

Summary Report

The 70 Percent Solution: Five Principles for Helping Young People Make Better Choices During and After High School

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Supported by the AT&T Foundation

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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.



Summary Report

This summary report was prepared by the John J. Heldrich Center for Workforce Development at Rutgers, The State University of New Jersey, with generous support from the AT&T Foundation. It offers a different vision of how educators, employers, and parents should prepare students for life after high school. The full report can be accessed on the Heldrich Center website at www.heldrich.rutgers.edu.

The report finds that our students need more information in order to make better career choices after high school. It also 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 with few tools to make important career decisions. It calls upon parents, students, policymakers and educators to recognize the new realities of a changing economy—and to support life-long learning for people at all levels of educational achievement.

Our high schools' emphasis on attending college is commendable. Today, over two-thirds of American high school students enroll in institutions of higher education within two years of graduation. Yet, one-third of the students that enroll in college will leave school without obtaining a college degree.² These statistics are even much higher for minority students. Meanwhile, the national focus on providing college opportunities for all has led some to view career paths other than college as a terrible "waste" of human potential.

In this "college for all" climate, important tasks have been left undone. As our high schools drill students on college applications, standardized tests, SAT or ACT preparation, and getting into a "good school," not enough is done to educate our 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 complex nature of careers and work in today's economy. They do not fully understand the array of educational and training choices that could help them achieve their goals and aspirations.

The Bureau of Labor Statistics predicts that almost 70 percent of jobs in the next decade will not require a two- or four-year college degree.³ This is fortunate, since 70 percent of American workers do not complete a four-year college program (see Figure 1). While the majority of jobs today require training and/or education beyond high school, many well-paying careers outside of the professions do not require a four-year college degree. In fact, there would not be enough jobs with a degree requirement for the 67 percent of high school graduates who enroll in college if they actually completed their degrees. However, opportunities abound for individuals who pursue alternative training and education paths after high school. Occupational and on-the-job training (OJT) are important for many of today's careers.

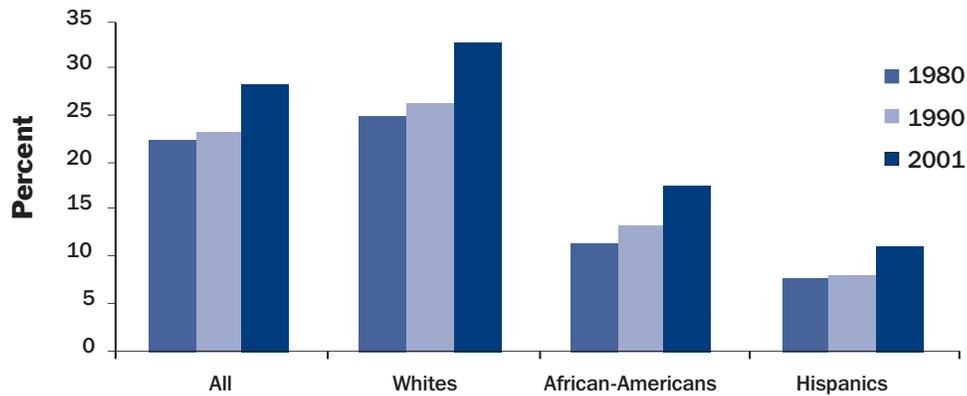
The 70 percent of students who are not likely to get a four-year college degree urgently need better career education and development. Students going on to traditional college also need and will benefit from career guidance. By educating teachers, parents, and students about the careers and work opportunities that will be in demand in the job market, all students will have more of the information they need to make better financial and educational choices.

This report seeks to offer a practical solution to the challenges faced by the 70 percent of workers seeking success in the workplace without a 4-year degree. This "70 Percent Solution" encompasses five principles for strengthening career education in America:

² U.S. Department of Education, National Center for Education Statistics. 2002. *Short-Term Enrollment in Postsecondary Education, Student Background and Institutional Differences in Reasons for Early Departure, 1996–98*, NCES 2003–153. Washington, DC. 6.

³ U.S. Department of Labor, Bureau of Labor Statistics. 2001. "Employment and Total Job Openings by Education or Training, 2000 – 2010," BLS 2000-2010 Employment Projections. USDL 01-443. Washington, DC, Table 4.

Figure 1: Share of Persons Age 25 to 29 With a Bachelor’s Degree or Higher, 1980, 1990, and 2001



Source: U.S. Department of Education, National Center for Education Statistics. 2003. *Digest of Education Statistics, 2002*, NCES 2003–060. Washington, DC, Table 8.

Figure 2: 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 and Data Communications Analysts	Utilities/Infrastructure	\$66,720	53.9%

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

Figure 3: Top Five Growing Occupations in New Jersey Requiring a High School Diploma or GED

Occupation	Industry	Average Salary	Occupation Growth
Home Health Aids	Health Care	\$19,615	56.1%
Amusement and Recreation Attendants	Tourism	\$15,785	24.6%
Maids and Housekeeping Cleaners	Tourism	\$18,800	23.8%
Hotel, Motel, and Resort Desk Clerks	Tourism	\$20, 205	23.4%
Gaming Dealers	Tourism	\$17,350	23.2%

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

Principle One: **Re-energize the profession of career counseling by reinvesting in its role within our schools. Give counselors, teachers, and parents more power to provide students with the information they need to make informed career choices.**

Principle Two: **Incorporate career/occupation knowledge into curriculum standards and testing for all students.**

Principle Three: **Improve and expand how schools inform parents and the community about career options and opportunities, including those not requiring four-year degrees.**

Principle Four: **Help students make well-informed decisions through career and academic planning that begins in the middle grades. This guidance should culminate in a senior-year program designed to make high school a turning point, not an end point.**

Principle Five: **Embrace the notion of lifelong learning for all, and encourage respect for workers who earn their credentials outside of the traditional college setting.**

At the heart of each principle 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. Teachers and parents have important roles to play as well.

This report urges America’s schools, employers, and communities to consider the five 70 Percent Solution Principles. It shares the stories of schools from North Dakota and Maryland to New Jersey and Nebraska where these Principles are being put into practice every day. It also describes a recent “solution” developed by the State of New Jersey: a new career guidance web site, www.NJNextStop.org, which will enable teachers, parents, and students to put these Principles into action in their own school districts.

Principles In Action

The 70% Solution Principles are not abstract concepts that have no place in the “real world.” Concrete examples of these ideas are already being put into practice by selected schools nationwide.

The stories that follow are based on extensive research and interviews conducted by Heldrich Center staff. They suggest that the experimental school reforms of today could become common practice if parents and educators made a joint commitment to strengthening career education.

Principle One: Re-energize the profession of career counseling by reinvesting in its role within our schools. Give counselors, teachers and parents more power to provide students with the information they need to make informed career choices.

On one level, the reforms of our elementary and high school educational system—underway for more than twenty years—have succeeded. Although science and math test scores are still mediocre, graduation standards

have risen and college entrance rates have soared. Reading test scores and literacy have improved. Most young people and jobseekers can access computers, computer networks, the Internet, and computer training with relative ease.

Yet something is also fundamentally wrong. Despite decades of large financial investments in higher education, there is a growing mismatch between the job skills demanded by the 21st century labor market and the supply of the high school and college graduates with those skills.

A majority of jobs in the next decade will not require a college degree. Instead they will require a mix of certification programs, occupational, or on-the-job training. Career education information and guidance is therefore vital when high school students are making decisions regarding their future educational and career choices.

Unfortunately, many counselors in most American high schools do not have the time, resources, or knowledge to provide the guidance on these issues so many students need. 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.

Furthermore, counselors have very few professional development opportunities, and often feel ill equipped to impart career guidance.⁴ A 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.⁵

High school staff, including guidance or career counselors and teachers, must be provided more support, flexibility, and funding where possible to address the post-graduation needs of all students. Schools, business, and community leaders should:

- Require that counselor education programs include more courses focused on career guidance.
- Provide professional development opportunities for counselors and teachers.
- Reduce counselor caseloads and administrative responsibilities.
- Provide opportunities for counselors to work with teachers to impart career education.
- Provide resources for counselors to build relationships with local businesses, trade unions, and education and training institutions.

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

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 to the many 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; and Transportation and Logistics.

Participants visit businesses and hear from business leaders themselves. 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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⁴ Heldrich Center focus group, 2003.

⁵ U.S. Department of Education, National Center for Education Statistics. 2003. *High School Guidance Counseling*, NCES 2003-015. Washington, DC, 15.

Principle Two: **Incorporate career/occupation knowledge into curriculum standards and testing for all students.**

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.”⁶

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 technological, mobile economy. Too many parents and high school officials still buy mistakenly believe 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. 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.”⁷

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. Important steps 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 information on the labor market and careers, 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.

⁶ Heldrich Center focus group, 2003.

⁷ Heldrich Center focus group, 2003.



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 the 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 city-wide partnership across nine public and private school districts. Current partners now include a range of agencies, unions, workforce groups, employers, and universities.

In 1998, OJC used a \$1 million grant to create the Omaha Career Network that 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, which allows jobseekers access to local and national career resources.

In 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, and to identify clear skill standards for students. Students fill Employment Portfolios with their transcripts, resumes, work experience information, letters of references, or samples of their best work. Students are encouraged to use them to create a good impression at college or job interviews.

For more information, contact:
Patricia L. Crisler, Director
Opportunities | Jobs | Careers
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www.ojc-omaha.org

Principle Three: Improve and expand how schools inform parents and the community about career options and opportunities, including those not requiring four-year degrees.

Students get most of their information and advice about what to do after high school from their parents, but they spend relatively little time with them on the issue, and get relatively little information. “Parents can’t teach what they don’t know,” one counselor noted in a focus group.⁸

It is well documented that students need to receive better information about making the next step after high school. The 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.⁹

Schools must broaden the pool and quality of career knowledge available to students, parents, and school supporters. They must move quickly to educate families about suitable options and opportunities after high school. They should:

- 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 4).

- School leadership should promote positive case studies of students who successfully pursue two-year, certificate, on-the-job and other career options as vigorously as they spotlight their college-bound graduates.
- Schools should emphasize the importance of developing a career and academic plan for students with full parental involvement, beginning in eighth or ninth grade. The plans should build knowledge about the world of options available to students, not structure “tracks” or place limitations.

⁸ Heldrich Center focus group, 2003.

⁹ Van Horn, Carl and K.A. Dixon. 2003. *Taking the Next Step: High School Students, College, and Careers*. New Brunswick, NJ: John J. Heldrich Center for Workforce Development, 11.

Figure 4

new jersey
Next Stop...Your Career
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 Put Yourself in Demand

Welcome!

You demand great things for yourself. And as candidates for tomorrow's work force, employers will demand great things from you. Want to know the skills you'll need to succeed in leading New Jersey industries? Then you have made an essential stop along your path of career prep.

At njnextstop.org, find out what New Jersey's employers are saying about jobs and careers growing right here in the Garden State. Get vital details about industries, types of jobs, and the cutting-edge career paths that combine many of your talents.

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Real People

Name: Jennifer Dyer
 Education: Rowan University
 Home Town: Woodstown
 Occupation: Platoon Leader, New Jersey National Guard

Jennifer Dyer was a hometown girl who had always dreamed, as had her parents, of going straight to college. She was accepted at the University of Delaware, but before she even made it to campus, decided she wanted a change. She enlisted in the Army National Guard.

Lifelines

Debt, A Four-Letter Word: Credit Card Is a Two-Word Danger Sign

Did you know a \$1,000 credit card balance can take 12 years to pay off if you only make the minimum required payments? Don't fall into the plastic pothole. Here's how to get off to a smart financial start by using your credit card wisely. What's in your wallet?
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Good Practices: The Business Academy for Studies and Experiences (BASE) at Cherry Hill, New Jersey

The Academy is a partnership between Cherry Hill school district and Commerce Bank launched in 2002. The academy was formed with the support of the superintendent of Cherry Hill School District, Morton Sherman, the Commissioner of the NJ 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.

The program's launch included parents and students; and local parents have strongly supported the effort. Parents are provided with materials to document the program's work and purposes.

For more information contact:
 Gail Cohen, Cherry Hill Public Schools
 (856) 429-5600 ext. 237
gcohen@chclc.org



Principle Four: Help students make well-informed decisions through career and academic planning that begins in the middle grades. This guidance should culminate in a senior-year program designed to make high school a turning point, not an end point.

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. Businesses, teachers, parents, and policymakers should explore a career development program 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.⁹

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. 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 a community service project; an unpaid internship in government, business, or the service professions; or independently produce a product or performance demonstrating a command of a given area of interest.

Approximately 50 percent (200-250 students each year) of seniors choose to participate. The program is fairly aggressive, with students attending seminars on workplace issues and skills, completing a minimum of 120 hours in the practicum activity, and submitting regular time sheets for their activity. They maintain a journal regarding their experience and are observed on the job through site visits by the program staff. Students must also do a formal presentation about their experience in front of an audience of their peers at the end of the year.



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.

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⁹ National Commission on the High School Senior Year. 2001. *Raising Our Sights: No High School Senior Left Behind*. Princeton, NJ: Woodrow Wilson National Fellowship Foundation.

Principle Five: Embrace the notion of lifelong learning for all, and encourage respect for workers who earn their credentials outside of the traditional college setting.

Taken together, the 70 Percent Solution Principles can serve as the school-age foundation for a process of life-long learning available to anyone seeking a place in today's knowledge-based economy. There is no question that the increasingly rapid pace of economic and technological change means an ever-increasing demand for changing sets of skills. Therefore, leaders of business, foundations, unions, higher education, and local schools have a common interest in ending the stigma surrounding what has been known as vocational-technical education.

Today, the best school systems incorporate a variety of technical and skills-oriented programs, career planning, and traditional classroom subjects into the same curricula. It is time for everyone to show greater respect for the non-college career paths that most of our workforce will follow to successful lives.



Good Practice: Grand Forks Public Schools Comprehensive Career Development Guidance and Counseling Program, 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.

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' post-secondary 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.

Critically, the school district leaves nothing on automatic pilot and takes nothing for granted. Teachers and counselors engage business partners at every stage.

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www.careered.org

Eastern Technical High School Baltimore, Maryland

Eastern Technical High School in Baltimore, MD 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 training students for many jobs that would not 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, 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 ten of the career majors, as well as complete a library orientation, a course on PowerPoint software, and a "civility module" that 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 were graduated as Career Completers, compared to less than one percent and 78 percent of graduates in 1991, respectively.

Eastern Tech focuses on using the latest technology and real work atmosphere to train students in their chosen career major. Students can earn credits towards a college degree, certifications, or acceptance into apprenticeship programs through some career majors. *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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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. 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, web sites, and available program evaluation material, and interviewed program directors to identify “Good Practice” sites that exemplify the five 70 Percent Solution Principles.

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, including educators, counselors, and policymakers.



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