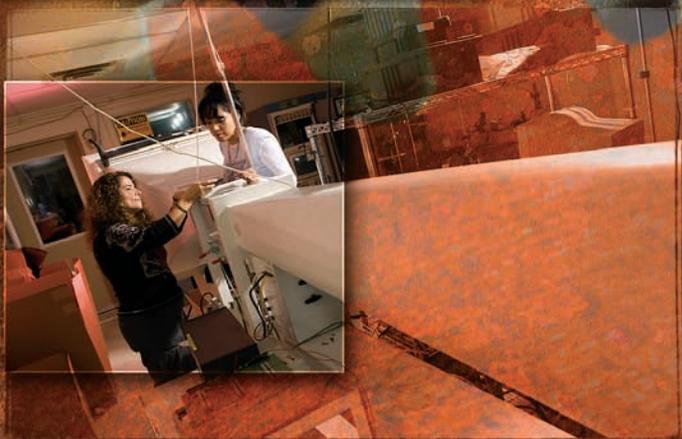


STATE
OF THE
WORKFORCE

2008

Post-Secondary Education in Focus





Improving the Impact of Community Colleges on Workforce Development

Each year, the Workforce Alliance State of the Workforce report uses the latest economic data to illuminate issues that are shaping the state's employment picture. What becomes increasingly evident is the interconnectedness of many different factors in determining employment outcomes, everything from the availability of housing to a person's ability to read and compute.

This year's report focuses on post-secondary education, especially the role of Associate's Degrees. Connecticut's Community College system has grown and flourished in the past few decades. They have gone through many changes seeking the most appropriate ways to serve the students and businesses of the state.

The increase in facilities and in students has been nothing short of remarkable. This growth has tracked the increased complexity of even the simplest jobs in the modern economy. Serving

traditional, 2-year, Associate's Degree students is no longer the primary mission of the Community Colleges. Far more students use the colleges to advance their careers with certificate and non-degree courses that are tailored to specific industries. The Community Colleges have also expanded their importance as centers for personal growth and development.

Community Colleges in Connecticut have a unique and often daunting mandate: they are required to accept all applicants who possess a high school diploma or GED. Many of these applicants fared poorly in high school or adult education and require several remedial courses just to get started on their community college careers.

The need to improve the rudimentary skills of these students has a direct impact on the overall outcomes of a community college education.

Recent research by Paul Harrington at the Center for Labor Market Studies at Northeastern University examines these outcomes in terms of student success rates and the transition of students into the workforce. His findings suggest the need for a basic shift in the delivery of Community College services.

Connecticut is not alone among states as we seek to improve the educational outcomes of public education at every level. New models are being piloted around the country that increase the interaction with adult education programs and attempt to make seamless transitions to four-year public colleges. Aligning these different public education systems for the benefit of students and business has the power to enhance the viability of Connecticut's future workforce, and to help the state maintain its historic position as home of the best-educated workforce in the country.

Joseph Mirra
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State of the Workforce 2008: Introduction

The reports by various experts of worker shortages and skills miss-matches in the Connecticut workforce have been piling up, year after year. These impressive reports categorize the situation quite clearly, but have not spurred the change required to improve the state's economic outlook.

Where Connecticut Is in 2008

- We have the 7th oldest population in the country, and it is not growing;
- Up to 50% of manufacturing employees can retire in the next few years, but few younger workers have traditional skills;
- Drop-outs fuel one of the largest per-capita prison populations in the country;
- Public colleges, especially community colleges, are overwhelmed with the high percentage of entrants who require remediation in reading and math;
- The most-accomplished poor kid has less chance than the least-accomplished middle class kid of graduating college;
- Projections of where the majority of future workers are coming from have recently been increased—current estimates project that up to 50% of our future workforce will come from the urban centers where dropout rates are close to 50%;
- The greatest number of new jobs being created also pay the least amount;
- Ex-offenders are a growing part of the general population, yet often have insurmountable obstacles to finding decent employment;
- And, of course, the cost of housing and taxes is so out of sync with the earnings of most residents that we may some day be known as the “land of out-migration” rather than the “land of steady habits”.

With the state's no-growth population and aging workforce, Connecticut must do a better job for the people already here, such as: educating our youth and finding them employment; helping ex-offenders become a viable addition to the workforce; providing every capable and willing Connecticut high school graduate a chance at post-secondary education; and finding ways to make housing more affordable for average workers.

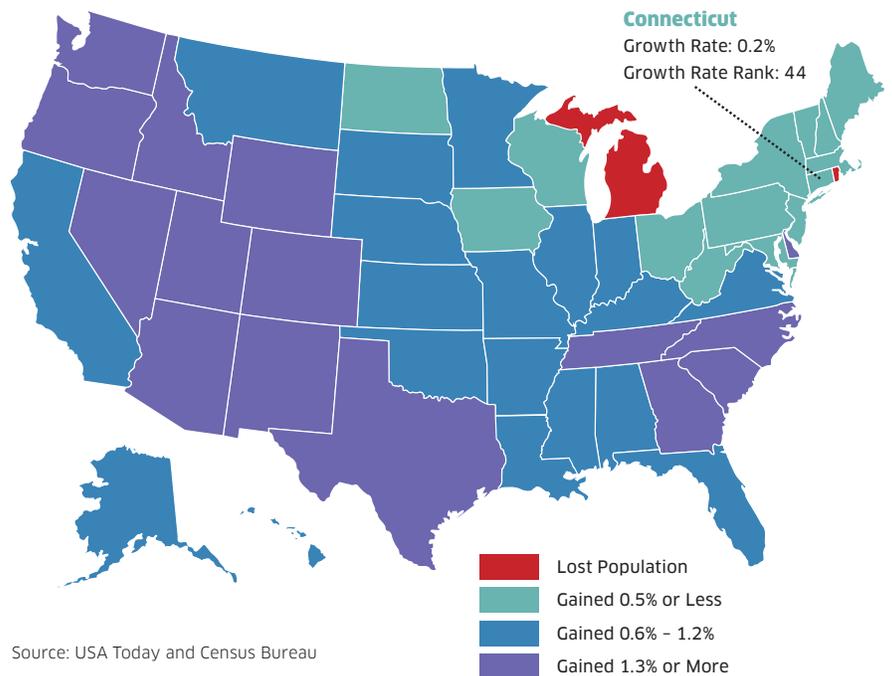


High tech skills are in demand in manufacturing, where continued increases in productivity depend upon well-educated workers.

Employers Have a Right to be Worried

Employers are worried about where they will find capable employees, with job skills and basic workplace skills. They worry that the next generation of executives and managers (people in their mid-30's to mid-50's) seems to have disappeared from the labor force. The gigantic out-migration of 20-to 34-year olds (265,000 have left the state in 15 years) exacerbates the looming workforce shortages that have already begun to appear.

GAINERS AND LOSERS IN STATE POPULATION: JULY 2006 - JULY 2007



Source: USA Today and Census Bureau

Workforce Development Is Crucial to Connecticut's Future



Healthcare jobs, including Medical Coding and Billing, are projected to increase substantially as the state's population ages.

Top 5 most difficult manufacturing positions to fill:

- CNC Programmers
- CNC Machinists
- Tool & Die Makers
- Machinists
- Engineers

Source: CBIA

While current statistics for the number employed remain above the historic peak we reached in 2001, there is every reason to believe that Connecticut will dip below that number by next year. Many economists call the period of expansion that followed the 2001 recession a “CEO’s Recovery” with much larger pay packages for those at the top. The story has been quite different for those in the middle and lower ends of the organizations, where earnings have been flat and buying power has declined.

People who lost their jobs in the 2001 recession took an average pay cut of 17 percent in their next position, double the average of people dismissed in the 1990’s. The time required to meet or beat previous earnings also grows longer and longer, with one well-respected economist suggesting seven to eight years.

Yet, Connecticut employers are telling surveyors that they are having difficulty finding trained, skilled workers. The percentage who say they are hiring should be encouraging. The disconnect is between available skills and available workers. Many of the

available jobs are in areas of manufacturing where long-honed skills are being lost as workers retire. Other jobs are in areas that require a technological base that few middle-aged, previously well-employed people seem to have.

A Tough Way to Start a Career

Just getting started in the workforce is increasingly difficult. Employment opportunities for young people in high school and out of school are difficult to find. An analysis of youth 16-24 in the South Central Connecticut workforce in 1999 versus 2006 reveals that teens are experiencing the least success finding work, and, once hired, the number of hours per year they work has also been in decline. The link between employment and educational attainment is clear from the first job a young person gets. The decline in work rates from 1999-2006 was entirely concentrated among those with a high school diploma or less. This includes young people who looked for work while enrolled in school.

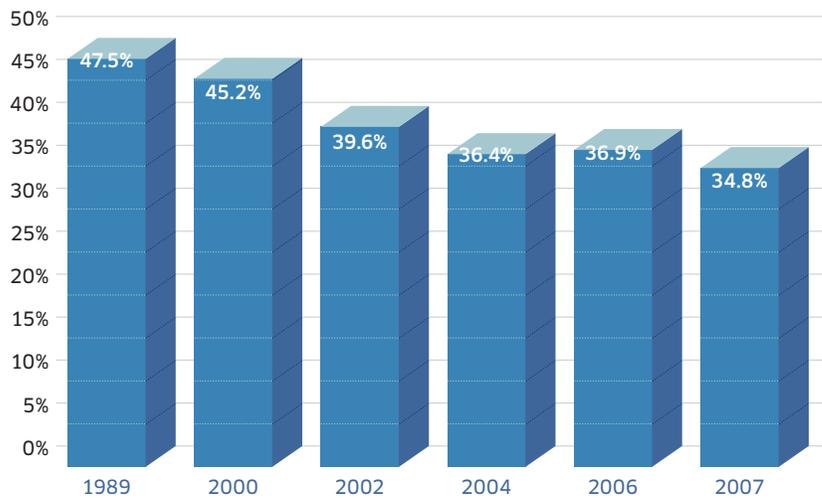
Sources
 Top Graph:
 Center for Labor Market Studies
 Bottom Graph:
 Center for Labor Market Studies,
 Northeastern University, 2008

The work rate of teens is directly related to the income of their family. In households with incomes below \$20,000, the young adult work rate declined 20% in six years.

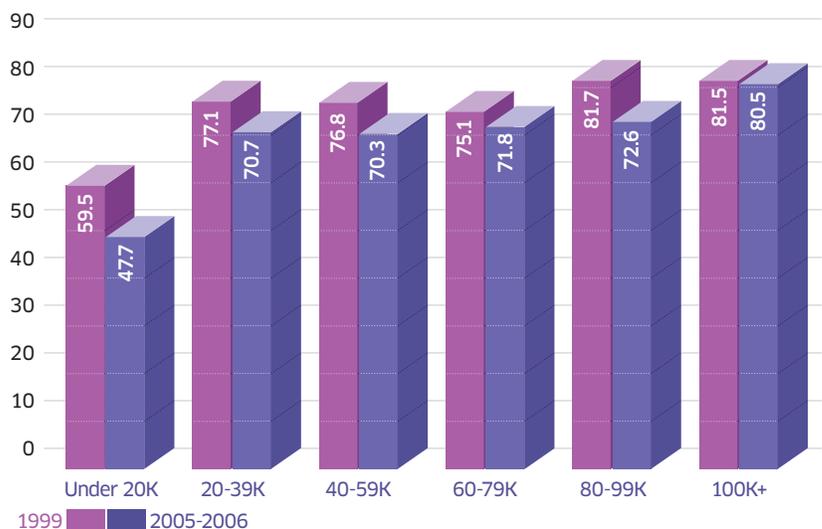
In 2007, 20% of the unemployed were jobless at least 27 weeks—twice the level of long-term unemployment before the 2001 recession.

Source: National Employment Law Foundation

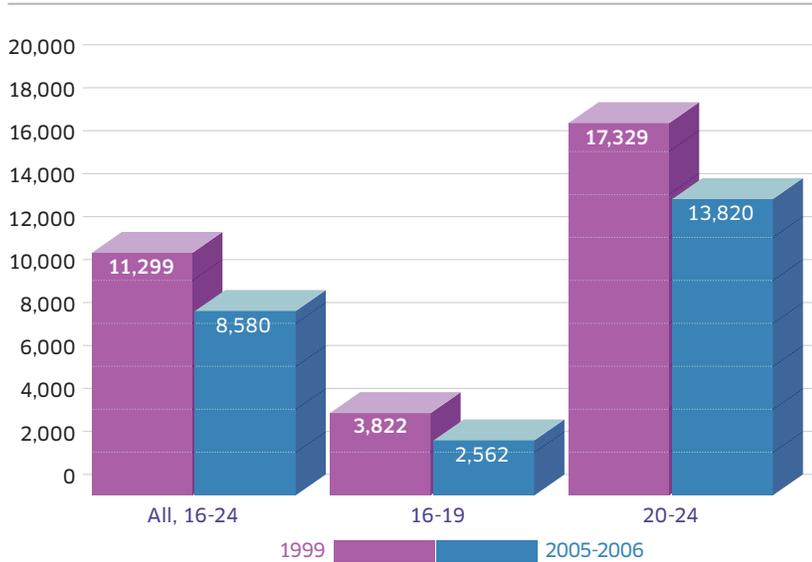
**EMPLOYMENT/POPULATION RATIOS 16-19 YEAR OLDS
 SELECTED YEARS 1989 TO 2007**



TRENDS IN WORK RATES OF TEENS AND YOUNG ADULTS IN THE SOUTH CENTRAL REGION OF CONNECTICUT BY HOUSEHOLD INCOME LEVEL 1999 TO 2005-064



TRENDS IN THE MEAN ANNUAL EARNINGS OF TEENS AND YOUNG ADULTS IN SOUTH CENTRAL CONNECTICUT, BY AGE, 1999 TO 2005-06 (INCLUDES ZERO EARNERS)



Source: Center for Labor Market Studies, Northeastern University, 2008

Not only are young people getting fewer jobs, but the jobs offer fewer hours, as well. Employed youth worked from 9-12% fewer hours in 2006 than in 1999. The decline in hours worked has been especially evident among white youth, who experienced the greatest reduction.

The outcome of working less is earning less. The average income of 16-24 year olds dropped from \$11,299 in 1999 to \$8,580 in 2006. The earnings for youth still in their teens dropped 32%, with young adults faring slightly better. The steepest decline hit high school youth, who saw a loss of 52% in mean annual earnings.

Education and Training Increase the Potential for Success

Even as the quality and quantity of jobs for people lacking a good education has been on the decline, educational achievement in Connecticut has also decreased. In the past decade, we have lost our coveted status of best-educated state. We are becoming known for the waves of potential employees coming from our cities, which include three of the poorest cities in the nation, where up to 50% of students are still dropping out of high school.

For twenty years, we have watched the growth and increasing importance of our Community College system. The Community Colleges have been vital partners in the re-training of workers to gain needed new technology skills. Their enrollments have increased precipitously and the state has been justifiably proud of their growth.

Increased enrollment, however, is only one step toward success. The chief credential one assumes a Community College might award is an Associate's Degree, however, a relatively small percentage

of students earn this degree. Many students study for non-degree, professional certification, and others opt for personal development, not degrees.

Access to Higher Education for Associate's Degrees Remains Flat

Community Colleges are not alone in awarding Associate's Degrees. In the 30 towns of the Workforce Alliance's South Central region, there are 5 public and private institutions of higher learning that granted Associate's Degrees in 2006, including: Albertus Magnus College, Gateway Community College, Middlesex Community College, Quinnipiac University, and



the University of New Haven. More than 800 Associate's Degrees were collectively granted in 2006.

High tech medical equipment doesn't replace the need for clinical medical service jobs. The educational requirement for Healthcare Technicians is often an Associate's Degree.

NUMBER OF ASSOCIATE'S DEGREES CONFERRED: U.S., NEW ENGLAND & SOUTH CENTRAL CONNECTICUT 1996 & 2006

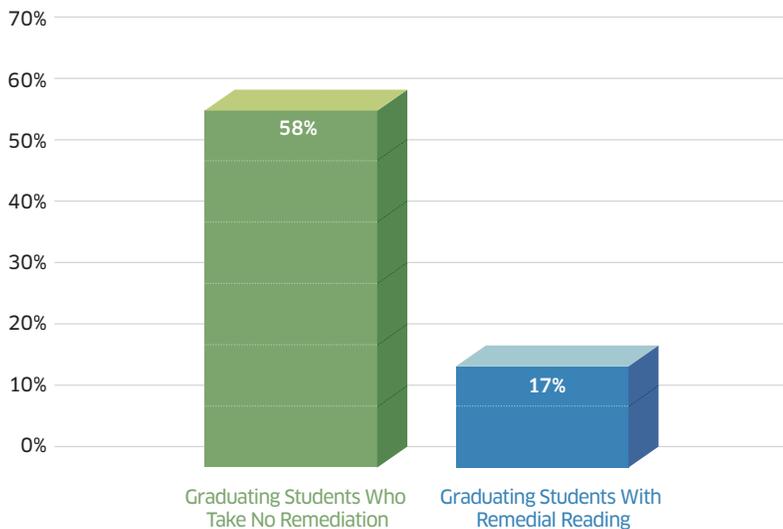
	1996	2006	Absolute Change	Relative Change
United States	557,858	730,643	172,785	31%
New England	28,440	27,023	-1,417	-5%
South Central Connecticut	802	838	36	4%
South Central Connecticut Public	647	650	3	0%
South Central Connecticut Private	155	188	33	21%

Source: Center for Labor Market Studies, Northeastern University, 2008

45% of America's good jobs in the next few years will require a certificate or Associate's Degree earned at a technical or community college.

Source: The National Center for Educational Statistics

STUDENTS WHO ENROLL IN A REMEDIAL READING COURSE ARE LESS LIKELY TO GRADUATE FROM COLLEGE



Source: NCES 2004

Community College remediation courses are a huge expense.

Annual Savings and earnings Benefits for a Reduced Need for Community College Remediation In Connecticut:

- the immediate annual remediation savings are estimated at \$23,985,384;
- the additional annual earnings of individuals who don't require remediation is \$29,063,995;
- the total annual benefit for the state economy is \$53,049,379

Source: The Alliance for Excellent Education

Over the past ten years, the number of Associate's Degrees awarded in the nation has increased by nearly one third, but the number granted in South Central Connecticut increased only 4%, rising from 802 in 1996 to 838 in 2006. Gateway and Middlesex Community Colleges granted 650 of the 838 degrees in 2006. Those 650 degrees represented only 3 more degrees awarded than in 1996. All growth in Associate's Degrees awarded since 1996 has occurred at the private schools.

Middlesex Community College had 1,038 full-time and 1,585 part-time students in Fall 2007; Gateway Community College had 8,909 individuals enrolled in degree or certificate programs, and 3,021 in non-degree programs.

The disparity between the large number of students who matriculate at Community Colleges and the relatively low number of degrees and certificates conferred partially explains why these graduates aren't filling the employment gaps that employers are experiencing. In the past ten years, the number of degrees in two of the most sought-after fields, Health Sciences, and Engineering & Computer Sciences, have decreased: -14% and -39%

respectively. The areas of growth at Community Colleges have been in Business, Arts & Humanities, and Personal Services, which includes Culinary Arts.

Of those who find their way into Community Colleges, an estimated 70% require remedial math and nearly as many require remedial reading, prior to taking any degree courses. That means that the doors of our Community Colleges, which are open to all, are admitting thousands of individuals who are not ready to tackle college courses. This problem is not confined to community colleges; Southern Connecticut State University provides remedial classes to 45% of freshmen. Remedial Centers are opening at many colleges just to handle demand.

The leading predictor that a student will drop out of college is the need for remedial reading. While 58% of students who take no remedial education courses earn a Bachelor's degree, only 17% of students who enroll in a remedial reading course receive a BA or BS within the same time period. (NCES 2004)



The actual potential for advancement of students who require remediation is far below the public's expectation of success for people attending college. Merely getting into college is no guarantee of graduating. The outcomes are extremely important: studies suggest that a person with "some" college earns a minimum of \$20,000 less per year than someone with a degree. The time to assure that students will succeed in college is when they are in middle and high school. That is when society traditionally invests in basic public education, with the expectation that they will succeed in later life.

Skills required for jobs in quality control—a key component in research & development and manufacturing—can be gained at the Community Colleges.

Remediation Track Record in South Central Connecticut

- *Of 1,161 new students entering Gateway Community College in the 2006 fall semester:*
- *38% needed developmental reading*
- *54% needed developmental English*
- *84% needed developmental math*
- *Of those who enroll in developmental math only 48% pass - for developmental English the success rate is 35%*

Source: Center for Labor Market Studies, Northeastern University, 2008

Non-Degree Programs Add to the Economy



Traditional skills are in short supply as the manufacturing workforce ages out of the labor market.

Resident investment in post-secondary education is not limited to private and public colleges. In the Workforce Alliance region, post-secondary proprietary schools are also an important force. In 2006, Branford Hall Career Institute accounted for 28% of all non-degree awards, while Stone Academy and the New England Technical Institute accounted for 16% and 13% of awards, respectively. Gateway and Middlesex Community Colleges combined granted a total 141 awards, accounting for 12% of awards granted.

The numbers of post-secondary, non-degree awards in the South Central region increased by more than double the national rate in the past ten years, and more than six times the New England rate

TRENDS IN THE NUMBER OF NON-DEGREE CERTIFICATES AWARDED IN THE U.S., NEW ENGLAND, AND SOUTH CENTRAL CONNECTICUT, BY HIGHER EDUCATION SECTOR 1996 TO 2006

	1996	2006	Absolute Change	Relative Change
United States				
Public	307358	373218	65,860	21%
Private	313311	346752	33,441	11%
New England				
Public	4451	4922	471	11%
Private	17453	18081	628	4%
South Central Connecticut				
Public	144	141	-3	-2%
Private	707	996	289	41%

Source: Center for Labor Market Studies, Northeastern University

of increase. All of this growth was among private schools. In 2006, these private institutions accounted for 88% of all non-degree awards in the region.

The areas of study that fueled this increase are directly linked to the needs of the area labor market. Forty-six percent of the awards in this region were in Health Sciences, 20% were in Personal Services and 19% were in Engineering & Computer Science. The mix of degrees was very similar at both public and private institutions.

A Gender Gap that Feeds the Prison System

Whether in terms of Associate's Degrees or non-degree programs, a gender gap is having repercussions beyond the workforce. Among the Associate's Degrees awarded in 2006 in South Central Connecticut, 260 went to males, 578 went to females, which means that degrees were awarded to 222 females for every 100 males who earned these degrees. This statistic is far greater than similar analysis of New England and U.S. Associate's Degrees awarded.

The gender gap in non-degree awards granted is virtually the same: 353 went to males, while females earned 784 awards, also 222 female awardees for every 100 male. In this case, New England as a whole had a slightly worse gender gap of 230 females to every 100 males.

Many of the young men who have not had any post-secondary education are the ones who dropped out of the education system. These young men are at far greater risk of becoming involved in substance abuse and crime. Keeping these young men in the education system benefits Connecticut in many ways: Dropout research reported by U.S. DoE estimates:

- High school dropouts earn 37 cents for every dollar earned by high school graduates. Dropouts live 9 years less than high school graduates.
- Every 10% increase in high school graduation rates is correlated with a 13% lower rate of auto theft and a 20% lower rate of murders and assaults.

Essential Resources needed to improve access to post-secondary education for low-income students:

- *Rigorous academic program that moves without break from high school into non-remedial college work*
- *Financing for higher education promised by 9th grade*
- *A web of support including school, family and community*

Source: Education Week

There is a bright side to this particular part of the workforce picture: men constitute an increasing share of the number of non-degree awards in the region. From 1996-2006, the relative change in the number of women was 5%. In the same time period, the number of males receiving these awards increased 243%. The message that technical, job-specific training helps a person find and keep employment seems to be getting through.

Bridging the Achievement Gap

Foreign-born students represent half of all grad students in computer sciences and more than half of the doctorate degrees in engineering. 30% of actively employed science and engineering doctorate holders in the U. S. are foreign born.

Source: U.S. Department of Education

Connecticut had the nation's largest achievement gap on the 2005 National Assessment of Educational Progress' (NAEP) National Report Card, and the gap has increased significantly over the past two years. Only 17% of graduating seniors are considered proficient in math and just 36% are proficient in reading, according to NAEP. The other 63% who are not proficient in math and the 64% who are not proficient in reading are the youth who are attending our 2-year post-secondary institutions.

Despite accomplishments in the preparation of students in leadership and other non-benchmark assets, the New Haven School System continues to be among the lowest 10 cities in the state for percentage of students who met the target range for standardized test scores set by the CT DoE.

New Haven and the other impoverished urban centers in

Connecticut are not alone: West Haven, Meriden, Middletown, East Haven, Wallingford, all scored near the relative bottom in the categories for their population size. Even North Haven scored a mediocre 18 out of 30 in its population class. East Hampton, North Branford, Cromwell, and Clinton all scored in the lower half of the ratings in their population classes. Clearly, the need for improvement cuts across municipal boundaries.

Not Just Access, Success

What is increasingly evident is the importance of looking at the continuum of education and the alignment of the various institutions that deliver education at each stage. Currently, 22 states are reforming their public education systems, according to Tom Murphy of the Connecticut Department of Education.

The alignment of educational organizations creates disconnections instead of a continuum. Pre-K-16 should

TRENDS IN THE NUMBER OF AWARDS CONFERRED, BY GENDER, 1996 TO 2006

	1996	2006	Absolute Change	Relative Change
Male	103	353	250	243%
Female	748	784	36	5%
Total	851	1,137	286	34%

Source: Center for Labor Market Studies, Northeastern University

be considered the life span of educational endeavor. A number of states are currently working on projects to improve this alignment. A high school degree should mean that a student is college- or work-ready.

Nancy Hoffman and Joel Vargas, in “Minding the Gap: The Education Promise”, suggest that public financing to assist with higher education be promised to students by the time they are in the 9th grade. The authors suggest that the Education Promise will:

- lower dropout rates
- create higher expectations among students, faculty and families
- establish more affordable cost of college that is tied to the Education Promise, while requiring some investment from students

With 36% of residents possessing a bachelor’s degree or more, Connecticut brags that it has the fourth highest educational attainment in the nation, behind Washington DC (49.1%), Massachusetts (40.4%), and Colorado (36.4%). What people fail to mention is that in terms of “high school graduate or more”



Connecticut ranks 22nd in the nation, behind states like Alaska, Hawaii, Idaho, Nebraska, and Wyoming.

One reason for the large number of students who leave college is the low level of state aid available. According to the Public Policy Institute of New York State, Inc, Connecticut is 36th in the nation in per capita higher education spending.

Healthcare employment offers more routes for advancement than most service sector jobs.



Computer skills, and the ability to continually upgrade them, are requirements in virtually any office environment.

The state ranks 6th nationally in human capital due to the high number of advanced science and engineering degrees, as well as the high number of college grads. In actual growth of human capital, CT ranks 40th due to low scores on standardized tests.

Source: CERC's "Benchmarking Connecticut 2007"

40% of post-secondary school students are self-supporting adults age 24 and up.

Source: U.S. Department of Education

Public Investment in Education Pays Off Big

Our state investment in public education shows excellent returns. 68% (14,780) of public college graduates were employed in Connecticut by the third quarter after graduation. However, not all of the graduates' skills meet the current demands of the marketplace, for instance: Only 6.5% of CT public college graduates take jobs in manufacturing within the year after graduation. We need more engineers, more scientists, nurses and teachers. Recent efforts to stimulate interest in employment areas with high demand are well-intended, but require more funding.

Georgia's HOPE merit scholarship program, which has given thousands of "B" or better students a boost at state colleges, has now been joined by a non-merit-based grant. The merit-based scholarship can be used at 103 public and private colleges in Georgia. The non-merit-based grant applies only to non-degree programs at 2-year and technical schools for the attainment of certificates and other basic credentials. The HOPE program has evolved over

time to be even more inclusive: The household income cap for eligibility was recently increased to \$100,000.

An important study found that state funding for higher education decreases as per-capita spending on corrections; health care and K-12 education grows. (“Determinants of State Appropriations for Higher Education from 1985-2005: An Organizational Theory Analysis,” Weerts and Ronca). To complete the paradox, it has been shown that the incarceration rate of college graduates is one quarter that of high school graduates.

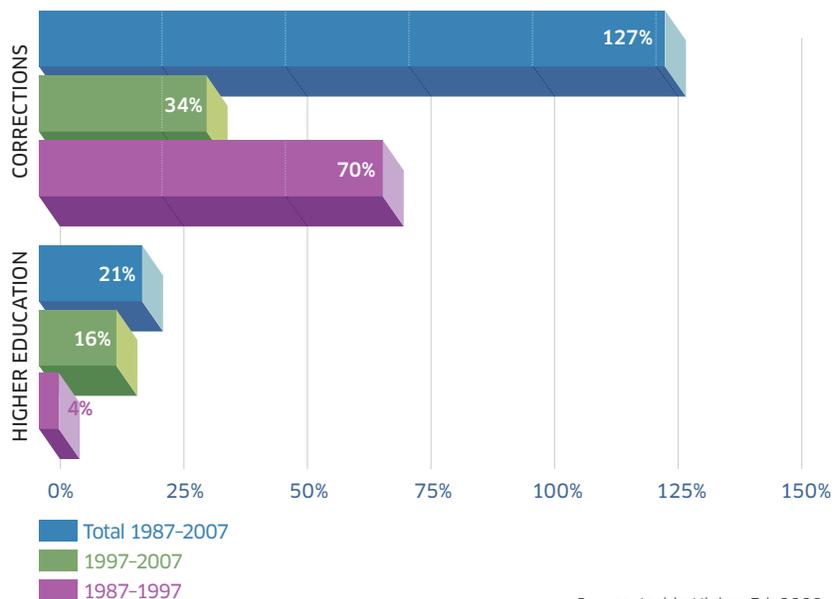
Additional efforts are underway in the state that hold the promise of better alignment among institutions. For instance, the Connecticut Community College and the Connecticut State College systems are working together to encourage and promote access to 4-year institutions for students earning 2-year degrees.

The state should also consider more radical reforms to narrow the achievement gap. Pre-K-12 teaching reform should begin with reforming colleges of education. In Connecticut, the largest number, 23% (2,402), of public college graduates employed in the state after graduation are in Educational Services. It is vital that they be trained to work with today’s students for tomorrow’s jobs.

The “Celtic Tiger” has shown the wisdom of deep and direct investment in education. Irish unemployment went from 17% in 1987 to 4% in 2005, and the average annual growth rate of the economy has been an astounding 7%, thanks to their commitment to educating knowledge workers.

Source: The Economist

GROWTH IN STATE SPENDING ON CORRECTIONS AND HIGHER EDUCATION 1987-2007



Source: Inside Higher Ed, 2008

Education and Training Are the Foundation for Tomorrow's Economy

Workforce Alliance's Recommendations for Improving the Odds of Success

- 1 Raise the legal age for leaving school to 18 years of age** or issuance of a diploma. High School drop-outs feed unemployment, the penal system, and substandard job opportunities. Close the loophole that allows 16-year olds to drop out.
- 2 Require literacy training for prison inmates.** The estimate for functional illiteracy within the penal system is 70%. The lack of literacy skills is an overwhelming barrier for ex-offenders who are returning to society.

- 3 Access Higher Ed—Provide full tuition scholarships for CT high school graduates** who have achieved basic proficiency in their 10th grade CAPT; who have maintained a “C” average in high school and whose family income qualifies for Pell grants.
- 4 Workforce Housing**—Programs are underway to improve the supply of affordable housing, but the state still leads the nation in housing prices. Affordable Workforce Housing strengthens the economy by retaining our best and brightest.

- 5 Incumbent Worker Training**—Connecticut is a no-growth state, so existing employees become a precious resource. Training employees in new skills reaps rewards for the employee and the employer. Connecticut provides the lowest level of incentives for incumbent worker training in the nation. It is time for a real investment in our future, by both business and the state.

PER CAPITA SPENDING ON INCUMBENT WORKER TRAINING



Source: Workforce Alliance



Design by Paul Kazmercyk, Granite Bay Design
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