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The 70 Percent Solution:

Five Principles for Helping Young People Make Better Choices During and After High School

Prepared by:
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Supported by the AT&T Foundation

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Acknowledgements

The 70 Percent Solution: Five Principles for Helping Young People Make Better Choices During and After High School was funded by a grant from the AT&T Foundation.[1] The John J. Heldrich Center for Workforce Development would like to thank Marilyn Reznick, Executive Director of the AT&T Foundation. The Center would like to extend special thanks to Hal Burlingame, member of the Heldrich Center's National Advisory Board. The Heldrich Center would also like to acknowledge the counselors who participated in focus groups for the project, the reviewers who provided comments on this report, and the individuals that provided information or were interviewed regarding their innovative career education programs. A full list of these individuals can be found in the Appendices.

The principal authors of this report are Carl Van Horn, Director and Professor, Denise Pierson-Balik, Project Manager, and Herbert Schaffner, former Communications Director and consultant at the Heldrich Center. Jeffrey Stoller, Stephanie Duckworth-Elliot, K.A. Dixon, and Harriet Kass of the Heldrich Center also contributed to the completion of the report.

[1] A similarly titled report, *The 70% Solution: Meeting the Need for High Skills*, by Kenneth Hoyt and James Maxey, was published in 2000 for the ERIC Clearinghouse on Counseling and Student Services. While both reports address career education and information in American high schools, this report is not based upon nor related to that earlier work.

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Executive Summary

The John J. Heldrich Center for Workforce Development at Rutgers, The State University of New Jersey, prepared this report with generous support from the AT&T Foundation. It offers a different vision of how educators, employers, parents, and all those who care about the development of young people should understand and address life after high school. *The report finds that students and all Americans need better and more informed choices for the next step after high school, and at every stage of their careers, as they seek the knowledge and skills that will help them succeed in the workplace and meet their economic necessities.* It calls upon parents, students, policymakers, and educators to recognize the realities and opportunities of the changing new economy for people of different educational backgrounds—and to support the increasing importance of lifelong learning to the success of so many Americans.

The national emphasis in our high schools, communities, and halls of Congress on attending college is commendable. More than six in 10 high school graduates enter college. The number of minority students attending college has risen from 16 percent in 1976 to 28 percent in 1999, and the number of women attending college has jumped by 13 percent during the last 10 years to represent 56 percent of all undergraduates in 2000. Students from around the world apply to American universities and colleges. But there is something amiss at the core of the higher education dream in America. Despite the widespread belief among high school students that they should attend college, one-third of students that enroll in college will leave school without obtaining a college degree. These statistics are even higher for minority students. Today, only three in 10 Americans have a four-year college degree. Yet, in the eyes of so many, to choose a path other than college is a terrible "waste" of human potential.

In the midst of this nation's aspiration to provide college opportunities for all, important tasks have been left undone. As our high schools drill students on college applications, standardized tests, SAT or ACT prep, and getting into a "good school," not enough is done to educate students about the world that awaits them beyond college or high school. As our students approach the critical turning point of high school graduation, they are ill-prepared to understand the complexity of careers, work, and the economy. They do not sufficiently understand the array of educational and training choices that would help them achieve their goals and aspirations. Yet, despite limited information on career options, students and their families routinely make a large financial investment in college.

This report finds that the college-for-all focus of high school education and counseling leaves both individuals who attend college and those who never attend college unprepared to make important career decisions.

The 70 percent of students who are not likely to get a four-year college degree urgently need better career education and development. Students going on to traditional college also need career guidance. While many professional careers require a college education, not all well-paying jobs require a four-year college degree. Opportunities abound for individuals who pursue alternative training and education paths after high school. By educating teachers and students about the careers and work opportunities that will be in demand in the job market, and the pathways that people follow to enter those careers, we will enable our nation's families to make better financial and educational choices.

This report delivers five principles for change that will strengthen the education of our young people and all Americans about careers, work, and economic change. At the core of these principles is the overlooked potential of the high school guidance counselor in the development of our students toward adulthood and work. Too many counselors in American high schools do not have the time, resources, or knowledge to provide the guidance on work and career issues that so many students need. We must support and fulfill the promise of career and occupational guidance in every school in America.

The full report includes analysis and examples in each chapter, addressing a major challenge in our schools and the appropriate roles of the 70 Percent Solution:

- Chapter One describes the economic and demographic trends shaping educational and career choices today, and features the first 70 Percent Solution Principle: energize and reinvest in the profession of counseling and its role in the schools, and give counselors more power at the local and school level to provide students with the information they need to make informed choices.
- Chapter Two addresses the history and progress of school reform as it shaped the role of career education, vocational education, and career development, and features the second 70 Percent Solution Principle: incorporate career/occupation knowledge into curriculum standards and testing for all students.
- Chapter Three explains the importance to our schools of improving the education of parents, guardians, and all adults about the educational and career options available to every student, featuring the third 70 Percent Solution Principle: improve and expand how schools market and inform parents and the community about career options and opportunities, including those not requiring four-year degrees.
- Chapter Four explores the options and possibilities for forging and implementing career education and awareness programs and standards in our schools beginning in the early grades, featuring the fourth 70 Percent Solution Principle: schools should help students make well-informed decisions, by guiding students through career and academic planning. This should begin in the middle grades, and culminate in a senior year program designed to make high school a turning point, not an end point.
- Chapter Five presents the school age foundation of lifelong learning in the knowledge economy, leading to our fifth 70 Percent Solution Principle: to embrace the notion of lifelong learning for all, and encourage respect for workers who earn their credentials outside of the traditional college setting.

We urge America's schools, employers, and communities to consider the five *70 Percent Solution Principles*. Each solution is featured in one of the five chapters of this report, and illustrated with case studies of American schools where these changes are producing remarkable results. The report will share the progress and impact of good practice programs, including the Grand Forks, North Dakota Public Schools Comprehensive Career Development Guidance and Counseling Program, an initiative that includes every grade and student. We will learn from the experiences of Grand Forks students such as Collin, who discovered sheet metal working (including building a sculpture for a local park) during his internship and was asked to join the company at which he interned upon graduation.

The report will recount the success of the Allentown, New Jersey Senior Practicum that prepares and places students in senior year internships, job shadowing, and other opportunities. Students, parents, teachers, and employers are enthusiastic about the experience and its impact on students' lives. "I think the Senior Practicum is a wonderful thing," one student wrote. "It really lets the students get a feel for the workplace and their possible future in the field of work they want to stay in. ...I was able to produce more work than I ever thought I would and I love it."

The report will introduce readers to the spectacular and replicable success of the Eastern Technical High School in Maryland. This school languished as a mediocre vocational-technical institution a little over a decade ago. Under decisive leadership, it has erased the 'vo-tech' stigma to emerge as a national academic and career development model. Eastern Technical incorporates academic excellence with career preparation and experience through a balanced curriculum, to prepare all of its students for the workplaces of the 21st century. Graduation, grade point averages, placement rates, and other metrics have soared over the last decade for all of its students, including low- and moderate-income graduates. Eastern Tech has received numerous awards, including being named a Maryland Blue Ribbon School of Excellence, a New American High School national showcase site by the U.S. Department of Education, and a National Demonstration Site for Business Partnerships by the U.S. Department of Education in 1999. The school was featured as a national model program to improve achievement in the National Commission on the High School Senior Year Report.

This report features the innovative curricula and business alliance behind the Omaha, Nebraska public schools career education initiative, a business-academic partnership in Cherry Hill, New Jersey, and the 21st Century Discovering Careers partnership of southern New Jersey, among other good practice models discussed here.

School-based career development and education can serve as the foundation for a process of lifelong learning available to anyone seeking a place in today's knowledge-based economy. A college degree is not a passport to a good job or a finishing course for youth. It is about providing our young people, ourselves, and future generations with opportunities for self fulfillment and economic security through learning. This value is not limited to the four-year bachelor's degree program. It can take place throughout our lives in a diversity of education and training settings. Our universities and colleges make a range of degree and certificate programs available to Americans at any stage of life. It is in our K-12 schools that the notion of a lifetime commitment to learning new skills must take hold and begin to grow, and it is in the interest of every parent and teacher to encourage this idea.

Methodology

The Heldrich Center arrived at the five 70 Percent Solution Principles outlined in this report through the use of several methodologies:

1. Review of existing research and data on educational attainment, educational reform, labor market requirements, and career education models.

2. Five focus groups with guidance and employment counselors from across the nation to discuss the shortcomings of guidance counseling in American high schools and innovative solutions to increasing opportunities for young people. A total of 38 individuals participated in these focus groups, which took place at the annual meetings of the American Counseling Association and the American School Counselor Association (see Appendix C for a list of participants). This report also draws from the findings of a New Jersey conference, entitled "Strengthening Career Guidance for New Jersey High School Students," hosted by the Heldrich Center for Workforce Development on October 3, 2003.

3. Case studies of "Good Practice" career education programs that exist in schools across the nation. The Heldrich Center reviewed program literature, websites, and available program evaluation material, and interviewed program directors to identify "Good Practice" sites that exemplify the five 70 Percent Solution Principles (see Appendix D for a list of interviewees).

The Heldrich Center also received comments on *The 70 Percent Solution: Five Principles for Helping Young People Make Better Choices During and After High School* from outside reviewers (see Appendix E for a complete list of reviewers).

I. College Unbound: The Economics of the 70 Percent Solution

"There is dignity in all work. Look carefully at people who are excellent at whatever they do and model their commitment to their work and to their ever-present desire to get better at what they're doing. Look around and think about what you could see yourself doing enthusiastically and doing well. Then know that because the world now changes so rapidly, it's likely that you will change careers a couple of times. The one ingredient running across all those changes is that you need to be an educated person capable of further education. You must be ever the learner, ever curious, ever seeking new and better ideas and ways of thinking about and doing things."

–William Librera, New Jersey Commissioner of Education

On one level, the reforms of our elementary and high school educational system—underway for more than 20 years—have already succeeded. Although science and math test scores are still mediocre, graduation standards have risen, accountability has been imposed for education outcomes, and, more important, rates of college attendance have skyrocketed. Reading test scores and literacy have improved. Most young people and jobseekers can access computers, computer networks, the Internet, and computer training relatively easily. Various school districts and regions boast high-performing schools and career preparation programs that are the dream of reformers.

Yet something is also fundamentally wrong. Despite decades of tremendous investments in higher education and financial aid, there is a growing mismatch between demand in the emerging labor markets of the 21st century, and the nature and supply of the graduates of our higher education system. College entrance rates have soared. However, nearly one-third (32%) of students enrolled in a two- or four-year postsecondary educational institution leave within three academic years without a degree or credential.[2] The U.S. labor market is characterized by rapidly shifting work trends that require workers to update their knowledge and skills many times during their lives, a two-edged challenge of stress and opportunity. Workers will change careers in directions that depart from their college education or interests—and many of the best jobs emerging in the U.S. economy do not require a four-year college degree.

This report addresses the implications of a college-bound education system for the 70 percent of adult Americans who do not have a four-year college degree. Unfolding demographic and economic trends underscore the need to prepare ALL members of America's school-age generation for a role in the digital and information revolution impacting the American workforce.

The national emphasis in our high schools on attending college is commendable. But this message needs to be supplemented with a much richer array of advice and guidance about the purposes of further education, as well as alternative paths to personal fulfillment and economic success. In this first chapter, we examine the major economic and demographic trends surrounding this issue. We also introduce the first of five principles to guide broad-based, common sense change in how our schools and communities educate young people about careers, the workforce, and higher education—the 70 Percent Solution Principles.

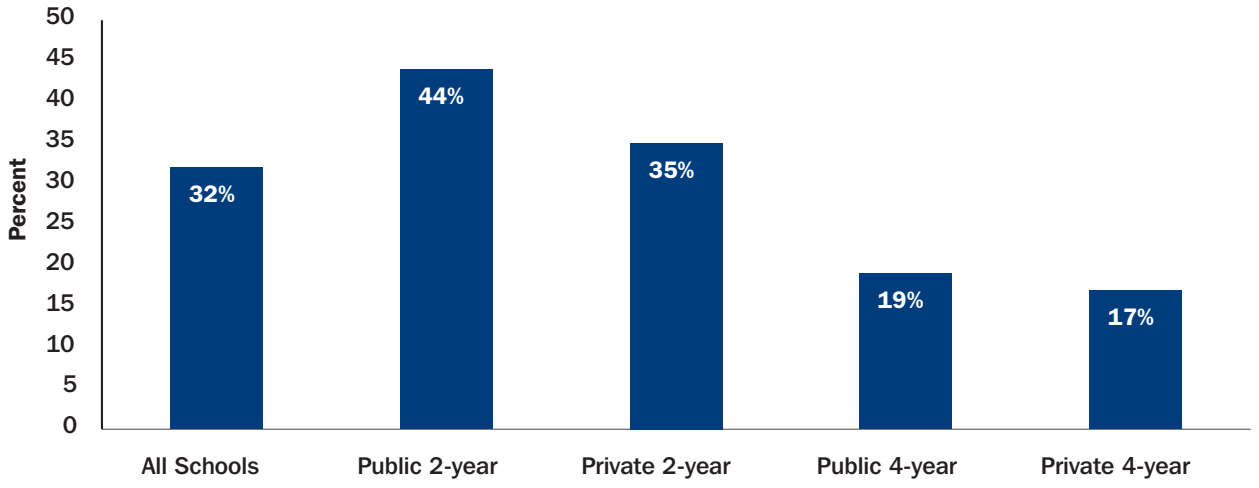
[2] U.S. Department of Education, *Short-Term Enrollment in Postsecondary Education*, 6.

The achievements of the American commitment to higher education cannot be overlooked. Women have entered college in significant numbers during the past two decades. Between 1989 and 1999, the number of women enrollees increased by 13 percent, compared to a five percent growth rate among men. In 2000, 56 percent of all undergraduates were women.[3] Minority students have experienced a notable increase in college attendance in the last two decades. In 1976, only 16 percent of college students were minorities; by 1999 that figure increased to 28 percent. However, despite this increase in enrollment, graduation rates are not keeping pace. Approximately one-third of students that enroll in college will leave school without obtaining a college degree. Those who attend two-year institutions are far more likely than those who attend four-year institutions to leave school without completing a degree (see Figure 1).[4]

In fact, the percentage of 25 to 34 year olds with a four-year college degree has remained nearly the same over the past three decades, about 30 percent.[5] The statistics are even lower for minority students. Only 18 percent of African-Americans and nine percent of Hispanics held a bachelor's degree in 1999 (see Figure 2).[6]

At the same time, the U.S. population is growing (unlike many Western European democracies), and it is becoming more diverse. The "echo boom" generation—computer-savvy, digital-savvy, skeptical of one-size-fits-all messages—are entering high school and will be asking questions about their roles and expectations in the workplace. The number of students graduating from high school in the United States will reach a peak of 3.2 million in 2008-2009, according to a 2004 report by the Western Interstate Commission for Higher Education. The study projects a 73 percent increase in Hispanic students after 2014, a six percent increase in African-American students, and an 11 percent drop in white students.[7]

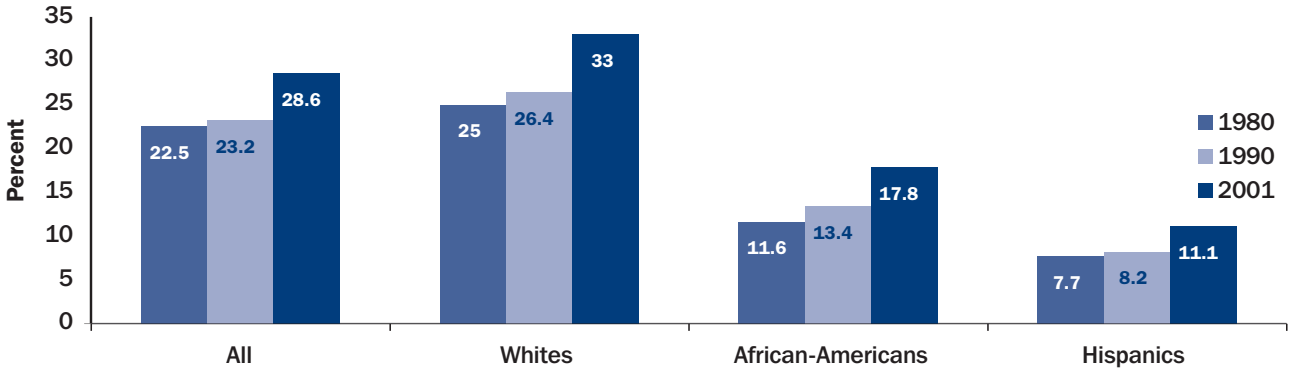
Figure 1: Share of students that entered postsecondary institutions in 1995-96 and left within three years without a credential



Source: U.S. Department of Education, *Short-Term Enrollment in Postsecondary Education*, Table 1.

3 U.S. Department of Education, *Enrollment in Postsecondary Institutions*, 2.
4 U.S. Department of Education, *Short-Term Enrollment in Postsecondary Education,* 7.
5 National Governors Association, *Ready for Tomorrow*, 4.
6 Ibid., 3.
7 Western Interstate Commission for Higher Education, *Knocking at the College Door.*

Figure 2: Share of persons age 25 to 29 with a bachelor's degree or higher, 1980, 1990, and 2001



Source: U.S. Department of Education, *Digest of Education Statistics, 2002,* Table 8.

They're Different! Degrees, Credentials, and Skills

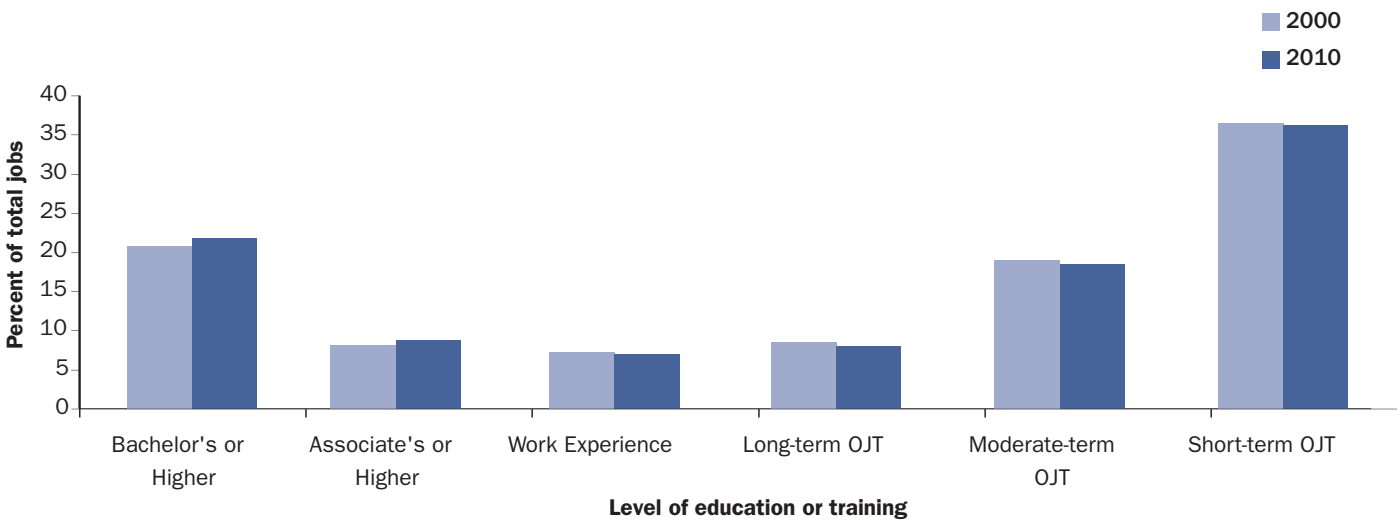
While many professional careers require a college education, not all well-paying jobs require a four-year college degree. In fact, the Bureau of Labor Statistics predicts that the majority of jobs (almost 70 percent) in the next decade will not require a two- or four-year college degree(see Figure 3).[8] According to these estimates, there would not be enough jobs with a degree requirement for all of the 67 percent of high school graduates who enroll in college if they all obtained a college degree. However, the majority of employment will require training and/or education beyond high school. Opportunities abound for individuals who pursue alternative training and education paths after high school (see Figures 4 and 5). Occupational and on-the-job training (OJT) are important for many of today's careers.

The productivity of educated workers drives the economy of the 21st century. It is well established that workers holding only a high school degree are at a distinct disadvantage, as educational attainment has become a key dividing line between the have and the have-nots. A person's socioeconomic status significantly influences his or her income and occupational choices. But educational attainment mediates the influence these factors have on success in the labor market.[9]

First, the more education a person receives, the more likely it is that the person will enter the labor force. For example, among people age 20-24, those with less than a high school education have lower levels of labor force participation, compared to those with more education. For those 25 and over, people with an associate's or a bachelor's degree have significantly higher labor force participation than those with a high school diploma or less (see Figure 6).[10]

[8] U.S. Bureau of Labor Statistics, *Employment and Total Job Openings by Education or Training, 2000 – 2010,* Table 4.
[9] Terenzini, Cabrera, and Bernal, *Swimming Against the Tide*, 37.
[10] U.S. Department of Labor, Bureau of Labor Statistics, *Current Population Survey, 2000.*

Figure 3: Current and future employment by level of education or training required, 2000 and 2010



Source: U.S. Bureau of Labor Statistics, *Employment and Total Job Openings by Education or Training, 2000 – 2010,* Table 4.

Figure 4a-4d: Educational Requirements of Top Paying Occupations in New Jersey

Top Five Paying Occupations in New Jersey Requiring a Bachelor's Degree or Higher			Top Five Paying Occupations in New Jersey Requiring an Associate's Degree		
Occupation	Industry	Average Salary	Occupation	Industry	Average Salary
Computer & Information Systems Managers	Information Technology	$101,155	Computer Systems Analysts	Information Technology	$75,235
Computer & Information Scientists, Research	Information Technology	$87,800	Sales Agents, Financial Services	Finance	$70,185
Construction Managers	Construction	$84,560	Registered Nurses	Health Care	$53,870
Computer Software Engineers, Systems Software	Information Technology	$82,565	Transportation Inspectors	Transportation & Logistics	$49,940
Administrative/Customer Services Managers	Finance	$79,655	Radiologic Technicians	Health Care	$45,645

Top Five Paying Occupations in New Jersey Requiring a High School Diploma or GED			Top Five Paying Occupations in New Jersey Requiring Some Training After High School		
Occupation	Industry	Average Salary	Occupation	Industry	Average Salary
Communication Equipment Mechanics, Installers, & Repairers	Utilities/ Infrastructure	$50,390	Sales Representatives, Wholesale and Manufacturing, Technical & Scientific Products	Manufacturing	$70,730
Electrical & Electronics Repairers, Commercial & Industrial Equipment	Manufacturing	$43,435	Structural Iron & Steel Workers	Construction	$59,515
Tractor Trailer Drivers	Transportation & Logistics	$36,885	Electricians	Construction	$52,540
Underwriters, Assistant/ Insurance Policy Processing Clerks	Finance	$34,565	Food Service Managers	Tourism	$52,345
Inspectors, Testers, Graders, Sorters, Samplers, Weighers	Manufacturing	$31,930	First-Line Supervisors/ Managers of Production and Operating Workers	Manufacturing	$51,790

Source: New Jersey Department of Labor, Labor Market Data, 2000–2010.

Figure 5a-5d: Educational Requirements of Fastest Growing Occupations in New Jersey

Top Five Growing Occupations in New Jersey Requiring a Bachelor's Degree or Higher			
Occupation	Industry	Average Salary	Occupation Growth
Computer Support Specialists	Information Technology	$47,330	75.7%
Computer Software Engineers, Systems Software	Information Technology	$82,565	66.1%
Computer Software Engineers, Applications	Information Technology	$76,100	66.1%
Computer Security Specialists	Information Technology	$66,125	62.6%
Network Systems & Data Communications Analysts	Utilities/ Infrastructure	$66,720	53.9%

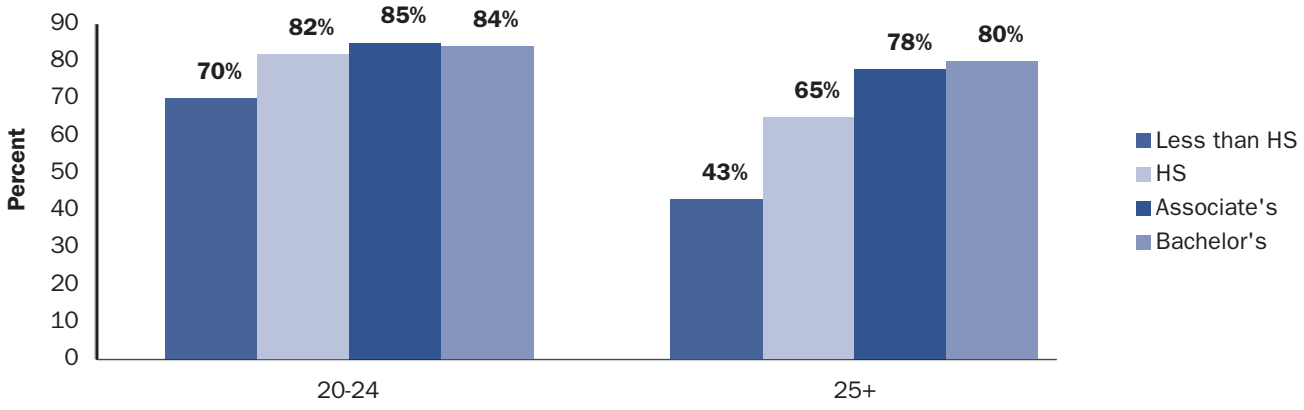
Top Five Growing Occupations in New Jersey Requiring an Associate's Degree			
Occupation	Industry	Average Salary	Occupation Growth
Computer Systems Analysts	Information Technology	$75,235	39.3%
Radiologic Technicians	Health Care	$45,645	27.7%
Registered Nurses	Health Care	$53,870	25.5%
Sales Agents, Financial Services	Finance	$70,185	19.2%
Transportation Inspectors	Transportation & Logistics	$49,940	7.9%

Top Five Growing Occupations in New Jersey Requiring a High School Diploma or GED			
Occupation	Industry	Average Salary	Occupation Growth
Home Health Aides	Health Care	$19,615	56.1%
Amusement & Recreation Attendants	Tourism	$15,785	24.6%
Maids & Housekeeping Cleaners	Tourism	$18,800	23.8%
Hotel, Motel, & Resort Desk Clerks	Tourism	$20,205	23.4%
Gaming Dealers	Tourism	$17,350	23.2%

Top Five Growing Occupations in New Jersey Requiring Some Training or Education After High School			
Occupation	Industry	Average Salary	Occupation Growth
Medical Coders	Health Care	$30,960	38.8%
Licensed Practical & Licensed Vocational Nurses	Health Care	$38,445	26.2%
Certified Nurses Aides	Health Care	$22,545	24.3%
Water Liquid Waste Treatment & Systems Operators	Utilities/ Infrastructure	$41,740	12.7%
Gaming Supervisors	Tourism	$47,245	12.6%

Source: New Jersey Department of Labor, Labor Market Data, 2000–2010.

Figure 6: Labor force participation by age and education



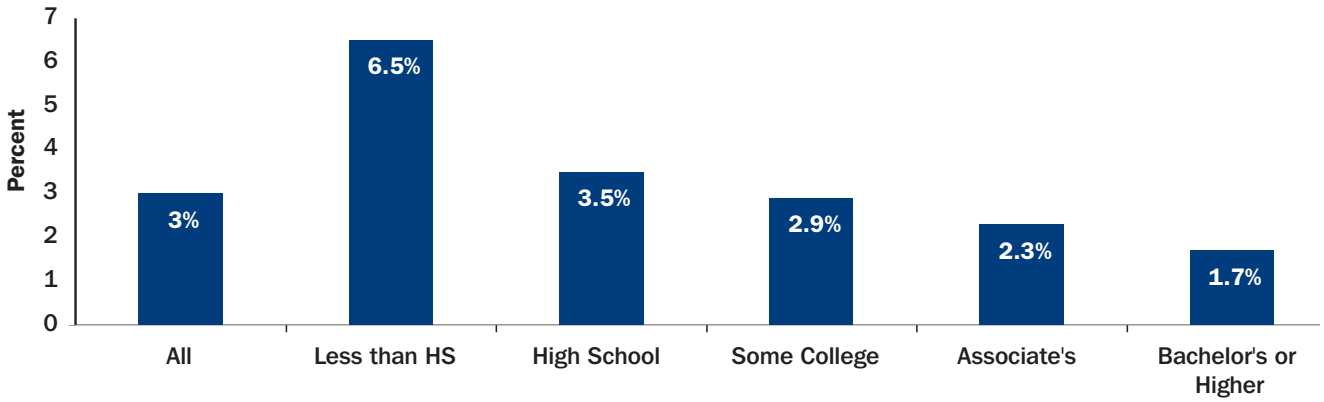
Source: U.S. Department of Labor, Bureau of Labor Statistics, *Current Population Survey, 2000*.

Workers with more formal education have lower unemployment rates than workers with less formal education. The unemployment rate of people with less than a high school education is dramatically higher than those with a high school diploma or more. For example, while the overall unemployment rate of people 25 years old and over in 2000 was three percent, the unemployment rate for those with less than a high school diploma was 6.4 percent. In contrast, those with some postsecondary education experienced an unemployment rate below the average (see Figure 7).[11]

Finally, worker median annual income increases with education. In 2002, workers with less than a high school education earned less than $23,000, compared to over $36,000 earned by those with an associate's degree, and over $48,000 earned by college graduate workers (see Figure 8). This gap in earnings between workers with a high school education and those with a college degree has continued to grow since the 1970s. According to the U.S. Census Bureau, in 1975, a full-time year-round worker with a bachelor's degree earned 1.5 times the annual earning of a high school graduate. By 1999, the difference was 1.8 times that of a worker with a high school diploma. The gap is even greater between those with more advanced degrees and high school graduates, with their earnings being 1.8 times greater in 1975 and 2.6 times by 1999.[12]

But this gap does not mean American high school students must limit their educational goals to a high school or university diploma. Education takes many forms at different times in life, and can be financed in different ways to achieve different goals. Young people are often faced with what seems to be an all-or-nothing proposition when they reach their senior year in high school. The "college for all" ethos suggests the student must enter whatever college he or she can afford and qualify for, even if the student's interests and skills point elsewhere. Often, the student does the "right thing"—getting into the "best" school—and then finds the college experience unsatisfying or does not perform well.

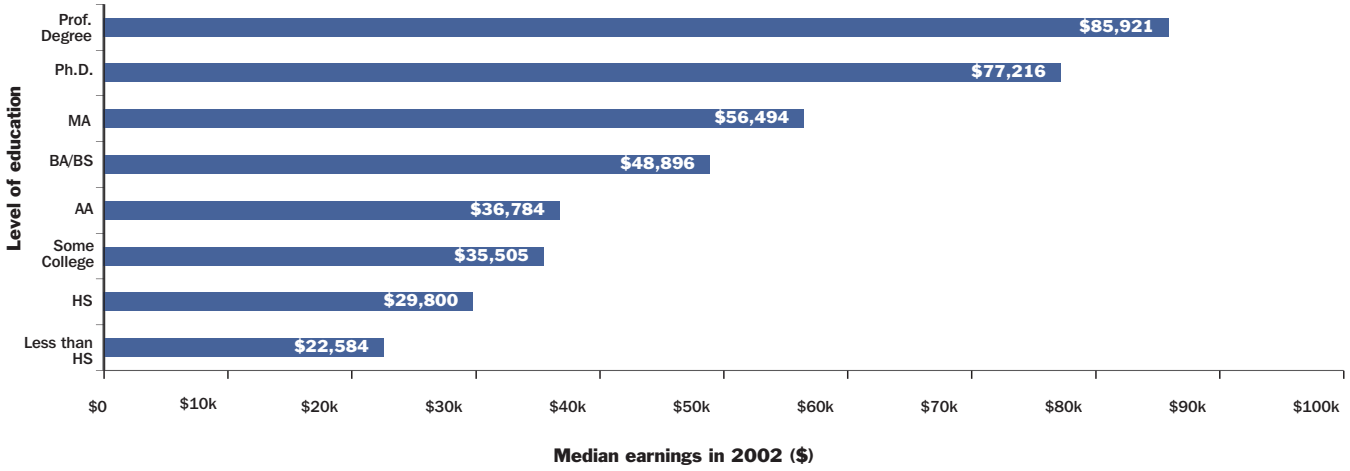
Figure 7: Unemployment rate of people age 25 and over by education



Source: U.S. Department of Labor, Bureau of Labor Statistics, *Current Population Survey, 2000.*

[11] Ibid.
[12] Day and Newburgers, "The Big Payoff," 3.

Figure 8: Income by education level



Source: Postsecondary Education OPPORTUNITY website. *Education and Training Pay.*

The Cost of Doing Nothing

In light of these trends, there can be little question that students require more attention and counseling about a wide array of opportunities after high school. The "college for all" focus of high school education and counseling leaves both individuals who attend college and those who never attend college ill-equipped to make important career decisions. This fact is highlighted in *The Forgotten Half Revisited: American Youth and Young Families, 1988–2008,* edited by Samuel Halperin, study director for the 1988 William T. Grant Foundation reports. Halperin finds that while many more youth are attending college today than ever before, the situation for workers who do not go onto college or career training was actually much worse in the late 1990s than the 1980s.

Full- and part-time employment rates of 16–24 year olds in this group were up to three percentage points lower in 1997 than in 1989, and for minority youth, the full-time employment rates are 20 to 30 percent below white youth. In addition, when adjusted for inflation, earnings have fallen about one-third for young men under 25, and about 16.5 percent for young women during that decade. Approximately one-fourth of out-of-school young adults working full-time had earnings below the poverty line for a family of four in March 1997.[13]

While many more youth are attending college today than ever before, the situation for workers who do not go onto college or career training was actually much worse in the late 1990s than the 1980s.[14]

The Importance of Sound Investments

While postsecondary education is important to improve one's economic future, the cost of college is prohibitive for many. Between the 1997-98 and 2002-03 school years, average tuition and fees at four-year public institutions rose 32 percent, to $7,656 for in-state students and 29 percent to $14,045 for out-of-state students. At two-year public institutions, the average tuition increased 19 percent for in-state and 15 percent for out-of-state students with costs, not including room and board, averaging $5,186 and $7,407, respectively (see Figure 9).

[13] Halperin, *The Forgotten Half Revisited.*
[14] Ibid.

Private institutions are even more expensive. On average, a private four-year college would require nearly twice the family income of poor families, in comparison to only 17 percent of family income of those in the highest income strata. Even a public two-year institution's tuition represents almost half (47.8 percent) of the family income for those in the lowest quintile (see Figure 10).

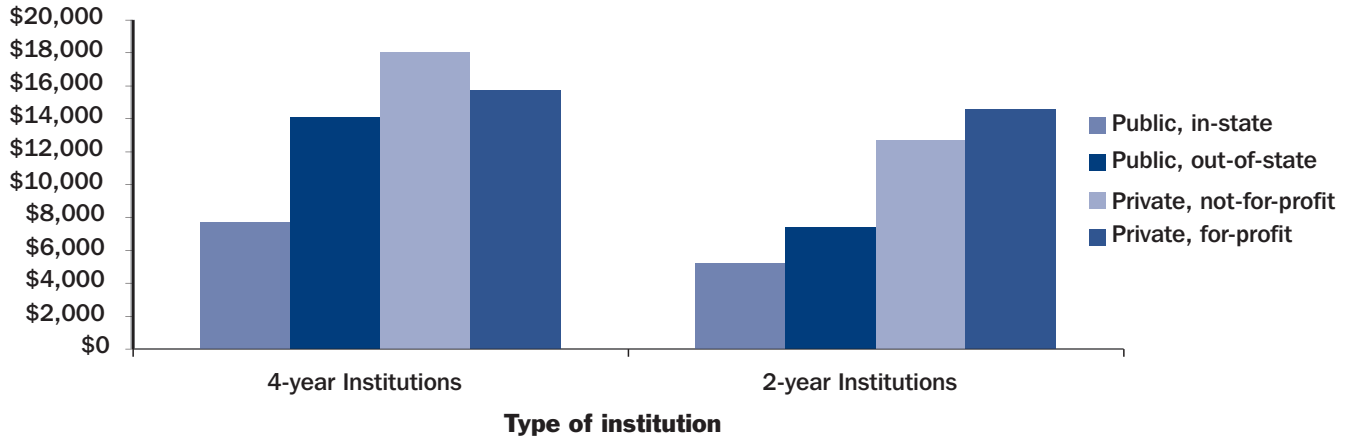
College represents a huge financial investment for students and their families, particularly when one considers that one-third of college students will leave school without obtaining a degree. However, not all students need to expend these large sums to ensure they will have a stable, well-paying job. A majority of jobs in the next decade will not require a college degree. Instead they will require a mix of certification programs or occupational or on-the-job training. Career education information and guidance is vital when high school students are making decisions regarding their future educational and career choices.

In a series of focus groups conducted for this report, we asked school counselors to speak frankly about the challenges of finding better options for those not going to college. Counselors firmly agreed that education, job opportunities, and income are inextricably connected, but not always to college. One counselor told us, "schools need to stress the idea that certain skills are required to do anything, work or college. In addition, parents and others need to see more marketing of successful non-college workers."[15]

Unfortunately, many counselors in most American high schools do not have the time, resources, or knowledge to provide this vital guidance. Extremely high student-to-counselor ratios and the assignment of administrative duties, like master scheduling and detention proctoring, leaves high school guidance counselors with very little time to commit to career planning, skill development, and education.

During the Heldrich Center focus groups, participants noted that 80 percent of the average counselor's time is spent on tasks other than counseling. One contributor noted that a study of counselors in his geographic area found that only six percent of a high school guidance counselor's time is spent in career counseling activities.

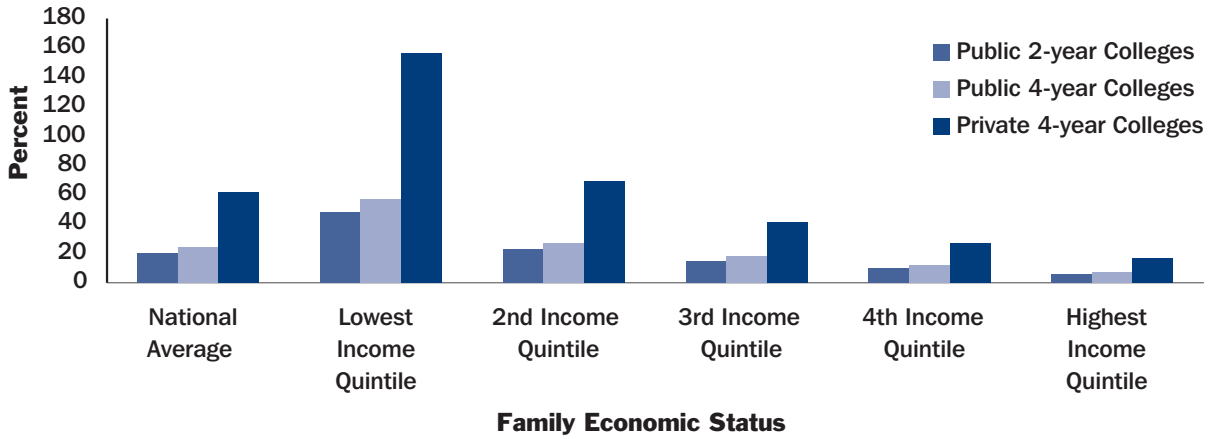
Figure 9: Average price of attendance for full-time undergraduates, not including on-campus housing costs



Source: U.S. Department of Education, *Postsecondary Institutions in the United States: Fall 2002 and Degrees and Other Awards Conferred: 2001–02,* Table E.

[15] Heldrich Center focus group, 2003.

Figure 10: Share of family income needed to pay for college, by type of institution



Source: The National Center for Higher Education Policymaking and Analysis. *Measuring Up: The State-by-State Report Card for Higher Education.*

Counselors are so consumed with addressing behavioral or psychological problems among students and handling college applications that there is little time left for career counseling.

Furthermore, because many counselor education programs do not provide adequate training in career guidance, and counselors have very few professional development opportunities, counselors often feel ill-equipped to impart career guidance.[16] The well-regarded national survey on guidance counseling by the National Center for Education Statistics found that only half of America's schools made professional development available on career guidance standards, frameworks, and models, and even fewer on occupational/vocational/curriculum standards. Of these schools, most offered four hours or less of such training.[17]

Other barriers may also exist for counselors who wish to deliver career guidance. In his recent book, *Beyond College for All,* James Rosenbaum argues that the emphasis of school counseling has shifted since the 1970s.[18] In the 1960s and 1970s, counselors had the responsibility and authority to influence which students applied to college, thus focusing on career guidance, workforce preparation, and job placement for many students who were not academically suited for college. The rise in community colleges with open admissions, increased parental involvement in post-high school plans, and raised public awareness of what was often deemed "tracking" of students by counselors has reduced the ability of counselors to discourage students from applying to college. Rather than facing angry parents, counselors can simply urge college for all.

Unfortunately, guidance counselors in most American high schools do not have the time, resources, or knowledge to provide this vital guidance. Extremely high student-to-counselor ratios and the assignment of administrative duties, like master scheduling and detention proctoring, leaves high school guidance counselors with very little time to commit to career guidance and education.

High school staff, including guidance or career counselors and teachers, must have more support, flexibility, and funding where possible to address the post-graduation needs of all students. All students, regardless of their intended postsecondary school plans, need career guidance. For the definite college-bound student, such advice will help them prepare in high school for choices of study

[16] Ibid.
[17] U.S. Department of Education, *High School Guidance Counseling,* 15.
[18] Rosenbaum, *Beyond College For All,* 88-107.

in college. For those not sure, it will help them explore the benefits and disadvantages of a four-year degree program.

Therefore, the first 70 Percent Solution Principle is: Energize and reinvest in the profession of counseling and its role in schools, and give counselors more power at the local and school level to provide students with the information they need to make informed choices. Schools, business, and community leaders should:

- **Require that counselor education programs include more courses focused on career guidance.** Counselors argue that the lack of emphasis on career guidance is not only a problem in many high schools, but also a problem of counselor education itself. Many counselor education programs require students to take only one course in career development training. While it is included in the American School Counselor Association National Standards for School Counseling Programs, career development is emphasized far less than other topics such as identifying and dealing with depression, bullying, and behavior problems. Graduates of counselor education programs often enter the field with little background or skills in career guidance. Counselor education programs need to institute stronger training in this area.
- **Provide professional development opportunities for counselors and teachers.** In addition to improving counselor education programs, counselors must continually update their skills and knowledge to keep up with current career opportunities and education and skills needs of employers. Counselors and teachers need continuing professional development to understand the requirements of the changing labor market, how to integrate and deliver curricula, and use newly developed tools and resources.
- **Reduce counselor caseloads and administrative responsibilities.** School administrators and school boards must cut back administrative tasks and counselor caseloads to ensure counselors are helping students. Some schools have addressed this issue by assigning specific career counseling units within their guidance staff. These professionals address career counseling only, while other guidance counselors are available to deal with other issues such as behavior problems. In Maryland, every high school has a career center staffed by a career technician.
- **Provide opportunities for counselors to work with teachers to impart career education.** Counselors see students for a brief amount of time over their high school careers. Career education is much more effective if it is integrated into the academic workload. Teachers and counselors need time and resources to work together to find ways that career information can be taught in daily classes.
- **Provide resources for counselors to build relationships with local businesses, trade unions, and education and training institutions.** Career education programs benefit from ties to local businesses, trade unions, and education and training institutions. Not only can these organizations provide up-to-date information on education and skill requirements of jobs in the local labor market, but they can also provide opportunities for students to explore careers while in high school through internships, job shadowing, or taking advanced education or occupational training courses.

In the words of one counselor, "principals and assistant principals need a vision of what counselors are doing, and a community that is going to support it. If that is in place, they will get professional development for counselors."[19]

In the words of one counselor, "principals and assistant principals need a vision of what counselors are doing, and a community that is going to support it. If that is in place, they will get professional development for counselors."[20]

[19] Heldrich Center focus group, 2003.
[20] Ibid.

Good Practice: Cumberland Pathways: Discovering 21st Century Careers Program, Cumberland/Salem County, New Jersey

Discovering 21st Century Careers is a partnership among the New Jersey Department of Labor, the State Employment and Training Commission, the New Jersey Department of Education, the Cumberland/Salem Workforce Investment Board, and Cumberland County College. Leaders of the partnership established the effort to address the shortage of qualified applicants for growing industries in southern New Jersey, particularly for those jobs that do not require a four-year college degree. The Discovering 21st Century Careers partners found that most information available to local high school students focused on college choice and preparation. Seeking to address the lack of information regarding alternatives to four-year degrees for high paying careers, the partners developed a program to build awareness among students about alternative paths to careers, and to educate the county's teachers and counselors to become active, engaged partners in addressing this challenge.

Cumberland County has the highest unemployment rate in the state, lowest median family income, and high teen pregnancy and illiteracy rates. The number of growing industries and employment sectors in the area can generate new jobs and more resources to improve these metrics. Under the Discovering 21st Century Careers program, 24 school counselors and teachers from the 16 K-12 school districts in the county take part in an annual program to educate them regarding careers in the county that do not require a four-year college degree. The program begins with a two-day orientation to introduce teachers and counselors to possible non-baccalaureate career opportunities and their education and training requirements. After the orientation, the group attends an all-day program once a month focusing on one of the major sectors in the region, including:

- Manufacturing
- Allied Health and Nursing
- Agribusiness and Food Processing
- Retailing
- Information Technology
- Transportation and Logistics

Participants spend time learning about the career opportunities, skill requirements, and career paths of these industries. They visit businesses and hear from employers. The program expands educators' knowledge of career opportunities, emphasizes the importance of various types of postsecondary education and training, provides counselors with additional tools for guidance, and strengthens the relationship between business and education in the county. At the end of the program, participants are provided with resource materials and references to provide guidance to students in possible career options.

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II. Reform—for What?

"Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world. This report is concerned with only one of the many causes and dimensions of the problem, but it is the one that undergirds American prosperity, security, and civility. We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people. What was unimaginable a generation ago has begun to occur—others are matching and surpassing our educational attainments."

—Introduction, *A Nation at Risk,* 1982

"As America enters the 21st Century full of hope and promise, too many of our neediest students are being left behind.

Today, nearly 70 percent of inner city fourth graders are unable to read at a basic level on national reading tests. Our high school seniors trail students in Cyprus and South Africa on international math tests. And nearly a third of our college freshmen find they must take a remedial course before they are able to even begin regular college level courses.

Although education is primarily a state and local responsibility, the federal government is partly at fault for tolerating these abysmal results. The federal government currently does not do enough to reward success and sanction failure in our education system."

—Executive Summary, *No Child Left Behind,* White House Report, 2001

If schools are going to become more effective in helping students gain knowledge about building careers in today's workforce, we must revisit the roots of school reform. In 1981, in the midst of recession, U.S. Education Secretary Terence Bell formed the National Commission on Excellence in Education to respond to a rising chorus of national alarm about lost industrial competitiveness, decreasing graduation rates, falling college admissions, and the poor work skills of high school graduates.[21] The Commission's publication of *A Nation at Risk* moved public opinion and galvanized the educational establishment.

The publication of two more landmark reports by the William T. Grant Foundation in 1988, *The Forgotten Half: Non-College Youth in America,* and *The Forgotten Half: Pathways to Success for America's Youth,* underscored the crisis.[22] *A Nation at Risk* found that most American high school students were woefully unprepared for college and did not complete the basic number of academic credits in high school necessary to succeed in college classes. *The Forgotten Half* reports focused attention on the more than 40 percent of American teenagers who were not attending college, but earning less, learning less, and

[21] The National Commission on Excellence in Education, *A Nation at Risk*, Introduction.
[22] The William T. Grant Foundation, *The Forgotten Half.*

working less than had been true of the "greatest generation" and early Baby Boomer workers who came before them.

Since the early 1980s, policymakers, experts, and private citizens have poured resources into reforming and improving the competitiveness of American public schools. In 1999-2000, K-12 expenditures reached $308 billion, an increase of 65 percent from the $202 billion figure in 1990.[23] Currently, 18 states use "high stakes" testing policies in the pursuit of improving student performance and school accountability—and many more states will follow under the No Child Left Behind Act.[24] Academics and consultants have published thousands of articles and books. National and state commissions have released blue ribbon reports. Americans in countless communities have devoted time, money, caring, and commitment to the performance of their local schools and the importance of graduation.

> "We face a barrier in the mindset of school districts and parents that college equals success. We are placing way too much emphasis on college as the route all students should take," notes a high school counselor in a Heldrich Center focus group.[26]

The result has been the push in high school education and counseling to prepare all students for further education, the "college for all" movement. Policymakers have directed schools to focus on preparation, testing, and standards. High school educators and counselors devote most of their efforts to preparing students for entrance to college. As one counselor explained, "we face a barrier in the mindset of school districts and parents that college equals success. We are placing way too much emphasis on college as the route all students should take."[25]

As parents and educators committed themselves to preparing students for the ultimate goal—acceptance into the best college or university the student could achieve—states and the federal government have established national education goals linked to a system of standards and assessments for schools throughout the nation. Ever more stringent national standards are raising the stakes for failing schools and policymakers. By the mid-1990s, the era of "teaching to the test" had come to pass.

During these past three decades, vocational and technical education has been governed by a series of mandates and laws. Employers and experts continue to raise an outcry over the poor skills, literacy, and workforce preparation of high school graduates. Dozens of books and studies identified the importance of "high skills" to earn "high wages." Policymakers and school leaders sought to modernize and improve vocational education to focus more attention on the need for a highly skilled workforce, and to build more links between classroom education and "experiential" learning outside of the school walls. Major laws, including the Carl D. Perkins Vocational and Applied Technology Education Act of 1990 and the School to Work Opportunities Act of 1994, funded new programs to build and encourage links among students, training, employers, and career awareness.[27] Nonetheless, many parents view "vo-tech" negatively.

Vocational preparation and career education are still viewed as second-tier programs for less academically talented students rather than as a core value for education in a high tech economy. The National Center for Education Statistics (NCES) found that 43 percent of American public high school counselors spend less than 10 percent of their time on occupational choice and career planning, while three-fourths of counselors spend less than 10 percent of their time on job placement and employability skill development.[28] In contrast, counselors spend significantly more time on attendance, discipline, personal problems, and academic testing, the NCES found.

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[23] U.S. Department of Education, C*ommon Core of Data, National Public Education Financial Survey and Digest of Education Statistics*.
[24] Braun, "Reconsidering the impact of high-stakes testing."
[25] Heldrich Center focus group, 2003.
[26] Ibid.
[27] Erlichson and Van Horn, "School to Work Governance: A National Review."
[28] U.S. Department of Education, *High School Guidance Counseling*, 66.

School counselors concur that parents and school management want their time spent on college prep. "Career counseling in high school is just not encouraged," one Vermont counselor said. "The No Child Left Behind Act has made it worse."[29] The No Child Left Behind Act (NCLB) is the most recent version of the Elementary and Secondary Education Act of 1965, federal legislation that provides vital funds to states and districts aimed at improving student achievement. The law seeks to assure that all students become proficient in reading/language arts and mathematics by the time they reach the 12th grade. Each state is given the authority to define their proficiency levels, which then must be evaluated by the U.S. Department of Education (USDOE) based on the "rigor of the standards, the validity and reliability of the assessments, and the strength of the accountability systems."[30]

To assess the progress of each state, the USDOE requires that each state annually test all students from grades three through eight and test students once during their secondary education. These tests, which focus on reading/language arts and mathematics, are based on the proficiency standards of each state and consistent with nationally recognized professional and technical standards.

After each state completes annual testing, NCLB requires each state to take part in the National Assessment of Educational Progress (NAEP), often referred to as "the school report card," the results of which are then published and disseminated. School performances are also measured relative to the previous year in the Adequate Yearly Progress report.

Districts and schools that fail to meet the NCLB goals face a series of escalating consequences, with the clear implication that schools in poorer neighborhoods or schools with more at-risk or low-performing students will be vulnerable to watch lists and oversight even if such schools had made enormous progress but fall short of the statistically predetermined targets. Dueling reports and evaluations offer conflicting evidence on the effects of high-stakes testing.

The seminal survey by the National Center for Education Statistics found that 43 percent of American public high school counselors spend less than 10 percent of their time on occupational choice and career planning, while three-fourths of counselors spend less than 10 percent of their time on job placement and employability skill development.

Education experts, teachers, principals, and advocates have raised concerns about the inflexibility of the new system. The implementation of stringent accountability measures could lead to "test-based coaching," with schools even more inclined to center the curriculum primarily on test material to better ensure the preparedness of students for annual testing. Many worry that the pressure to meet state Adequate Yearly Progress targets will further marginalize efforts to assist and prepare students to make well-informed life, career, and educational choices.

The transition from high school to postsecondary options poses the next great challenge for the "tested generation," analysts have observed. A Jobs for the Future survey of early college credit programs states: "During the past five years of nationwide, high-stakes testing and high school reform, attempts to improve student outcomes focused on the first big transition in which we lost many students: the leak in the education pipeline around ninth grade, when leaving school is legal. ...Now, as the 'tested' generation reaches college age, huge questions are appearing about the next transition: to postsecondary education."[31]

[29] Heldrich Center focus group, 2003.
[30] Education Commission of the States, *A Closer Look*, 3.
[31] Hoffman, "College Credit in High School," 45.

In recent years, new initiatives have been developed to address the growing perception that a high school degree does not adequately prepare students for education or work after high school. Achieve, Inc., The Education Trust, and the Thomas B. Fordham Foundation partnered in 2002 to create The American Diploma Project. The recently published report, *Ready or Not: Creating a High School Diploma that Counts,* establishes clear benchmarks for high school graduates in English and mathematics.[32] The research also focused on the workplace tasks and postsecondary assignments that relate to these benchmarks, giving context for the knowledge and skills gained in high school.

Americans express strong support for accountability, testing, and standards. Nine in 10 U.S. workers favor high school exit exams to ensure that students have basic skills, and about the same number also support requiring students in the third through eighth grade to take yearly tests in math and reading, according to survey data from the Heldrich Center at Rutgers University and the Center for Survey Research and Analysis at the University of Connecticut.[33] However, despite the dominance of accountability and "college for all," while six in 10 high school graduates enter postsecondary education, nearly one-third of college students drop out before achieving a degree or credential.

Career Development for All

A recent study by the Educational Policy Institute and the New England Association of Schools and Colleges surveyed 1,613 college freshmen at eight institutions in spring of 2002 about their work-based learning experiences in high school. The survey found that 69 percent of these students had participated in at least one of the following: job shadowing, internship, community service, apprenticeship, career academy, school-sponsored enterprise, or tech prep program. Students' expectations and scholastic performance increased with the number of work-based learning activities in which they participated. Forty-five percent of participants said that their interest in pursuing higher education was furthered by their participation in the work-based learning activity. Finally, 71 percent of respondents said that they learn better through hands-on and real-world experience than through classroom instruction. The same percentage said they would like to participate in college approved work experiences, but only 49 percent indicated that their colleges offer enough of these opportunities.[34]

As teaching to the test and "college for all" have come to dominate the policy conversation, too many parents and high school officials still agree with the misconception that career counseling or vocational training are reserved for non-college-track students. This misperception is a fundamental disservice to America's students, who enter college without clear direction or goals, often drop out, and fail to earn a satisfying credential or degree. In addition, because the "college for all" view reinforces high school as largely a passport to a good school one must enter by age 19, many individuals come to view themselves as failures for not completing college, when a bachelor's or master's degree could be earned later in life.

The American economy will continue to create millions of good jobs that require only two years of postsecondary education, on-the-job training, or occupational training. Many counselors share the view of one in the Heldrich Center's focus group: "both college and non-college-bound youth need career advice and help. Career development should not be thought of as only for non-college-bound youth. Solid career development is important for every student."[35]

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[32] Achieve, Inc., *Ready or Not*.
[33] Van Horn and Dautrich, *Work Trends VI—Making the Grade*, 2.
[34] Swail and Kampits, *Work-Based Learning & Higher Education*, 10-19.
[35] Heldrich Center focus group, 2003.

> "Both college and non-college-bound youth need career advice and help. Career development should not be thought of as only for non-college-bound youth. Solid career development is important for every student."
>
> –High School Guidance Counselor, Heldrich Center focus group

Some research indicates students in today's economy are more aware of the need for communications, technical training, and technical skills. According to the Ferris State University *Decisions Without Direction* survey, nearly three-fourths of students believe there are plenty of good-paying high-tech jobs available that only require two or three years of job training. Young people today are 22 percent less likely to believe job-training courses limit professional choice than students were in 2000.[36]

For decades, American public schools sorted students into college and non-college prep tracks. These tracks provided students with starkly different programs and outcomes. That legacy is still at work today. Public schools offer a patchwork assortment of general or vocational classes for lower-achieving students, yet must acknowledge the imperative of meeting standards and preparing students for an information technology economy.

Raising Our Sights: No High School Senior Left Behind, a report of the National Commission on the High School Senior Year, sponsored by the Carnegie Corporation, the Mott Foundation, and the Woodrow Wilson National Fellowship Foundation, consolidates years of research from a variety of political and professional perspectives. The Commission tackles the dilemma of "tracking" in a world of standards, testing, and high skills. The Commission recommends that U.S. public schools should help all students prepare to complete two additional years of education after graduation, in programs that span skill certification, job training, or college education (including four-year degree programs). The Commission calls for a thoughtful approach to encourage K-12 and higher education to become one system, one common endeavor. The Commission therefore "merges the standards-based school reform movement, which has become the focus of efforts in practically every state, with emerging new efforts to create a P-16 system of education—from pre-school through postsecondary..."[37]

In today's economy, every worker should embrace education and lifelong learning as an investment, always seeking knowledge needed for careers at every stage. More attention should be paid to how the lack of contextual learning and skills development contributes to high school dropout rates. School counselors and psychologists cite the importance of work experience and job counseling in bolstering mental health for students who are not academically inclined. Counselors note that without this preparation, students enter postsecondary and community colleges having to "use most of their financial aid to learn basic skills and career planning," as one focus group member stated.

Nor is higher education ready to step in and provide this knowledge. The fact remains that many colleges and universities are poorly equipped to help students who are undecided on a career. In a society obsessed with K-12 educational performance, the well-being of millions of students is compromised by lack of bridges to the world of work around them. As we have noted, public schools have the resources to close the career readiness gap, but they need permission and direction. **Therefore, the second 70 Percent Solution Principle is: Incorporate career/occupation knowledge into curriculum standards and testing for all students.**

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[36] Hurley and Thorp, eds., *Decisions Without Direction, Comprehensive Report and Data Summary*, 26.
[37] National Commission on the High School Senior Year, *Raising Our Sights,* 16.

Education leaders, administrators, and local leaders must work with policymakers to change state guidelines to ensure that schools can integrate career information into academic curricula. Teachers, counselors, and administrators must also collaborate to ensure that students are receiving the information that will help them achieve their education and career goals. Educators need the support of school administrators to implement career education. Schools need to share information about effective practices and materials to make the best use of limited time and resources. Leadership is needed at the district, regional, and state level to foster collaboration and provide additional resources. The State of New Jersey has adopted The New Jersey Core Curriculum Content Standards for Career Education and Consumer, Family, and Life Skills. These standards focus on the developmental nature of career preparation and incorporate indicators at grades four, eight, and 12 in career awareness and planning.

Important steps for this principle include:

- **Realigning curricula** to ensure career knowledge and work skills are included in classroom teaching and academic assignments;
- **Providing students with training in soft skills** (work habits, resume writing) critical to the workplace and advanced skill training;
- **Training classroom teachers and counselors on these techniques**, coordinated with provision of knowledge building exercises for each academic discipline;
- **Establishing online clearinghouses for all available materials**, including labor market information and accessible journalism about careers and the labor market, such as the State of New Jersey has established at *www.NJNextStop.org*.

Ready for the Job Project

In a project funded by the New Jersey State Employment and Training Commission and the New Jersey Departments of Education and Labor, the John J. Heldrich Center for Workforce Development, with local Workforce Investment Boards and community colleges, identified occupations and required skills, abilities, and credentials for eight key industries in New Jersey. The results of this project were industry reports and a website (www.NJNextStop.org) aimed at students, parents, and school staff with useful career information and resource links. For more information, contact Stephanie Duckworth-Elliott at the Heldrich Center, (732) 932-4100, ext. 767, sad@rci.rutgers.edu.

Good Practices: Opportunities | Jobs | Careers, Omaha, Nebraska

In 1990, Metropolitan Community College, the Greater Omaha Chamber of Commerce, and Omaha Public Schools created the Opportunities | Jobs | Careers partnership (OJC) in the wake of a report that found that 75 percent of Omaha, Nebraska high school graduates entered the labor force within 18 months of graduation with little or no postsecondary education or training. The partners formed OJC to provide new pathways and services for these youth. It started as a small job shadowing program serving a limited number of students and has grown to a citywide partnership across nine public and private school districts. Current partners now include a range of agencies, unions, workforce groups, the Omaha and Fremont Chambers of Commerce, hundreds of participating employers, the University of Nebraska at Omaha, and the University of Nebraska Medical Center.

OJC grew when it received one of only 15 School-to-Work grants awarded to local partnerships under the School-to-Work Opportunities Act in 1994. OJC facilitators coordinated career fairs, career assessments, and career speakers for the participating high schools. They established career academies and apprenticeship programs in areas such as business and information technology, construction, and hospitality. A mentoring program for economically disadvantaged youth was created and OJC launched a teacher/counselor summer internship program for teachers to work in area businesses and build lesson plans based on their experiences.

The partnership worked with school administrators to introduce ACT's Work Keys® skill assessment system into Omaha public schools to test students' workforce preparedness skills such as problem solving, communication, and applied academics. Counseling staff and teachers use these assessments to assist in course selection and career development activities. For elementary students, a curriculum was developed for kindergarteners and first graders to explore careers. The curriculum also benefits older students who deliver the content to the young children using puppet shows.

In 1998, the Suzanne and Walter Scott Foundation awarded a one million dollar grant to OJC. Using this grant, OJC created the Omaha Career Network to provide and improve career services for all Omaha citizens through a partnership of career development organizations, employment service providers, employers, and educators. The Omaha Career Network piloted two programs: Education for Employment that provided pre-employment training for employment-bound seniors, and the Talent Pool Program that provided pre-employment training, basic skills remediation, and technical skills training for high school and college dropouts. The Omaha Career Network also established four Career Network Centers and four satellite locations through the Greater Omaha area. They developed a Virtual Career Center, an Internet-based career exploration tool, and OmahaCareerNetwork.org, that allows jobseekers access to local and national career resources.

"If I had to point to one major accomplishment of the coalition over the years, it is that we have succeeded in offering a professional framework for business and education in which to become partners," notes Patricia Crisler, the director of OJC. "When we started out nearly 15 years ago, few people were seriously talking about K-12 education's role in workforce development. Now, since a solid cross section of educators and business people understands how their roles intersect, we spend less time convincing people of the need and more time working together on solutions."

In September 2000, OJC launched a major new initiative, the X Files project, to provide students with a clear link between academic achievement and success in the workplace, to identify clear skill standards for students, and to attract more business involvement in the education system. The project has four main components:

- Community Skill Standards and Certificates based on Work Keys® scores. The Greater Omaha Chamber of Commerce awards certificates to students who meet or exceed the workforce standards.
- Student Employment Portfolios, called "X Files" for the expandable file folders labeled "eXperience," "eXpertise," "eXamples," etc. Students fill the portfolios with their transcripts, resumes, work experience information, letters of references or samples of their best work. Over 2000 portfolios are distributed each year.
- Business participation through School-to-Career activities, portfolio review, and financial contributions.
- OpportunityLink.org, a website that connects businesses with schools.

The purpose of the X Files project is to enhance student motivation, so that students get the most out of their high school careers—whether they plan to attend college or move directly to the workforce (or both). In only its second year, the X Files initiative received national recognition as being a model program for academic-workplace standards alignment from the National Commission on the High School Senior Year.

Students are encouraged to prepare their files carefully and use them to create a good impression at college or job interviews. OJC recruits businesses and provides them with a resource guide that includes information about how to interpret the files during hiring. The project uses advertising and professionally developed materials to attract students and businesses to participate. Crisler underscores the strengths of integrating career education into everyday curricula: "Two key factors strengthened the X Files initiative: its flexibility to work across school curricula and its emphasis on building business involvement from kindergarten on up. The career portfolio itself is not prescriptive, so schools and school districts can determine how best to use the tool within their existing frameworks. And by increasing business involvement from the earliest grade levels, students have ample opportunities to explore and experience the world of work before the portfolio even comes into play."

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III. The Parent Paradox

"Yet, the increasing importance of intellectual capital in today's knowledge economy requires that the American high school be transformed from an institution that prepares a few for further learning into one that prepares all students for living and prospering in an increasingly complex and interdependent world."

—National Commission on the High School Senior Year

If parents are going to become more effective in assisting their children prepare for the economic challenges of the future, more of them need to understand the implications of these words. Students get most of their information and advice about what to do after high school from their parents, but that information is often not enough. It is well documented that students need to receive better information about what to do after high school.

The John J. Heldrich Center's 2003 survey of New Jersey high school students found that while the majority of students (96 percent) reported that they planned to attend college after high school to prepare for a career, only 10 percent said they are very familiar with the types of jobs in the fields for which plan to prepare. The survey indicated few students have a clear understanding of how they can make the most of education post-high school to prepare for their careers.[38]

According to the Ferris State *Decisions Without Direction* report: "Students perceive a lack of career guidance in their schools, and often cannot name anyone outside of their parents who has been helpful in career counseling. Furthermore, most admit that parental guidance has been limited to a few hours in the past few months. ...Most young people are receiving little to no career guidance outside the home, and not enough from their parents."[39]

"It is extremely important for parents to have an active role in helping their children develop those values and habits that will enable them to have the tools to make informed decisions about their futures," states Catherine Reeves, director of Business Partnerships and the Senior Practicum at Allentown High School in New Jersey, a model initiative in the state.

"Parents can't teach what they don't know," one counselor noted in a focus group.[40]

Schools must broaden the pool and quality of career knowledge available to students, parents, and school supporters. This should be done in a number of areas: understanding the nature of higher education, the usefulness of career information and the range of information tools available to support "next step" decisions, and most importantly, the viable alternatives open to high school graduates seeking a career path.

The John J. Heldrich Center's 2003 survey of New Jersey high school students found that while the majority of students (96 percent) reported that they planned to attend college after high school to prepare for a career, only 10 percent said they are very familiar with the types of jobs in the fields for which plan to prepare.

38 Van Horn and Dixon, *Taking the Next Step,* 11.
39 Hurley and Thorp, eds., *Decisions Without Direction, Executive Summary*, 1-2.
40 Heldrich Center focus group, 2003.

The Changing Face of the American College Student

School counselors and officials must portray a complete picture of the roles and changing nature of a college education today. As this report has emphasized, while as many as three-fourths of high school students enter some form of higher education, only 28 percent will complete a bachelor's degree by age 29. Among today's college student body, in fact, less than one-fifth of students meet the stereotype of the 18-22 year-old living on the college campus.[41] It is also important for parents to understand that advanced learning can be achieved at every age and stage of life:

- After decades of investing billions of private and public dollars in higher education, supply of classrooms exceed demand. Today, many colleges and universities provide essentially open admissions, accepting most high school graduates and providing the needed remedial classroom work. Ultimately, many of the smaller, regional, newer, and community colleges—setting aside the merits of classroom instruction and knowledge gained—do not provide substantial reputation, prestige, and credibility to employers. The pool of colleges with exacting entry requirements and "great college" prestige is, in fact, quite small. Media coverage regarding higher education can perpetuate the "big name" college myth.
- One-third of 3,600 institutions of higher education are community colleges, enrolling one-half of all students.[42]
- Numerous occupations that require some form of postsecondary education training or a two-year degree pay better than other occupations requiring four-year degrees.
- Many employers provide their workers advanced education and skills training relating to an occupcation or industry. More than 1,000 corporate universities already exist, providing instruction and training for their own workers in myriad skills and degree programs. Six of every 10 employers provide tuition reimbursement to their employees, the International Foundation of Employee Benefit Plans has found.

Getting Parents and Guardians in the Loop

Schools should provide parents with information about options such as military service and government and community service programs, including the Peace Corps and AmericaCorps. They also need to hear directly from employers about the conditions and realities of the 21st century workplace. Officials and counselors should also encourage youth to seek mentoring opportunities through Boy and Girl Scouts, youth organizations, and athletics.

Because it is so important to reach youth at an early age, schools should implement a structured career education initiative that begins in elementary school, at least by third grade, and continues through high school. Information should be provided in small doses, through a consistent plan, over a long period of time. School counselors, or designated liaisons or coordinators, can partner with principals, administrators, and employers to provide richer information and choices for parents.

Until these steps are taken, uninformed views of high school will persist. Experts agree that too many parents and citizens accept the traditional function of the high school as the "Great American Sorting Machine." Part of what is required to change this perception is educating parents and students about why adequate preparation in the middle school years is essential to success in high school and beyond.[43]

This leads us to the third 70 Percent Solution Principle: Improve and expand how schools market and inform parents and the community about career options and opportunities, including those not requiring four-year degrees.

[41] Levine, "Privatization in Higher Education," 1.
[42] U.S. Department of Education, Digest of Education Statistics, 1997.
[43] National Commission on the High School Senior Year, *Raising Our Sights*, 28.

Every school district should develop an education program addressing career and education planning, alternatives, and the workforce. “We need to honor and recognize skilled labor as well as college achievement,” noted one counselor in a Heldrich Center focus group, “and we *must* involve parents.”

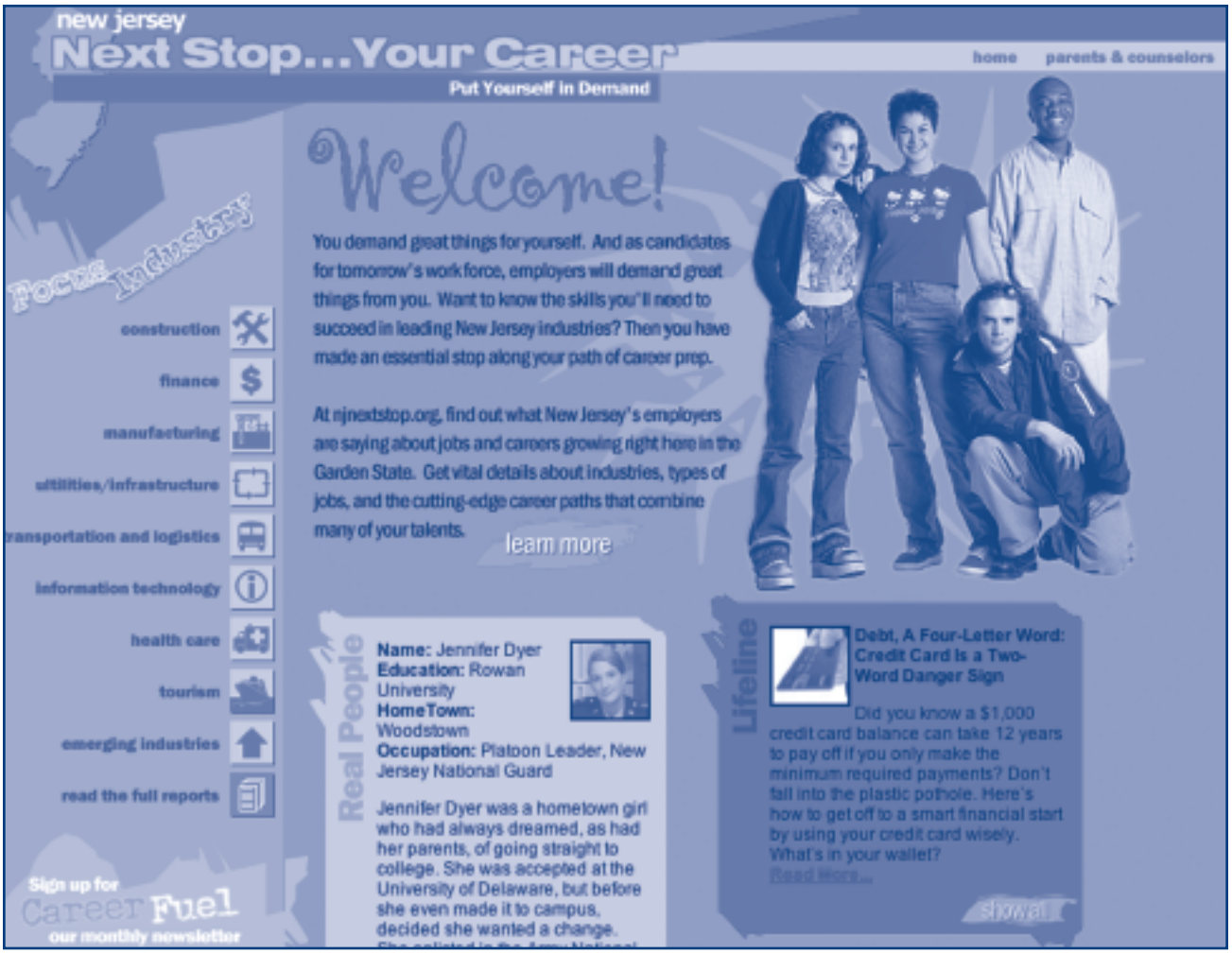
School administrators must lead their schools and the business community in developing public relations and outreach efforts needed to build new understanding of career directions and alternatives. Every school district should develop an education program addressing career and education planning, alternatives, and the workforce. “We need to honor and recognize skilled labor as well as college achievement,” noted one counselor in a Heldrich Center focus group, “and we *must* involve parents.”

This report recommends schools and their local supporters move quickly to educate families about suitable options and opportunities after high school. The following steps should be considered:

- **Leadership of school administrators and top-level involvement of school counselors;**
- **Research good practices nationwide** and provide parents with solid data about labor and occupational demand and job growth and educational requirements;
- **Promote use of select, screened career education tools and websites for use by parents and students**—rather than overwhelm parents with pages of recommended resources, identify “portal” sites where the parent and student can start gathering information. The State of New Jersey’s www.NJNextStop.org provides an example of a comprehensive, well-documented online service that identifies growth industries and jobs, provides useful journalism, and links to other important resources (see Figure 11).
- **School leadership should revamp its public recognition programs for students** who earn acceptance into prestigious four-year degree programs. While these students deserve public praise indeed, schools should promote as vigorously the achievements of non four-year college-bound students via awards and recognition programs. School districts should promote positive case studies of students who pursue two-year, certificate, on-the-job and other options and have made a successful transition.
- **Schools should emphasize the importance of developing a career and academic plan for students with full parental involvement**. School administrators should work with national certification groups, model schools, state policy officials, and teacher unions in developing and implementing career plan programs, beginning in eighth or ninth grade. The plans should build knowledge about the options available to students, not structure “tracks” or place limitations. This initiative should be developed, discussed with, and presented to parents. Some call these “career pathway” concepts. By applying the career pathways concept, educators and counselors can more easily provide young adults with the information needed to make more informed career decisions.[44]
- **Educating parents and guardians about careers will help them as well**, not just their children, in coping with rapid labor market change.

[44] Hurley and Thorp,eds., *Decisions Without Direction, Executive Summary,* 7.

Figure 11: www.NJNextStop.org website



Good Practices:

Opportunities | Jobs | Careers at Omaha, Nebraska

The Business Academy for Studies and Experiences (BASE) at Cherry Hill, New Jersey

Eastern Technical High School at Baltimore, Maryland

In 1997, Omaha's **Opportunities | Jobs | Careers** (OJC) partnership developed Family Resource Centers where parents could access bilingual social service information, career information for students, community announcements, and other important information. Activities also included a community health conference, a Career Day for all students at Omaha's urban school, South High, business tours, job shadowing, and career speakers. OJC offered professional development for teachers to help them use innovative approaches to career development and to provide them with contextual Spanish to help them communicate with students and their families. In addition, a mentoring program for elementary school students, TeamMates, was introduced and since has been expanded statewide.

For more information, contact:
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In New Jersey, the **Business Academy for Studies and Experience** is a partnership between the Cherry Hill school district and Commerce Bank that was launched in September 2002. The academy was formed with the support of the superintendent of Cherry Hill School District, Morton Sherman, the Commissioner of the Department of Education, William Librera, and the chairman of the Cherry Hill-based Commerce Bancorp Inc., Vernon Hill.

The program offers in-depth business courses to juniors and seniors at Cherry Hill East and Cherry Hill West high schools. These go beyond the typical high school business classes to cover topics such as business leadership and macroeconomics. Credits from these courses fulfill elective requirements or may be applied toward college credit. Students can also take online courses from various colleges across the country. Cherry Hill School District partnered with Educere, which offers online college courses to high school students. Educere operates like online discount travel websites: they track down empty seats in online courses nationwide and offer them to high school students at a discount. Students use these courses for college credit. However, students must pay to enroll in these courses, usually between $400 and $600, some of which may be defrayed by financial assistance provided by the district through donations from businesses that participate in the internships. Drexel University is one of the partners in this component of the program and professors from the online courses visit the high school classrooms. To help them learn to balance this workload, students have access to a high school teacher who serves as a mentor for students taking college-level courses in high school.

Students attend instructional workshops at Commerce corporate training centers and participate in internships and employment opportunities at local businesses, such as Commerce Bank, the Chamber of Commerce, collection agencies, NFL Films, and several retail stores. Prior to internships, students receive training in job readiness skills to help them understand business culture and protocol, such as punctuality and appropriate business dress. Finally, guest speakers visit the classroom and discuss workplace issues in the business world.

The program's launch included parents and students, and local parents strongly support the effort. Parents are provided with materials to document the program's work and purposes. Approximately 50 students participated in its first year and the program's success is apparent in the full registration for program classes. In addition, many students have been hired for summer jobs after completing an internship, enroll in the program their senior year after participating the year before, and have been able to transfer and apply online courses to their college credits.

For more information contact:
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Cherry Hill Public Schools
856-429-5600 x237
gcohen@chclc.org

Baltimore, Maryland's **Eastern Technical High School** is widely recognized for its record of student achievement and exceptional programs that prepare students for postsecondary education success. The school's programs emphasize core values, positive workplace attitudes, multicultural awareness, and responsibility to self, family, and community. In addition to concentrated academic study, Eastern Tech students experience all of the technical areas taught in the school through a ninth grade exploratory program. Through this program, students consult with their teachers and parents to shape an individual career action plan within the school, and specialize in a career major. This leads to each student qualifying as a "career completer" and/or an entrant into the University of Maryland college system. Eastern Tech students meet or exceed the graduation requirements of many students in other high schools. All students take English, math, and social studies, in academically rigorous settings.

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Harry J. Cook, English Department Chair
Eastern Technical High School
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www.easttech.org

IV. Building Career Awareness From an Early Age

"My mentor and I treated each other as friends and colleagues. My work habits increased substantially. I learned that I could work well. I never tested myself before."

—Student, Allentown, New Jersey Senior Practicum

"This experience has changed my life. If it were not for the Senior Practicum I would not have known whether or not I really wanted to become a teacher…"

—Student, Allentown, New Jersey Senior Practicum

Despite billions of dollars and the building of a national foundation/government/ education reform industry over the last twenty years, many students still ask of their schools, "Why am I here?" While this in part reflects normal human restlessness, the wall between classroom experiences and how education translates to jobs and opportunity in the U.S. economy has not yet been brought down. This report notes the gaps in how public education prepares students for life and work, even as the lion's share of resources are devoted to preparing for standardized tests, meeting curricula standards, and encouraging college attendance for all graduates. We have identified the need for common sense practices to expand the roles of school counselors, better inform parents, and give teachers new tools.

As school professionals, policymakers, and parents become better informed about options for students not immediately attending a traditional four-year college, and certain assumptions about public education today are changed, toward what goals should we be working? What approaches have proven successful? Many experts across the spectrum agree that students need a different mix of academic work and career preparation and stronger integration of career and academic standards.[45] Career education and preparation for success beyond high school must be adopted earlier in the students' educational experience.

The business sector has engaged school and workforce reform at the legislative and local district level, as advocates and often innovators in career planning and experiential learning. A number of business leaders have become deeply involved in the policy struggle to achieve national standards and performance measures. However, it is clear that many communities will benefit from sustained or renewed attention from local and regional corporations, including the appointment of human resources and community outreach executives funded to directly work with schools. Schools note the increasing rate of job turnover during the past decade, and how downsizing at firms has meant that many contacts schools had built in the human resources and other departments at firms are no longer useful.[46]

Several pilot initiatives, already underway around the nation, offer models for building better career and college sense among high school students. Addressing the 70 Percent Solution often means modest adjustments that ease the transition from high school to postsecondary education and the world of work. What many of these efforts have in common are broad-based partnerships that engage parents, universities, foundations, businesses, and unions in helping high school students.

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[45] For a comprehensive review of the research literature on the effectiveness of career development programs, see Hughes and Karp, "School-Based Career Development: A Synthesis of the Literature."
[46] Van Horn and Pierson-Balik, *Strengthening Career Guidance for New Jersey High School Students,* 5.

Dual Enrollment

Nearly every state has some form of dual enrollment, which allows high school students to take some college level courses during high school. At least 21 states provide incentives to increase student and institutional participation in these initiatives. Most dual enrollment efforts include community colleges, however, rather than four-year public institutions. Analysts and policymakers have generally praised dual enrollment as an effective strategy for promoting college access, and introducing students to college and work-related skills early in their high school careers. A number of programs have shown impressive growth, including Minnesota High Schools (20 percent participation in 2000), Washington State's Running Start (growing three percent a year), Florida's Community College System (82 percent increase between 1991 and 2001), and New York City's public school system and CUNY, which has grown to include 17 schools with a goal to serve 45,000 students by 2003.[47]

Early College and Middle Schools

Early college high schools and a related but longer standing institution called "middle colleges" combine the high school and college experiences both intellectually and socially. Middle colleges are explicitly designed to serve at-risk youth by easing the transition from high school to college, and increasing motivation for academic work. The middle schools model situates high schools adjacent to or within community colleges. These placed-based programs are quite small, involving fewer than 5,000 students per year. However, the National Commission on the High School Senior Year cites middle schools and related programs as positive models for "demanding alternatives that relieve the tedium characterizing much of high school work."[48]

In 2003, major foundations, including the Bill & Melinda Gates Foundation, Carnegie Corporation, and the Open Society Institute joined forces with urban school systems to pilot "early college high schools," an aggressive new initiative that will allow students to earn an associate's degree or two years of credit toward a bachelor's degree while in high school. Early college high schools are small, autonomous, focused on academic achievement, and can begin with the middle grades. It is their priority to serve low-income families, first-generation college goers, students of color, and new immigrants. The schools focus on eliminating time wasted during the junior and senior years to facilitate the transition of motivated students to postsecondary education. The schools focus on outcomes, performance measures, and completion of credits and reference points to move further toward degrees.

Grants have established schools in seven U.S. cities to carry out these reforms. As noted by Karen Arenson in the July 14, 2003 *The New York Times*, "New York City is getting two more 'early-college high schools' this fall, part of a national wave of such schools designed to help minority and low-income students complete high school and get a jump on college before they graduate. These early college schools aim to make such advanced curricula the norm for every one of their students, not just the handful at the top."[49] As these projects are in a nascent stage, their efficacy cannot be evaluated for a number of years.

Tech Prep

So-called Tech Prep programs receive high praise, both for involving school counselors in working with non-college-bound youth, and for achieving real results in the classroom and after graduation. The Tech Prep program partners a community college with high school guidance counselors, who learn about which technology and certificate programs will lead to jobs with good pay. The counselor then works with teachers to educate

[47] Hoffman, "College Credit in High School," 46-47.
[48] National Commission on the High School Senior Year, *Raising Our Sights,* 30.
[49] Arenson, "Early College Gains Ground in Education," B-1.

students about designing coursework and generating college or certificate credit, generally in technical fields. The counselors also suggest internships and additional experiential learning opportunities. For Tech Prep to work, counselors must have the support of the local and state administrators to provide the time that is required.

Career Academies

The Career Academy is one response to the School-to-Career movement. First developed in 1969 in Philadelphia, the Career Academy model builds a school-within-a-school where students learn in small communities with a career or industry theme. Students often attend a core set of classes with the same classmates and a small number of teachers throughout their high school education. The model also incorporates the involvement of the business community, to develop advisory boards comprised of business leaders or to establish internship opportunities for students. According to the National Career Academy Coalition, Career Academies exist in over 1,500 high schools across the United States.[50]

An evaluation of Career Academy programs throughout the nation by Manpower Demonstration Research Corporation (MDRC) shows that the programs had short-term effects on participants, such as increasing the level of school engagement and the rate at which students participated in career awareness activities and career-related courses. However, high school graduation and college enrollment rates were high for both Academy students and similar non-Academy students. Researchers attribute this to the fact that both groups are high-achieving, motivated students that are likely to succeed regardless of participation in a Career Academy program.[51] However, MDRC also reported substantially improved labor market outcomes for male Academy students. Compared to the non-Academy control group, young men in the Academy group earned over $10,000 (18 percent) more over the four-year follow-up period due to increased wages, more hours worked, and greater employment stability.[52]

Expanding Options for High School Seniors

As has been cited elsewhere in this report, the findings of the National Commission on the High School Senior Year express a consensus of analysts and education officials from various regions of the country and political perspectives. The early college, middle school, and Tech Prep models all do or can incorporate a senior year initiative. As with the programs mentioned above, a re-envisioned senior year is rooted in new arguments about connecting students to the career, academic, and life management concerns they will encounter upon leaving high school.

The expanded senior year provides time to explore options and prove knowledge and skills. As noted by the Commission: "Ideally every senior should complete a capstone project, perform an internship, complete a research project, participate in community service, or take college-level courses... The Commission also is restating a long-held view of countless educators, business leaders, and policymakers who are convinced that the best preparation in high school readies students for postsecondary education, work, and life."[53]

This report confirms the importance and success of these programs as markers for continued and expanded investment by foundations, states, and school districts. Evaluations of Tech Prep, middle schools, and related programs are encouraging. Career and experiential learning strengthen communication, organization, and problem-solving skills through every year of high school, and also help students better understand post-graduation choices.

Columbia University researchers have found that studies of Tech Prep at both the state and national level show that Tech Prep students were more successful in high school than similar, non-Tech Prep students, and were likely to enter postsecondary education (though more often in a two-year rather than a four-year institution).[54]

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[50] National Career Academy Coalition website, http://www.ncacinc.org/aboutacad.html.
[51] Kemple, *Career Academies: Impacts on Students' Initial Transitions to Post-Secondary Education and Employment,* 42.
[52] Kemple with Scott-Clayton, *Career Academies: Impacts on Labor Market Outcomes and Educational Attainment*, 16.
[53] National Commission on the High School Senior Year, *Raising Our Sights*, 22.

It must be acknowledged that despite this progress large numbers of low-income, at-risk, or just academically middling students are being poorly served by public education. If they cannot find a seat on the college-for-all express, they often leave high school empty-handed.

Research on middle college schools shows that enhanced comprehensive programs are successful with at-risk students. Middle college high school graduates generally performed better than students in other alternative schools, did well on state assessment tests, and graduated from high school at higher rates than other students in their school district, although they also had relatively low rates of bachelor's degree attainment.[55]

Compelling evidence also shows that underrepresented students—and not just those with vocational orientations served by Tech Prep—are taking advantage of opportunities to earn college credits while in high school, according to a Jobs for the Future analysis: "Although still in small numbers, these students are sufficiently committed to college-going that they are opting for a higher academic challenge while in high school, apparently motivated by several factors, including the chance to save money, the chance to prove they can do college work, and the chance to speed entrance to a career."[56]

Missing Pieces of the Puzzle

While the initiatives noted above speak to many issues raised in this report, they are largely focused on linking students to college. For many students, on-the-job training, certificate programs, union apprentice programs, as well as the U.S. military and federal service programs, are viable options that students should be made aware of and encouraged to consider. Student achievement may be directed to college credit or college placement, but it should include doors to work-based opportunities that offer certification and training.

It must be acknowledged that despite these efforts, large numbers of low-income, at-risk, or just academically middling students are still poorly served by public education. If they cannot find a seat on the college-for-all express, they often leave high school empty-handed.

The following facts suggest more is to be done:

- Only 44 percent of high school students graduate having completed an academically rigorous program.[57]
- The number of high schools preparing students for Advanced Placement exams grew from 9,786 in 1990-1991 to 14,157 in 2001-2002, although the percentage of African-American (four percent) and Latino (nine percent) students taking the test has been flat since 1994.[58]
- Upper-income youth are seven times more likely to earn a bachelor's degree by age 24 than low-income youth.[59]
- Nearly 29 percent of Hispanic youth aged 16 to 24 have dropped out of school; 13 percent of African-American young men and women have dropped out in this age group.[60]

The fourth 70 Percent Solution Principle: Schools should help students make well-informed decisions, by guiding students through career and academic planning. This should begin in the middle grades and culminate in a senior year program designed to make high school a turning point, not an end point.

54 Bailey and Karp, *Promoting College Access and Success, 18.*
55 Ibid.
56 Hoffman, "College Credit in High School," 45.
57 National Commission on the High School Senior Year, *Raising Our Sights*, 9.
58 Hoffman, "College Credit in High School," 46.
59 Ibid., 44.
60 National Commission on the High School Senior Year, *Raising Our Sights,* 16.

The fourth 70 Percent Solution Principle: Schools should help students make well-informed decisions, by guiding students through career and academic planning. This should begin in the middle grades and culminate in a senior year program designed to make high school a turning point, not an end point.

We encourage businesses, teachers, parents, and policymakers to discuss the elements of a career development "arc" culminating in the twelfth year:

- **Research the range of approaches**, including the size of the career development program, the content of guided study or new curricula, and the effectiveness of various approaches with youth of various backgrounds;
- **Begin alerting students and parents to these opportunities and programs in elementary school**; by high school it is far too late;
- **Underscore stronger academic standards for all students** and require students to apply and document their interests.
- As called for by the National Commission on the High School Senior Year, greatly **expand the opportunity for students to experience the challenges of college-level work.**
- **Provide options for service- and work-based learning opportunity for credit.**
- **Experiment with efforts to create virtual high schools** that employ distance learning techniques to provide the highest quality instruction and programming, particularly in low-income or rural communities experiencing difficulties finding well-qualified teachers, and provide flex-time and block scheduling.
- **Require all seniors to create a portfolio** of their work throughout high school, including a senior project.[61]

The Senior Practicum at Allentown High School in New Jersey is a remarkable model of a program that incorporates many of these strategies.

[61] Ibid, 33.

Good Practice: the Senior Practicum at Allentown High School, Allentown, New Jersey

The Senior Practicum is the culmination of a career education program at Allentown High School in Allentown, NJ. Seniors can opt to take the practicum as a pass/fail five credit elective course. The mission of the practicum is to develop independence, self-awareness, self-confidence, and career awareness. To fulfill the requirements of the practicum, students can participate in one of three activities:

- A community service project that provides students an opportunity to demonstrate and explore their responsibility as citizens by "giving back" to the community;
- An unpaid internship in some aspect of the adult world of government, business, or the service professions;
- An independently produced product or performance that demonstrates a deep understanding and command of a given area of interest and developing expertise. This product or performance will benefit themselves and others within or outside the school community.

Allentown High School is currently developing a fourth option that would allow the student to take courses at the college level. The program is currently in its sixth year of operation and approximately 50 percent (200-250 students each year) of seniors choose to participate.

The program is fairly aggressive, with strict requirements for student performance. They must attend scheduled seminars throughout the semester on workplace issues and skills, complete a minimum of 120 hours in the practicum activity, and submit regular time sheets for their activity. Students are expected to maintain a journal regarding their experience that is submitted, reviewed, and commented on weekly. Students are observed on the job through site visits by the program staff and evaluated extensively by themselves and their sponsors in an effort to expose students to the demands of the workplace. In addition, students must also do a formal presentation about their experience in front of an audience of their peers at the end of the year.

"Most students decide in their meetings with me," Reeves notes, "what they want to do by the end of their junior year. However, some change their mind about the career field over the summer. Some parents have direct contact with me regarding what their child will be doing."

To prepare students for the practicum option, career seminars are conducted annually for ninth, tenth, and eleventh graders. These students also take interest inventories, practice writing resumes, and learn important workplace skills such as interviewing techniques, punctuality, and networking. The program is advertised aggressively to students and parents through Back to School night, letters to parents, the school newsletter, and press releases.

> "Students have an enormous amount of untapped, underdeveloped talent and ability and they are just waiting for us to help them see how and why their classroom studies can help them discover and realize their dreams...and that includes allowing them to "fail" and discover something important about themselves. Experiential learning through internships, meaningful job shadowing, or well constructed and truly independent projects can do just that."
>
> —Catherine Reeves, Director

Among the hundreds of glowing comments from seniors who have completed the program:

> "I think the Senior Practicum is a wonderful thing. It really lets the students get a feel for the workplace and their possible future in the field of work they want to stay in. My training consisted of learning definitions in 12 areas such as pharmaceuticals, dermatology...I was training to do medical transcription from tapes done by doctors. Each day got a bit easier. I was able to produce more work than I ever thought I would and I love it."—NL

> "I learned that it takes a lot of work to film and edit a film. I learned a lot about cinematography, editing, layouts....I learned that I need to continue to become more organized and that I have the ability to solve problems and to talk them out and to make compromises to get a project done. I have learned that if there is something that I want to do, I can accomplish it if I give 100 percent effort." —BB

> "I learned that I am creative and open minded, and much more organized and responsible than I thought." —LE

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V. Toward Career Education:

Lifelong Learning and the Spirit of 21st Century Youth

"Lifelong learning is therefore about much more than access to formal education; it relates to the ways in which knowledge is acquired, developed, and applied through the interpretation of experience in work, family, and community settings, as much as in educational settings. ...Lifelong learning, therefore, is a continuous social process, encompassing both individual and collective learning, rooted in the realities of community life and connected directly with the interests and aspirations of ordinary people."

—Chris Benner, Penn State University

Long-term economic and demographic forces reshaping American society demand a central role for personal and career development in public schools. The 70 Percent Solution is, in fact, the school-age foundation of lifelong learning in the knowledge economy.

Lifelong learning is understood as a comprehensive set of opportunities and processes in the workplace and society that shape the ability of individuals to continuously learn through every stage of life. This includes the formal education system as well as a network of private and public training programs, on-the-job training, higher education, and distance learning. Those who lack the preparation to understand these dynamics will sit on the sidelines of the opportunity economy, at risk of being left behind. For there is no question that the increasingly rapid pace of economic and technological change in the new economy means an ever-increasing demand for changing sets of skills.

Therefore, business, foundation, union, higher education, and local school leaders have a common interest in ending the stigma surrounding what is known as vocational-technical education. Federal and state policies have moved far beyond the "vo-tech" programs of the 1960s, 70s, and 80s, and the "not for college" tracking these programs employed. But in many communities, perception lags reality. Today, the best school systems incorporate a variety of technical and skills-oriented programs, career planning, and traditional classroom subjects into the same curricula. In fact, many analysts argue for understanding applied and advanced education and skill development as core elements working together to create a lifetime portfolio of knowledge. The "vo-techie" of yesterday is the innovative knowledge worker of today.

A Brief History of the Vo-Tech System

As early as 1917, the U.S. Congress funded career education programs. The Smith-Hughes Act of that time created vocational programs to train non-college-bound workers for entry into the workforce, advocating the separation of vocational education from the traditional academic curricula in place in most schools. Spurred by World War I, and then by the leadership of U.S. Senator Walter F. George, new bills increased funding for vocational, home economics, agriculture, industrial education, and career education programs. After the end of the Second World War, the legendary GI Bill put millions of returning soldiers through college, while the George-Dean Act expanded career education programs for World War II veterans.[62] Most saw a high school degree coupled with a good apprenticeship or training program as a perfectly respectable route to stable blue-collar, industrial, or manufacturing careers.

The Cold War and the space race with the Soviets led to the passage of the National Defense Act of 1958, which stressed new investments in the teaching of science,

[62] Gordon, *The History and Growth of Vocational Education in America.*

math, and foreign languages, and the development of students for careers in technical and scientific fields. Gripped by national fears of Soviet superiority, Congress poured billions of dollars into the nation's schools that would contribute to the high skills and expectations of the Baby Boom generation, and the coming explosion in higher education. Not long after, Congress passed the Vocational Education Act of 1963, mandating that every American, regardless of background or financial situation, should be given access to high quality vocational training. Specific funds were established to ensure low-income students had the chance to participate, and schools were mandated to provide vocational education regardless of income. This landmark law was amended in 1976 to connect voc-ed to outside government agencies, providing a greater array of services, and then was changed and expanded by the Perkins Act in 1984, which ensured adults could have equal access to vocational education programs.[63]

The economic changes of the 1980s and the reforms addressed earlier in this report convinced policymakers and educators that the high school degree had become a dead end credential. Vocational education underwent broad-scale reforms under the Perkins Act of 1990. Perkins II incorporated vocational education into academic education, mandated better communication among different types of training programs, and called for more efficient linkages between educational programs and the needs of the workforce. This law encouraged policymakers to link the values of career and academic preparation.

In 1994, the School-to-Work Opportunities Act established five-year grants to be used by states as seed money to implement a system of school-to-work partnerships among employers, organized labor, educators, public agencies, and other groups responsible for economic and workforce development, education, and human services. It also sought to increase the number of students achieving high-level academic and occupational skills, and expand opportunities for all students to participate in postsecondary education. The Act encouraged states and schools to expand career development programming in schools, integrate career education into academic curricula, and link students to work-based learning. Many school initiatives expired under the "sunset" provision of these grants, and suffered from the lack of clarity and direction from the federal government. However, a number of schools built sustainable programs through School-to-Work funds, including models highlighted in this report.

The best of the School-to-Work legacy can be seen in these initiatives. Career development programs that knit business and civic partners into a coalition, raise independent funding, build widespread support among parents and administrators, and hire highly committed leaders, are showing the way for the future. At the core of many "good practice" programs is a commitment to reaching students at the earliest grades to introduce concepts of community, adding education and career planning units as students move through their secondary school years, culminating in a major senior year project. These programs orient young people to the importance of keeping skills and knowledge razor sharp for a lifetime.

A Quiet Revolution

For many young people, public attitudes are changing about the role of "vocational" or "technical" training. More students are developing a nuanced view of career preparation and education—as seen in the Ferris State University survey—and the best programs can speak to these evolving views:

- 97 percent of high school seniors and juniors rate communications skills as very or somewhat important in preparing for a good job;
- 72 percent of high school seniors and juniors agree with the statement that "there are plenty of good-paying high-tech jobs available that only require two or three years of job training and pay as much as $40,000 to $80,000 a year;"

[63] Ibid.

- Declining numbers of students state there is embarrassment associated with vocational and technical training and education;
- 89 percent of high school students agree that having training in the use of technology is important today if students are going to have a chance at getting a good job.[64]

America's school children and older students are coming of age in a technology-driven economy where adults are changing jobs, adding credentials, revamping skills, and becoming active managers of their own careers. The relevance of education to a satisfying career is unfolding before them. Lifelong learning is an emerging social value—and education must reflect that change.

The soaring numbers of community colleges are serving adult learners. About 99 million adults participate in at least one or more adult education programs over the course of a year, according to federal education data. The increase in the number of adult education participants in the U.S. during the 1990s is double that of all persons enrolled in higher education for the same time period. Employer-based training is widespread, as more than 70 percent of U.S. companies with more than 50 employees offer their workers some kind of formal training.[65]

Today's more media-savvy youth also understand the economic importance of placing education in the context of an evolving workplace. Employers complain about the need for more highly skilled workers and debates rage over outsourcing workers and the large numbers of scientific and technical knowledge workers immigrating to the United States. The message of the Internet market crash of the 1990s and the corporate scandals that followed will resound in the memory of upcoming generations: you are on your own.

This report embraces the importance of lifelong learning as a democratic value and keystone of the American process. **Our fifth 70 Percent Solution Principle is: Our nation must dedicate itself to the value and ethic of lifelong learning and develop a greater appreciation for how we obtain credentials in the education system.**

School-based career development and education efforts can serve as the foundation for a process of lifelong learning available to anyone seeking a place in today's knowledge-based economy. A college degree is not a passport to a good job or a finishing course for youth. It is about expanding opportunities through learning. This value is not limited to the four-year bachelor's degree program. It can take place throughout our lives in a diversity of education and training settings.

Our fifth 70 Percent Solution Principle is: Our nation must embrace the notion of lifelong learning for all, and encourage respect for workers who earn their credentials outside of the traditional college setting.

To fully grasp how these values can take hold in our schools, let us turn to our final good practice model, the Comprehensive Career Development Guidance and Counseling Program in Grand Forks, North Dakota. This impressive initiative incorporates nearly every recommendation in this report, from parental education to enabling guidance counselors to developing student knowledge from the early grades. We will also share another remarkable success story of how one district reframed the stigmatized "voc-ed" school into a program that students compete to get into, sets and meets high academic standards, and covers a wide range of occupational training.

64 Hurley and Thorp, eds., *Decisions Without Direction, Comprehensive Report and Data Summary,* 26.
65 Schaffner and Van Horn, eds., *A Nation at Work,* 82.

Grand Forks Public Schools Comprehensive Career Development Guidance and Counseling Program, Grand Forks, North Dakota

The mission of the program is to assist all students in exploring, developing, evaluating, and preparing to achieve their career goals. Directed by Jerome Gunderson, the program has three goals for its students:

- that they acquire the skills to investigate the world of work and make informed educational and career decisions;
- that students understand the relationship between education and the world of work; and
- that students complete school with the academic preparation essential to choose from a variety of substantial postsecondary options, including college.

The effort started 10 years ago with a small group of teachers, a newly created staff of two career education personnel, and counselors, and has gradually expanded since its inception. The seven career education staff work closely with the counselors and teachers to ensure that curricula needs are met and that career education is incorporated into classes where it makes sense (resume writing in English class, for example).

Elementary teachers begin working with children in the primary grades introducing concepts of workers in the community, town, state, and country. Business volunteers teach business and work-related concepts in grades three to five through the Junior Achievement program. Beginning in grade five, counselors, career educators, and teachers work with students to identify personal characteristics, explore careers, and develop an education and career plan. Students and parents participate in private conferences with their school counselor during their secondary school years to evaluate progress toward the achievement of students' postsecondary goals.

The curriculum becomes a great foundation for future hands-on experience through job shadowing, cooperative work experience, internships, apprenticeships, and volunteer service. Twelve formal business partnerships have been established since 1997, offering work-based learning opportunities. Emphasis is placed on community and public service experience.

The Grand Forks schools offer a strong volunteer program for middle-school students called Helping Hands. About 50 students participated last summer and volunteered over 2,000 hours in total. Pam Peterson, Curriculum Coordinator, explains: "One volunteer at Altru Health Systems put in 89 hours through the Manely Therapy Program, a physical therapy program using horseback riding to help patients regain strength. She won a national award sponsored by the Child Welfare League for her service and her essay 'What is a Community?' She and her mother received a trip to Washington, DC to receive the award. Her counselor believes this experience will definitely influence her future career interests."

As students see and understand the progression of career education information and begin to apply themselves, they become more certain of their options and more aware of resources such as the Career Center. "The program is a lifesaver for students who are confused about what they want," Peterson observes. "Students who are self-driven and have definitive career ideas would probably use this information otherwise, but the program has proven very important for the students who aren't sure what they want to do after high school."

Many students take advantage of the opportunity to explore career information. Counselors spend time introducing alternatives to college and reassure students who may want to pursue alternatives. Teachers help by bringing in students they see floundering with choosing post-high school plans.

As noted in our executive summary, a student named Collin is typical. He job shadowed at McFarlane Sheet Metal company in Grand Forks and was offered an internship for the following summer. During the internship he helped to design a "working sculpture" (water wheel) out of sheet metal for a downtown park, a huge responsibility. Collin finished school and is now working for McFarlane.

Peterson and Kim Jones, Career Education Coordinator, explain that the partnerships have worked because the program started small and was built gradually with key players brought in along the way. Note how these roles make clear what schools in any community can do:

- The school superintendent is a great supporter who has made career education part of his message about the mission of Grand Forks schools;

- The owner of McFarlane Sheet Metal company is a business partner and past-president of the local Chamber of Commerce where he has been a great advocate for the program;

- The roster of business partners has expanded to 12, allowing students to enter internships in all career clusters (from those that require a high school diploma to those that require advanced degrees). Businesses are "educational advocates" and are constantly attesting to the quality of preparation students receive;

- Another 400-500 local businesses are involved and supportive of job shadowing and yearly career fairs;

- The region's Economic Development Commission actively supports the district's efforts and invites them to participate in events; the Commission recently honored the district's career director for the program;

- The public Job Service of North Dakota is a core partner, providing three of the seven career program staff, and the labor market and "demand" information that allows the school district to add courses to prepare students for the future labor market. Currently, the schools offer several programs that can lead to national certification and that students can take as electives (A+, Cisco systems, three Microsoft certifications, Auto Technology, Associate of General Contracting and Building Trades, and Certified Nursing Assistant).

Critically, the school district leaves nothing on automatic pilot and takes nothing for granted. Teachers and counselors engage business partners at every stage. Teachers and counselors look at business needs when developing the program and placing students in internships, and meet with employers to discuss each other's needs. Teachers can tour businesses to identify linkages between work and curriculum. "The program tries to meet the needs and get acceptance of all of our partners," Peterson emphasizes.

For the Grand Forks Public Schools, career education is about helping students see their potential, abilities, and skills. It is about seeing the world of work, its requirements, and opportunities, and helping students develop to their full potential. Pam Peterson:

"Our whole mission is providing opportunities for all students to develop their maximum potential and that really is what career education is doing. I see career ed as two pronged. We help kids see what their abilities, interests, skills, and values are, and we also help students to find out what the world of work is, what it requires, and what opportunities are available, and to help the kids put those two components together. We've noticed that students see the importance of their abilities and their interests, of getting better at what they do well, and that there is life after high school. We've noted that students are taking more interest in their schooling; they're doing a better job of choosing classes/courses that are appropriate for them. Students aren't waiting until their senior year to think about what they want to do after high school. They begin planning and implementing in eighth grade, knowing that they need to take certain classes for a four-year college, and that there are certain classes if they want to pursue a certain career. We are definitely seeing kids more focused on why they are in school. That is definitely the advantage of this program."

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Eastern Technical High School Baltimore, Maryland

Eastern Technical High School in Baltimore, MD was established in 1970. However, Eastern Tech went through many changes in 1991 with the appointment of Robert J. Kemmery as principal. Kemmery was concerned that Eastern Tech's traditional vocational education was not training students for many jobs that would exist in the 21st century and for the rapid changes in the American economy. Eastern Tech changed the mission of the school to reflect the changing workplace needs of the 21st century.

As a technical magnet school serving over 1,300 students in the Baltimore County Public School District, Eastern Tech requires students to go through a competitive application process and be accepted into one of 10 career majors. Eastern Tech's goal is to provide academic and career education for all types of students, including those that plan to attend a two-year or four-year college, those that plan to enter an apprenticeship or training program, and those that plan to enter the workforce after graduation. Students must pass a rigorous academic curriculum (including foreign language study) that meets or exceeds state requirements for core subjects; students must take four years of English, math, social studies, and science. In addition, Advanced Placement and honors level courses are also available in these core subjects.

Ninth grade students complete an exploratory program that introduces them to all 10 of the career majors, as well as complete a library orientation, a course on PowerPoint software, and a "civility module," which focuses on ethics and proper behavior. Through their chosen career major, all students have an Individualized Career Action Plan (ICAP) to ensure that all phases of their education are focused on the workplace or higher education. This leads each student to qualify for one of the two categories of graduates developed by the Maryland State Board of Education: Academic Completers and Career Completers. Academic completers have met the requirements for entrance into the University of Maryland college system. In 2003, 96 percent of Eastern Tech graduates fulfilled the college entrance requirements and 100 percent graduated as Career Completers, compared to less than one percent and 78 percent of graduates in 1991, respectively.

Other indicators point to Eastern Tech's success in reforming the mission of the school. In 2003, Eastern Tech offered six AP courses, 126 students took AP tests, and 32.5 percent of those who took AP tests passed. In 1991, there were no AP courses available or AP tests taken by students. The dropout rate fell from five percent of students in 1991 to less than one percent of students in 2003. The average SAT score of Eastern Tech seniors, 1056, passed the national average for combined verbal and math and has been increasing for seven consecutive years. In addition, the SAT participation rose from five percent of Eastern Tech students in 1991 to 43 percent in 2003. Students have a 100 percent passing rate for the Maryland Functional Tests in reading, writing, and math that are given statewide in grades nine and eleven. The school also boasts a 97.4 percent attendance rate.

Eastern Tech focuses on using the latest technology and real work atmosphere to train students in their chosen career major. For example, students in the Culinary Arts program prepare and serve food in the Eastern Inn, a campus restaurant, and seniors in the program are responsible for managing the Inn, including planning the menu, creating advertising, and purchasing food and other items. A state-of-the-art networking lab is available to students in the Information Technology major who qualify for the CISCO Networking Academy.

Eastern Tech students can earn credits towards a college degree, certifications, or acceptance into apprenticeship programs through some career majors. Students in the Culinary Arts program can get certified in the ServSafe food protection program through the National Restaurant Association Education Foundation while at Eastern Tech. Computer Aided Drafting and Design (CADD) students can earn up to 15 credits for the CADD program at the Community College of Baltimore County. Students in Construction Management earn apprentice credit and may receive advanced placement in the Associated Builders and Contractors (ABC) apprentice program. Graduates of this program are also eligible for job placement through the ABC apprentice program. Microsoft Office User Specialist (MOUS) certification and testing is available to Information Technology students, as well as the opportunity to earn up to 15 college credits.

Eastern Tech has received numerous awards, including being named a Maryland Blue Ribbon School of Excellence by the Maryland State Department of Education (MSDE) in 1998, a New American High School national showcase site by the U.S. Department of Education and the National Association of Secondary School Principals, and a National Demonstration Site for Business Partnerships by the U.S. Department of Education in 1999. The school

also received the Award of Excellence from MSDE for Career and Technology Education Program in 2003 and was featured as a national model program to improve achievement in the National Commission on the High School Senior Year Report. Baltimore Magazine named it one of the area's top high schools in 2001 and digitalcity.com ranked Eastern Tech #1 Public High School in Maryland in 2002 based on statewide test scores.

For more information, contact:
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Appendices

A. Innovative Career Education Programs

Name	Location	Description	Population Served	Contact Info
The Pfizer Medical Science Academy at Morristown High School	Morristown, NJ	Focus is to build a career exploration laboratory for a medical/health program that will ultimately benefit all students at Morristown High School. Assisting in the development of the new academy are the County College of Morris and the Morristown Memorial Hospital, which will provide internship opportunities, curriculum enhancement, speaker resources and overall career guidance.	High school students	Jill Magidson, Project Director (973) 292-2000 x 2174
Commerce Bank and the Cherry Hill School District: Cherry Hill Business Academy for	Cherry Hill, NJ	Career Academy partnering with Cherry Hill's two high schools and involves three colleges -- Drexel University, Camden County Community College and Rutgers University.	High school students	Gail Cohen Cherry Hill Public Schools (856) 429-5600 x 237 gcohen@chclc.org
Jersey City Public Schools & Merrill Lynch Corporation	Jersey City, NJ	Students in the Business/Marketing magnet program participate in an industry-specific career day with the employer. In the next year the students participate in a half-day training program that acquaints students with all aspects of the industry. The final year the employer provides a summer internship.	High school sophomores, juniors, and seniors.	Marilyn Roman School-to-Career Project Director Jersey City Public Schools (201) 915-6225
Wakefern Corporation	NJ	Promotes internship programs for high school students and The Young Consumer Program for K-4 students emphasizing problem solving, decision making and critical thinking skills through practical, hands-on-learning experiences at the ShopRite stores.	High school students; K-4 students	Lydia Mattson Wakefern Food Corp. (732) 906-5206 lydia.mattson@ wakefern.com
Lansing Area Manufacturing Partnership (LAMP)	Mason, MI	LAMP is a model school-to-career initiative operated by the Ingham Intermediate School District, the United Auto Workers, and the General Motors Corporation. Six units of study integrate academic standards and employability skills within a manufacturing context. Students attend the LAMP classroom, housed in the UAW/GM Training Center in Lansing, Michigan, for 2? hours every day during senior year.	High school seniors	Kathy Tomlanovich, Director, Ingham Intermediate School District (517) 244-4536 ktomlano@inghamisd.org
Los Angeles Shell Youth Training Academy (SYTA)	Los Angeles, CA	SYTA is a cooperative education program designed to improve employment opportunities for South Central Los Angeles youth. The one-semester program provides occupational and employability skills training, job shadowing and structured workplace learning. Students learn about requirements of today's workplace, get paid, receive on-the-job training for 12 to 16 hours a week for one semester, earn diploma credit, and have the opportunity to work with a workplace mentor who demonstrates job skills and models positive employee behaviors and attitudes.	High school juniors and seniors	Youth Training Academy Office 8611 South Western Ave. Los Angeles, CA 90047 (323) 751-5050

Name	Location	Description	Population Served	Contact Info
Atlantic County Special Services School District (ACSSD)	Atlantic County, NJ	In partnership with local gaming businesses, ACSSD provides a comprehensive training program for disabled students enrolled in the School-to-Career program. Students begin preparing for work at the casinos by first working at a local nursing home, hospital, or community college, with intense supervision by the teacher and employee mentors.	High School Students	Ann Dillon School-to-Career Project Coordinator Atlantic County Special Services District (609) 625-5663
Bergen County Technical Schools	Bergen County, NJ	Engineering, Science and Technology Tech-Prep program that creates linkages between secondary and postsecondary institutions and business members. Students also have work-based learning experiences.	High School Students	www.bergen.org/TechSchools
Senior Practicum, Allentown High School	Allentown, NJ	Provides students with opportunity to do a practicum in their senior year for course credit. Allowable activities include unpaid internship, community service, senior project, and taking college credit. Students must complete 120 hours of an activity to qualify.	High School Seniors	Catherine Reeves Director, Business Partnerships and The Senior Practicum Allentown High School (609) 259-7901 x 408 reevesc@ufrsd.net
Cumberland Pathways: Discovering 21st Century Careers Program, Cumberland/Salem County, New Jersey	Cumberland/ Salem County, NJ	A partnership among the New Jersey Department of Labor, the State Employment and Training Commission, the New Jersey Department of Education, the Cumberland/Salem Workforce Investment Board, and Cumberland County College. Counselors and teachers from the 16 K-12 school districts in the county take part in an annual program to educate them to the world of careers in the county that do not require a college degree by attending seminars and visiting local businesses.	K – 12 school teachers and counselors	Dr. Robert Hancox, Dean of Academic Affairs, Pennsylvania Institute of Technology (800) 422-0025 rhancox@pit.edu Dr. Kenneth Ender, President Cumberland County Community College (856) 691-8600 x 201 kender@cccnj.net
Grand Forks Public Schools Comprehensive Developmental Counseling Program	Grand Forks, ND	Comprehensive career education curriculum and counseling program from grades 1 – 12. Students work with counselors and parents to create and implement an education and career plan throughout their middle and secondary school years. Students and parents meet with counselors during high school to gauge their progress towards postsecondary goals. Students have the opportunity to volunteer for community service during middle school years and internship at one of twelve business partners during high school. Program has strong business partnerships and support and features job fairs and job shadowing opportunities as well.	1st – 12th Grade students	Pam Peterson Curriculum Coordinator, Career and Character Education Grand Forks Public Schools (701) 746-2205 x 151 www.careered.org

Name	Location	Description	Population Served	Contact Info
OJC - X files Omaha Public Schools, Millard Public Schools Ralston Public Schools, Westside Community Schools, Bellevue Public Schools and Fremont Public Schools	Omaha, Nebraska	Aims to place all students into the job marketplace with a portfolio, based on community skill standards, in which they showcase their skills and talents. An X file portfolio organizes students' school records and skill descriptions, and includes school transcripts, test scores, awards and honors, skill certificates, resumes, internship records, writing samples, letters of recommendation, school highlights, and other evidence that students are ready for employment	High school students	Patricia L. Crisler Director, Opportunities | Jobs | Careers (402) 457-2598 pcrisler@mccneb.edu www.ojc-omaha.org
Eastern Technical High School, Baltimore County Public Schools	Baltimore County, MD	Eastern Technical High School is a technical magnet school with a competitive application process and ten career majors. Students complete an academically rigorous curriculum in addition to the requirements of their chosen career major. All students have an Individualized Career Action Plan (ICAP) to ensure all phases of their education is focused on the workplace or higher education and graduates qualify as Career Completers or Academic Completers, which makes them eligible for entrance into the University of MD college system. Depending on their career major, students may receive college credit, certifications, acceptance into apprenticeship programs, or job placement.	High school students	Patrick S. McCusker, Principal Harry J. Cook, English Chair, www.easttech.org
Southern Regional Education Board(SREB)-	Atlanta, GA	The initiative goal is to prepare students for careers and further education by improving curriculum and instruction in high schools and middle grades.	High school Students and middle grades	Gene Bottoms, Senior Vice President, SREB Gene.bottoms @sreb.org (404) 875-9211 x 249
Central Educational Center (CEC), the Coweta County Schools, and West Central Technical College	Newnan, GA	Secondary and technical college, are vertically integrated into a seamless mix through instructor collaborations and dual-enrollment opportunities. The core instructional package is topped with heavy doses of work-based learning—real opportunities to practice classroom learning in the local economy. Along the way, local businesses provide advice, counsel, direction, and expertise in the classroom.	High school Students	Mark Whitlock 160 Martin Luther King Jr. Drive, Newnan, GA 30263 http://www.gacec.com/ (678) 423-2000 x 205 mark.whitlock@coweta.k12.ga.us

B. Focus Group Protocol

How can parity of opportunity be assured for those who do not go to college after high school?

Questions:

1. How can career counseling be reformed or strengthened in high schools to assist youth who will not attend college after high school?
2. Are you aware of any information on required skills for growth occupations for workers without degrees? If so, what material?
3. Do students have a structured career awareness or exploration opportunity sponsored by your district? If yes, please describe.
4. Is there any emphasis on the application of coursework to skill requirements of the labor market in your academic curriculum? If so, is it a district/state requirement or based on individual teacher initiative?
5. Are non-college bound students provided job search or job development support through your guidance department? If so are staff provided professional development in providing this guidance?
6. How can information on required skills for growth occupations for workers without degrees be developed as to be useful for high school and youth career counselors? What specific tools would help counselors and teachers implement career awareness education/counseling?
7. What strategies do you suggest for getting this information into the institutions that help youth make career and training decisions, including high schools? Are there any specific communications networks that would be appropriate for the relay of this information?
8. Current financial aid programs are designed to benefit traditional students who attend college full-time and directly after high school. How can current financial aid programs be altered/expanded to assist youth who attend college after time in the labor force or who attend part-time while working?
9. Are there any other programs or policies that should be addressed to assure parity of opportunity for those who do not attend college after high school?

C. Focus Group Participants

National Employment Counseling Association Members
American Counseling Association Annual Conference
March 23, 2003
Anaheim, CA

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American Counseling Association

Kay Brawley
National Employment Counseling Association

Cheri Butler
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Natanja Craig
Urban League of Eastern Massachusetts

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American School Counselors' Association
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D. Interviewees at Innovative Programs

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Cherry Hill Public Schools

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Eastern Technical High School

Patricia L. Crisler
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