Dual Credit opportunities. Although a relatively high percentage of the state's young adult population (18-24) either has a degree or is enrolled in postsecondary education, a lack of data exists on how and why these students are not succeeding in college and/or in the economy. Such information is vital to improving the state's workforce productivity.

Beginning in the 1960s, the K-12 education enterprise was strengthened by federal efforts to modernize and widen access to career and technical education programs in seven fields: agriculture, business, health, home and consumer economics, marketing, technical, and technology education. In 1984, the state of Wisconsin adopted the Education for Employment standards, which required school districts to implement plans to prepare all students for career and postsecondary education by offering, for example, school-supervised work experiences, career exploration and planning, and employability skills and attitudes. In the early 1990s, Wisconsin launched the nation's first youth apprenticeship program as the Congress and President Clinton implemented the School-to-Work legislation.

Over the same time frame, the Wisconsin Department of Public Instruction has launched other programmatic and policy efforts to improve career and college readiness and access. These include the postsecondary education options initiative, expanding access to Advanced Placement (AP), and the development of program articulation arrangements with the Wisconsin Technical College System campuses for integrated programs of study (spanning grades 11-14). Most recently, the latter effort has created the Wisconsin Career Pathways website to illustrate for students, parents, counselors, and educators the options for earning college credit and advanced standing in any of the 17 national career clusters (see <https://www.wicareerpathways.org>).

Over the past two decades, the Wisconsin Technical College System has widened its workforce development mission in response to both federal initiatives aimed at

In the early 1990s, Wisconsin launched the nation's first youth apprenticeship program.

youth and adults, as well as employers' rapidly changing technical skill demands. In addition, to better serve interested high school students, each of the 16 technical colleges has expanded transfer options with private and public four-year colleges in several professional fields, including nursing, engineering, business management, and information and computer systems.

This chapter provides a short description and implementation analysis for several of the programs mentioned above, which are overseen by the State Departments of Public Instruction and Workforce Development and the Wisconsin Technical College System. Each program's primary aim is to prepare Wisconsin's youth for success in the workforce. Specialized programs with particular niche missions that contribute indirectly to youth and workforce development, such as the Job Corps, 4-H, Science Olympiad, or First-Robotics, are beyond the scope of this review.

Two additional caveats help to frame the context for this review. Recently, high school Career Academies have attracted considerable attention on the national landscape. As described in the chapter by James Kemple in this report, a rigorous 12-year follow-up evaluation has documented the effectiveness of Career Academies in increasing the future earnings, employment, and marriage rates of high school participants, especially among young men. However, state and local attention to or interest in Career Academies appears to be very uneven. According to two national organizations – the National Academy Foundation and the Career Academy Support Network – only three Wisconsin high schools operate recognized Career Academies (all in Milwaukee), covering the fields of Engineering, Finance, Health Science, Hospitality and Tourism, and Information Technology. Several other Midwest states also have relatively low concentrations of recognized Career Academies: Illinois - 5, Indiana - 5, Michigan - 5, Minnesota - 2, Ohio - 1, and Iowa - 0.

For the programs described below, data and evidence documenting their implementation and/or impact on student outcomes (e.g., economic and social returns) is limited and/or dated. Moreover, much of the available information is generated by the sponsoring organization or agency.

Youth Apprenticeship

Created in 1991 as part of a statewide school-to-work initiative, the Youth Apprenticeship program offers 11th and 12th grade students a one- or two-year elective program leading to ten industry skill certificates issued by the Department of Workforce Development. The program combines classroom instruction with mentored, on-the-job learning experiences. Students in the one-year programs complete 450 hours of mentored worksite learning, while the two-year certificate students obtain 900 hours in work-based learning, which complies with federal and state child labor laws. Through the mentored internship with several trainers in each local business, students develop a broad understanding of the specialties and career pathways in such industries as: Agriculture/Food/Natural Resources, Finance, Health (Certified Nursing Assistant), and Manufacturing. The full details on the Youth Apprenticeship program can be found at: <http://dwd.wisconsin.gov/youthapprenticeship/>

The Youth Apprenticeship program offers students a one- or two-year elective program leading to ten industry skill certificates.

In several local Youth Apprenticeship consortia, classroom instruction is provided on state technical college campuses, which enables students to receive college credit for both the courses and associated work-based learning.

In 2008-09, the program received \$2.2 million in state support while serving 1,909 students, 1,262 employers, and 255 schools. Since its peak in 2009, Youth Apprenticeship enrollment has declined slightly to 1,697 students and 879 graduates in 2011-12. In spite of the difficult economic times recently, about 1,200 employers and 230 high schools operated programs in 2011-12. Since 1994, nearly 16,000 youth apprentices have received certificates from the Department of Workforce Development. In the pre-recession era (2005-2008), the program served roughly 1-2% of high school graduates annually.

Recent studies documenting graduate outcomes (e.g., success in the labor market and/or college), or graduate and employer satisfaction with the program are not available.

Project Lead the Way

Efforts to focus high school learning on the Science, Technology, Engineering, and Math (STEM) fields have been advancing rapidly nationally, as well as in Wisconsin over the past several years. Last year in Wisconsin, 151 high schools and 130 middle schools implemented Project Lead the Way programs with funding support from business and foundation partners, the State of Wisconsin, and federal legislation for career and technical education. Developed in upstate New York schools nearly a decade ago, Project Lead the Way is an eight-course, high school engineering curriculum using project- and problem-based learning strategies to acquaint students with engineering foundations (e.g., design and principles) and selected specializations (e.g., biotechnical, aerospace, civil, architectural). A fully implemented program provides students with 3 to 5 courses, along with four years of college preparatory math and science. End-of-course examinations for the engineering courses (similar to Advanced Placement exams) provide college credit for high-performing students. High school teachers in science, math, and career and technical education fields receive two weeks of intensive summer instruction from college-level engineering professors to become certified instructors. Each of the core courses—Introduction to Engineering Design, Principles of Engineering, and Digital Electronics—includes instructional content that is aligned with national common core standards.

The national, non-profit Project Lead the Way initiative also includes six, nine-week, middle school modules introducing younger students to robotics and automation, design and modeling, the science of technology, and other concepts through project-based learning. A Bio-Medical Sciences high school curriculum aimed at the growing demand for health and life sciences education was introduced in 2010.

Recent communications from Steve Salter, the Affiliate Director for Project Lead the Way at the Milwaukee School of Engineering, suggests that the number of

Last year in Wisconsin, 151 high schools and 130 middle schools implemented Project Lead the Way programs.

Wisconsin schools adopting Project Lead the Way programs is growing. The 2011-12 State profile data for Wisconsin is shown in Table 1.

Table 1. Project Lead the Way in Wisconsin: Descriptive Profile

Active School Districts	150 (34% of all WI districts)	
Active Schools	301	
High schools		151
Combined middle and HS		20
Middle schools and K-8s		130
Engaged Students	40,000 (estimate)	
Active Programs	332	
Engineering		157
Bio-Medical Sciences		25
Gateway to Technology		150
Project Lead the Way-Trained Teachers	752 (total)	
Summer 2012		233

Evidence regarding the program’s impact can be found on the sponsor’s website. Results from selected studies in other states suggest that Project Lead the Way is associated with raising the math and science scores of participating students compared to students from similar demographic backgrounds who were not exposed to the program. Some studies have also suggested that its method of instruction accelerates closing the achievement gap for culturally diverse students. Additional details from specific studies can be found on the Student Outcomes page at <http://www.pltw.org/about-us/who-we-are>

Two studies documenting program implementation have been conducted in Wisconsin settings. In Milwaukee middle schools with high concentrations of Latino students, a longitudinal design was used to study the influence of Gateway to Technology (GTT) modules. Significantly lower reading, math, and science scores were noted in the 6th grade for the Gateway to Technology students, but each of these differences disappeared by the 8th grade when these students were compared to a sample of middle school students with similar backgrounds not enrolled in the program.

In a Wisconsin study, students enrolled in Project Lead the Way courses received higher composite and math ACT scores.

In a case study of an engineering charter school located within a Wisconsin comprehensive high school, data for 2007-08 revealed that seniors completing Project Lead the Way engineering courses, when compared to all other seniors not enrolling in these courses, were significantly more likely to:

- receive higher composite ACT scores (26.7 compared to 23.1);
- attain higher ACT math scores (27.1 compared to 23.2);
- complete about the same amount of math and science credits in high school (about 3.2 to 3.4 credits); and

- report being involved in career exploration, including talking with adults about career goals and participating in school experiences that help them clearly define career goals.²

It is important to note, however, that these study designs do not make it possible to definitively test if benefits resulted from the program itself, or whether they might stem from unmeasured factors such as student motivation.

Youth Options

Since 1992, public high school juniors and seniors have been able to enroll in two- and four-year public and private, non-profit postsecondary institutions, including tribal colleges across Wisconsin. To supplement high school course offerings, Youth Options students are afforded the opportunity to explore careers or fields of interest, gain employable skills, or pursue other general interests. In some cases, the Youth Options courses enable students to get a head start on a degree or certificate by completing college courses not available at their high school. Selected high schools have opted to allow small groups of juniors or seniors to enroll in college courses with titles such as Introduction to College Writing, Communications for the 21st Century, History 101, or Anthropology. In other districts, Youth Options courses are embedded in high school/ postsecondary career and technical education programs (e.g., Computer Aided Design, Business Law, Accounting 2, Animal Sciences) or certain Youth Apprenticeship programs (such as Medical Terminology, Certified Nursing Assistant, or C++ Programming). However, the vast majority of Youth Options courses are individual enrollments on a postsecondary education campus.

Local school boards determine whether or not the course of interest meets the high school graduation requirements without duplicating existing courses. Once this determination is made, the board provides students and their families with payment for tuition, fees, and books. Students completing approved courses receive both high school and college credit. Additionally, a limited number of low-income students are eligible to receive partial travel cost reimbursement from the Department of Public Instruction once the semester is completed.

As noted in Table 2 below, the total number of students applying for and receiving the Youth Options credit since 2003 has stabilized to between 7,200 to 8,700 annually. Each student, on average, receives about 3.0 credits per enrolled course. Students attending the University of Wisconsin System or private non-profit colleges earn, on average, slightly more credit per enrolled course than students attending technical colleges. Of the 8,574 courses students completed through Youth Options in 2010-11, 63% were Wisconsin Technical College System courses and 33% were courses on UW-System campuses. Finally, it is important to note many Youth Options students complete more than one college course during their junior or senior year. Thus, the figures in Table 2 represent duplicated numbers of students (the same student was counted each time they took a course).

Youth Options courses enable students to get a head start on a degree or certificate by completing college courses not available at their high school.

Table 2. Annual Youth Options course completions and average credit generation
(Duplicated head count)

Year	Students	Avg. Credits	Wis. Technical College System		University of Wisconsin System		Private	
			Students	Credits	Students	Credits	Students	Credits
2011	8,574	2.94	5,365	2.76	2,803	3.15	406	3.30
2010	7,717	2.89	5,146	2.73	2,198	3.14	373	3.14
2009	7,967	2.94	5,300	2.77	2,314	3.21	353	3.29
2008	7,435	2.90	4,974	2.71	2,129	3.18	332	3.39
2007	7,149	2.91	4,778	2.71	1,926	3.16	445	3.40
2006	7,508	2.90	5,158	2.68	1,865	3.23	485	3.31
2005	8,581	2.90	6,153	2.71	1,922	3.22	506	3.37
2004	8,748	2.86	6,231	2.68	1,892	3.16	625	3.44
2003	5,599	2.93	3,692	2.79	1,467	3.13	440	3.19

In 2011, Wisconsin high school students completed 8,574 Youth Options courses and earned an average of 3 college credits per course.

In June 2011, approximately 70,880 students graduated from Wisconsin high schools. However, since the data reported annually represents “only the number of Youth Options courses completed,” and does not include the student names or ID numbers, staff at the Department of Public Instruction suggest that less than 10% of seniors graduate with Youth Options credits. Longitudinal data on the influence of Youth Options courses and dual credit on students’ postsecondary education choices, transitions, and successes will be available soon, once the state longitudinal (K-16) data system is in place.

Dual Credit

Students completing college level courses and exams (e.g., Advanced Placement course exams) while still in high school has been a popular high school innovation over the past decade. In 2002-03, more than 71% of U.S. high schools and 57% of U.S. postsecondary institutions offered high school students the opportunity to complete college courses.³ As Kleiner and Lewis noted, more than 813,000 secondary school students took a college-credit course during the 2002-03 school year.⁴

Most Wisconsin school districts and technical colleges have developed articulation agreements, which are formal agreements “. . . that allow credit for a course or sequence of courses taken at one institution to be applied in specific programs at another institution. These agreements may be between a high school and a postsecondary institution, or among postsecondary institutions.” Beyond the Youth Options program described earlier, two types of dual credit are available to students once articulation agreements are in place:⁵

Advanced standing credit: A high school student who has successfully completed a course taught by a high school teacher using a high school curriculum, wherein the high school and a technical college have compared curriculum competencies and developed an articulation course agreement, can receive advanced standing credit. Credit is awarded upon enrollment in the technical college; however, grades are not recorded on a technical college transcript.

Transcripted credit: Postsecondary credit earned by a high school student for successfully completing a college-level course taught via an articulation agreement is called transcripted credit. Both credit and grades are reported directly on a technical college transcript.

As noted in Table 3, the number of high school students participating in advanced standing and transcripted credit courses has increased steadily since 2006-07, while the number completing Youth Options credit has declined slightly. (Please note that the Youth Options numbers in Table 2 are different. Table 3 presents unduplicated numbers.)

Table 3. Unduplicated headcount of high school students enrolling in Youth Options and Advanced Standing or Transcripted credit courses at Wisconsin Technical College System campuses

Academic Year	Students Enrolled in Youth Options Credit	Students Enrolled in Transcripted or Advanced Standing Credit
2010-11	2,392	18,252
2009-10	2,912	16,853
2008-09	2,863	13,922
2007-08	2,563	12,324
2006-07	3,019	11,196

Of the 70,000 students graduating from Wisconsin high schools in June 2012, roughly 20-22% completed credit at a Wisconsin technical college before leaving high school.

A major policy question remains: To what extent does dual credit improve college-going rates and initial student success once they enroll in postsecondary institutions?

Recent studies have documented the positive impact of dual credit/dual enrollment programs in Florida and New York on a number of indicators, including college enrollment, first-year grade point average (GPA), retention to the second year, and degree completion.⁶

In a recent analysis of data from the 2007-2011 Wisconsin Technical College System student record database, a team of UW-Madison researchers uncovered some useful information about the effects of dual credit. Of the 177,000 technical

Recent studies have documented the positive impact of dual credit/ dual enrollment programs on college enrollment, GPA, retention, and degree completion.

college students who were enrolled in 2009-10 and had graduated from high school recently (2007-09), 8.5% had completed dual credit. Completion of dual credit was a small but statistically significant predictor of a higher GPA during the first year of postsecondary education—a widely documented indicator of student success. Other factors that were largely associated with obtaining high GPAs included 10th grade math and science scores and being female.⁷

Conclusion

Improving access and quality in both K-12 and higher education is a continuing fiscal struggle for state, local, and institutional leaders. A high performing economy depends on all individuals acquiring the knowledge, skills, dispositions, and human talents that enable them to create larger economic and social returns both for themselves and their communities.⁸ A relatively high percentage of the state's young adult population (18-24) either has a degree or is enrolled in postsecondary education—81.3% in Wisconsin, compared to 71.7% in the U.S. on average.⁹ However, we lack data on how and why these students are not succeeding in college and/or in the economy. Such information is vital to improving the state's workforce productivity.

In Wisconsin, 81.3% of 18- to 24-year-olds have a degree or are enrolled in postsecondary education, compared to 71.7% in the U.S.

Sustaining the state's two-tiered system for workforce development has limited attention to linking and integrating the workforce development needs of youth leaving high school, as well as young adults currently in the workplace. State leaders should seriously consider strategies for:

- integrating more fully and strategically the dual system of college and career readiness, and
- expediting the development and use of K-16 student record data systems at the state and regional level to increase students' postsecondary education and employment success.

2013 is an exciting and pivotal time for education, government, and business leaders in Wisconsin to create opportunities for new and effective strategies that prepare youth for success in the workforce.

L. Allen Phelps is a senior scientist at the Wisconsin Center for Education Research, professor emeritus of the School of Education and director emeritus of the Center on Education and Work at the University of Wisconsin-Madison. Over the past four decades, Dr. Phelps' research and teaching has focused on improving policy and leadership in career and technical education, secondary special education, and other education initiatives seeking to integrate high school and college education with the needs of the economy. Dr. Phelps' scholarship has informed questions about the economic and social returns associated with various education policies and programs, which has led to changes in state and federal legislation for career and technical education. His research has highlighted the efficacy of such innovations as work-based learning, individualization or personalization of instruction, school-to-work transitions for students with disabilities, regional community and technical college initiatives, and career and college readiness. Over the past decade, six of his 25 Ph.D. students have served as presidents at one of the Wisconsin Technical Colleges.

Endnotes

- ¹ Gonzalez, J. (2012, April). Education for all? 2-year colleges struggle to preserve their mission. *Chronicle of Higher Education*, 58(34), A1-A12.
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- ⁴ Kleiner, B., Lewis, L., & Greene, B. (2005). *Dual enrollment of high school students at postsecondary institutions, 2002-03*. Washington, DC: National Center for Education Statistics, U.S. Department of Education. Retrieved from <http://nces.ed.gov/pubs2005/2005008.pdf>
- ⁵ Wisconsin Career Pathways (2012). *Glossary of terms*. Retrieved from <https://www.wicareerpathways.org/Glossary>
- ⁶ Karp, M. M., Calcagon, J. C., Hughes, K., Jeong, D. W., & Bailey, T. (2008). *Dual enrollment students in Florida and New York City: Postsecondary outcomes* (CCRC Brief No. 37). New York: Community College Research Center, Teachers College, Columbia University.
- ⁷ Wang, X., Chan, H., Phelps, L. A. & Washbon, J. (2012). *Dual credit and the manufacturing and engineering pathways: Prospects and possibilities for enhancing success in technical colleges. Preliminary findings*. Madison, WI: Wisconsin Center for Education Research, University of Wisconsin-Madison.
- ⁸ Kauffman Foundation (2012). *2010 State new economy index*. Retrieved from <http://www.kauffman.org/research-and-policy/snei-interactive.aspx>
- ⁹ Education Research Center (2012, January 12). Quality Counts: 2012. *Education Week*. Retrieved from <http://www.edweek.org/go/qc12>

Selected Resources on Preparing Youth for the Workforce

For further information, we list selected resources below. For most organizations we provide a primary contact person, and relevant reports from the organization when available.

Wisconsin Legislative Service Agencies

Wisconsin Legislative Council

1 East Main Street, Suite 401
P.O. Box 2536
Madison, WI 53703
(608) 266-1304
<http://legis.wisconsin.gov/lc>

Contact: Jessica L. Karls-Ruplinger, Senior Staff Attorney
(608) 266-2230
jessica.karls@legis.wisconsin.gov
Interests: Labor and employment

Wisconsin Legislative Fiscal Bureau

1 East Main Street, Suite 301
Madison, WI 53703
(608) 266-3847
fiscal.bureau@legis.wisconsin.gov
<http://www.legis.wisconsin.gov/lfb>

State Agencies

Department of Children and Families

201 East Washington Avenue, Second Floor
P.O. Box 8916
Madison, WI 53708
<http://dcf.wi.gov>

Contact: Sara Buschman, Executive Assistant
(608) 261-6588
sara.buschman@wisconsin.gov

Department of Public Instruction

125 South Webster Street
P.O. Box 7841
Madison, WI 53707
(608) 266-3390
<http://dpi.state.wi.us>

Contact: Sharon W. Wendt, Director, Career and Technical Education Team
(608) 267-9251
sharon.wendt@dpi.wi.gov

Department of Revenue

2135 Rimrock Road

Madison, WI 53713

(608) 266-2772

<http://revenue.wi.gov>

Contact: John Koskinen, Chief Economist & Division Administrator, Research and Policy

(608) 267-8973

john.koskinen@revenue.wi.gov

Interests: Wisconsin economy, tax policy

Department of Workforce Development

201 East Washington Avenue

Madison, WI 53702

(608) 266-3131

<http://dwd.wisconsin.gov>

Contact: Dennis Winters, Chief, Office of Economic Advisors

(608) 267-3262

dennis.winters@dwd.wisconsin.gov

Interests: Economic development, workforce development, education, per capita income, early childhood development

University Institutes, Extension, & Technical Colleges**School of Business, UW-Madison**

975 University Avenue

Madison, WI 53706

(608) 265-4937

<http://www.bus.wisc.edu>

Contact: Stephen Malpezzi, Lorin and Marjorie Tiefenthaler Professor, Graaskamp Center for Real Estate

(608) 262-6007

smalpezzi@bus.wisc.edu

<http://smalpezzi.marginalq.com>

<http://wisconsinviewpoint.blogspot.com>

Interests: Housing, real estate, urban development, regional economics, local economic development

School of Social Work, UW-Madison

1350 University Avenue
Madison, WI 53706
(608) 263-3660
<http://socwork.wisc.edu>

Contact: Katherine Magnuson

(608) 263-4812
kmagnuson@wisc.edu

Interests: Early childhood policy, early childhood education, family support, child care

University of Wisconsin-Extension

Center for Community & Economic Development
610 Langdon Street, Room 336
Madison, WI 53703
(608) 265-8136
<http://uwex.edu/ces/cced>

Contact: Greg Wise, Director, Center for Community & Economic Development

(608) 263-7804
greg.wise@uwex.edu

Wisconsin Center for Education Research, UW-Madison

1025 West Johnson Street, Suite 785
Madison, WI 53706
(608) 263-4200
<http://wcer.wisc.edu>

Contact: Allen Phelps, Senior Scientist

(608) 263-2714
aphelps@education.wisc.edu

Interests: Career and technical education, secondary special education, career and college readiness, education policy

Current research: Improving Educational Outcomes in Manufacturing Engineering Technologist and Technician Education (<http://mette.wceruw.org>)

Wisconsin Technical College System

4622 University Avenue
Madison, WI 53705
(608) 266-1207
<http://wtcsystem.edu>

Contact: Kathleen Cullen, Vice President of Teaching and Learning

(608) 266-9399
cullenk@wtcsystem.edu

Interests: Dual credit offerings, youth options, youth apprenticeship, programs of study and career pathways

State Organizations

Wisconsin Council on Children and Families

555 West Washington Avenue, Suite 200

Madison, WI 53703

(608) 284-0580

<http://wccf.org>

Contact: David Edie, Early Education Policy Analyst

(608) 284-0580 x315

dedie@wccf.org

Interests: Early learning, economic impact of high-quality early learning, YoungStar, 4K, public policy related to early learning and development

The Economic Benefits of Investing in Early Learning (Report, 2009). Available at http://wccf.org/pdf/great_start_investment_ece.pdf

Wisconsin's Early Care and Education Landscape: Planning for a Coherent System (Executive Summary, 2009). Available at http://wccf.org/pdf/ece_executive-summary_dec2009.pdf

Infants and Toddlers: Crucial Years of Development (Policy Brief, 2010). Available at http://wccf.org/pdf/great_start_5_infants_toddlers.pdf

The Unique History of Four-Year-Old Kindergarten in Wisconsin (Policy Brief, 2010). Available at http://wccf.org/pdf/great_start_6_history_4K.pdf

Wisconsin Policy Research Institute

P.O. Box 382

Hartland, WI 53029

(262) 367-9940

<http://www.wpri.org>

The Economic Power of Early Childhood Education in Wisconsin (Report, 2012). Available at <http://wpri.org/Reports/Volume25/Vol25No2/Vol25No2.html>

National Organizations

American Youth Policy Forum

Washington, DC

<http://aypf.org>

Supporting High Quality Career and Technical Education through Federal and State Policy (Report, 2008). Available at <http://aypf.org/documents/CTEMeetingPaper.pdf>

Success at Every Step: How 23 Programs Support Youth on the Path to College and Beyond (Report, 2009). Available at <http://aypf.org/wp-content/uploads/2012/03/successateverystep.pdf>

College & Career Academy Support Network

Berkeley, CA

<http://casn.berkeley.edu>

Career Academies: A Proven Strategy to Prepare High School Students for College and Careers (Report, 2010). Available at http://casn.berkeley.edu/resource_files/Proven_Strategy_2-25-1010-07-07-03-29-28.pdf

Center on the Developing Child, Harvard University

Cambridge, MA

<http://developingchild.harvard.edu>

A Science-Based Framework for Early Childhood Policy (Report, 2007). Available at http://developingchild.harvard.edu/resources/reports_and_working_papers/policy_framework/

MDRC

New York, NY

<http://www.mdrc.org>

Career Academies Project: Linking Education and Careers. Available at http://mdrc.org/project_29_1.html

Career Academies: Long-Term Impacts on Labor Market Outcomes, Educational Attainment, and Transitions to Adulthood (Report, 2008). Available at <http://mdrc.org/publications/482/overview.html>

National Academy Foundation (Career Academy Network)

New York, NY

<http://naf.org>

Pathways to Prosperity, Harvard Graduate School of Education

Cambridge, MA

Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century (Report, 2011). Available at http://gse.harvard.edu/news_events/features/2011/Pathways_to_Prosperty_Feb2011.pdf

W.E. Upjohn Institute for Employment Research

Kalamazoo, MI

<http://upjohninst.org>

Distributional Effects of Early Childhood Programs and Business Incentives and Their Implications for Policy (Working Paper, 2009). Available at http://research.upjohn.org/cgi/viewcontent.cgi?article=1168&context=up_workingpapers

How Policymakers Should Deal with the Delayed Benefits of Early Childhood Programs (Working Paper, 2009). Available at http://research.upjohn.org/up_workingpapers/150

The White House Council for Community Solutions

Washington, DC

Final Report: Community Solutions for Opportunity Youth (Report, 2012). Available at http://resourcelibrary.gcyf.org/sites/gcyf/files/resources/2012/12_0604whccs_finalreport.pdf

THE FAMILY IMPACT GUIDE FOR POLICYMAKERS

Viewing Policies Through the Family Impact Lens

- ▶ Most policymakers would not think of passing a bill without asking, **“What’s the economic impact?”**
- ▶ This guide encourages policymakers to ask, **“What is the impact of this policy on families?”** **“Would involving families result in more effective and efficient policies?”**

When economic questions arise, economists are routinely consulted for economic data and forecasts. When family questions arise, policymakers can turn to family scientists for data and forecasts to make evidence-informed decisions. The Family Impact Seminars developed this guide to highlight the importance of family impact and to bring the family impact lens to policy decisions.

WHY FAMILY IMPACT IS IMPORTANT TO POLICYMAKERS

Families are the most humane and economical way known for raising the next generation. Families financially support their members, and care for those who cannot always care for themselves—the elderly, frail, ill, and disabled. Yet families can be harmed by stressful conditions—the inability to find a job, afford health insurance, secure quality child care, and send their kids to good schools. Innovative policymakers use research evidence to invest in family policies and programs that work, and to cut those that don’t. Keeping the family foundation strong today pays off tomorrow. Families are a cornerstone for raising responsible children who become caring, committed contributors in a strong democracy, and competent workers in a sound economy.¹

In polls, state legislative leaders endorsed families as a sure-fire vote winner.² Except for two weeks, family-oriented words appeared every week Congress was in session for over a decade; these mentions of *family* cut across gender and political party.³ The symbol of *family* appeals to common values that rise above politics and hold the potential to provide common ground. However, family considerations are not systematically addressed in the normal routines of policymaking.

HOW THE FAMILY IMPACT LENS HAS BENEFITED POLICY DECISIONS

- ▶ In one Midwestern state, using the family impact lens revealed differences in program eligibility depending upon marital status. For example, seniors were less apt to be eligible for the state’s prescription drug program if they were married than if they were unmarried but living together.
- ▶ In a rigorous cost-benefit analysis of 571 criminal justice programs, those most cost-beneficial in reducing future crime were targeted at juveniles. Of these, the five most cost-beneficial rehabilitation programs and the single most cost-beneficial prevention program were family-focused approaches.⁴
- ▶ For youth substance use prevention, programs that changed family dynamics were found to be, on average, over nine times more effective than programs that focused only on youth.⁵

QUESTIONS POLICYMAKERS CAN ASK TO BRING THE FAMILY IMPACT LENS TO POLICY DECISIONS:

- ▶ How are families affected by the issue?
- ▶ In what ways, if any, do families contribute to the issue?
- ▶ Would involving families result in more effective policies and programs?



HOW POLICYMAKERS CAN EXAMINE FAMILY IMPACTS OF POLICY DECISIONS

Nearly all policy decisions have some effect on family life. Some decisions affect families directly (e.g., child support or long-term care), and some indirectly (e.g., corrections or jobs). The family impact discussion starters below can help policymakers figure out what those family impacts are and how family considerations can be taken into account, particularly as policies are being developed.

FAMILY IMPACT DISCUSSION STARTERS

How will the policy, program, or practice:

- ▶ support rather than substitute for family members' responsibilities to one another?
- ▶ reinforce family members' commitment to each other and to the stability of the family unit?
- ▶ recognize the power and persistence of family ties, and promote healthy couple, marital, and parental relationships?
- ▶ acknowledge and respect the diversity of family life (e.g., different cultural, ethnic, racial, and religious backgrounds; various geographic locations and socioeconomic statuses; families with members who have special needs; and families at different stages of the life cycle)?
- ▶ engage and work in partnership with families?

Ask for a full Family Impact Analysis

Some issues warrant a full family impact analysis to more deeply examine the intended and unintended consequences of policies on family well-being. To conduct an analysis, use the expertise of (1) family scientists who understand families and (2) policy analysts who understand the specifics of the issue.

- ▶ Family scientists in your state can be found at <http://www.familyimpactseminars.org>
- ▶ Policy analysts can be found on your staff, in the legislature's nonpartisan service agencies, at university policy schools, etc.

Apply the Results

Viewing issues through the family impact lens rarely results in overwhelming support for or opposition to a policy or program. Instead, it can identify how specific family types and particular family functions are affected. These results raise considerations that policymakers can use to make policy decisions that strengthen the many contributions families make for the benefit of their members and the good of society.

ADDITIONAL RESOURCES

Several family impact tools and procedures are available on the website of the Policy Institute for Family Impact Seminars at <http://www.familyimpactseminars.org>.

¹ Bogenschneider, K., & Corbett, T. J. (2010). Family policy: Becoming a field of inquiry and subfield of social policy [Family policy decade review]. *Journal of Marriage and Family*, 72, 783-803.

² State Legislative Leaders Foundation. (1995). *State legislative leaders: Keys to effective legislation for children and families*. Centerville, MA: Author.

³ Strach, P. (2007). *All in the family: The private roots of American public policy*. Stanford, CA: Stanford University Press.

⁴ Aos, S., Miller, M., & Drake, E. (2006). *Evidenced-based public policy options to reduce future prison construction, criminal justice costs, and crime rates*. Olympia: WA State Inst. for Public Policy.

⁵ Kumpfer, K. L. (1993, September). *Strengthening America's families: Promising parenting strategies for delinquency prevention—User's guide* (U.S. Department of Justice Publication No. NCJ140781). Washington, DC: Office of Juvenile Justice and Delinquency Prevention.

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