

# REALITY CHECK:

The U.S. Job Market And Students' Academic  
And Career Paths Necessitate Enhanced  
Vocational Education in High Schools

NEA Research  
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# EXECUTIVE SUMMARY

This report presents key findings from an NEA Research study that has examined the job distribution of the U.S. labor force and students' academic and career paths as mandated by NEA's New Business Item 13. These findings include:

- ◉ The vast majority (70%) of the U.S. Labor force do not have a Bachelor's degree.
- ◉ Only one in four (26%) are currently working in high-skill jobs that normally require a Bachelor's degree, while the remaining majority (74%) are working in middle-skill (42%) or low-skill jobs (32%) that typically require only some college, or even less, high school education.
- ◉ One-half (51%) of high school students do not go to college.
- ◉ Almost three out of ten (28%) do not graduate from high school.
- ◉ It is not easy to earn a college degree. Close to half of four-year college students do not complete a Bachelor's degree within six years, while 70% of community college students fail to complete an Associate degree within three years.

## EXECUTIVE SUMMARY (CONTINUED)

- High school graduates have been taking fewer credits in vocational education since 1990, but they are taking more academic credits during the same time span.

The following conclusions are derived from these findings:

- While the nation has been emphasizing the importance of students getting college degrees, it is equally important to develop policies to provide more high-quality vocational education in high schools given that more than two-thirds of the jobs in the nation do not require a Bachelor's degree.
- Enhanced vocational education at the high school level would provide an alternate career path to one-half of the student population who have chosen not to go to college.
- Well-developed vocational education programs should help prevent students from dropping out and help them land a job soon after graduation, thereby potentially reducing a broad range of social, economic, and political problems.

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# BACKGROUND

- ◉ A new business item (NBI 13) was passed at the 2011 NEA Representative Assembly that mandates NEA to determine the job distribution of the US labor force by job skills and education attainment and to examine quality vocational education programs at the high school level.
- ◉ To fulfill NBI 13, NEA Research has conducted a research study primarily relying on existing data that have been collected by federal agencies and other organizations.

## NBI 13

“The National Education Association will produce and make available through its publications a report of national and regional employment data that gives percentage of job types (e.g., service, skilled, trade, entertainment, college level, etc.) and examples of quality educational programs that can have students certified/licensed upon high school graduation. ” (2011–13)

# METHODOLOGY

NEA Research has primarily used secondary data collected by federal agencies and other organizations for this report. More specifically, the following analyses have been conducted:

- ◉ Analysis of 2000 Census data and 2007–09 American Community Survey (ACS) data to examine job distribution and its developing trend of the US labor force;
- ◉ Examination of Bureau of Labor Statistics (BLS) and other data sources to determine status of high school graduates in terms of graduation, college enrollment, and employment;
- ◉ Analyzing National Center for Education Statistics (NCES) data to determine the trend of students taking vocational education as compared to taking academic courses; and
- ◉ Search of websites to examine the key elements for quality vocational education programs for high school students.

## METHODOLOGY (CONTINUED)

All jobs in the nation have been classified into three categories.

- ◉ **High-Skill Jobs**—These are managerial, professional, or highly technical occupations that generally require a 4-year college degree and experience.
- ◉ **Middle-Skill Jobs**—These are jobs that generally require a certificate or 2-year college degree and experience. Most ESP jobs fall into this category, such as paraeducators, technical services, and health and student services.
- ◉ **Low-Skill Jobs**—These positions generally require a high school diploma or less education. Some ESP jobs fall into this group, such as food services.



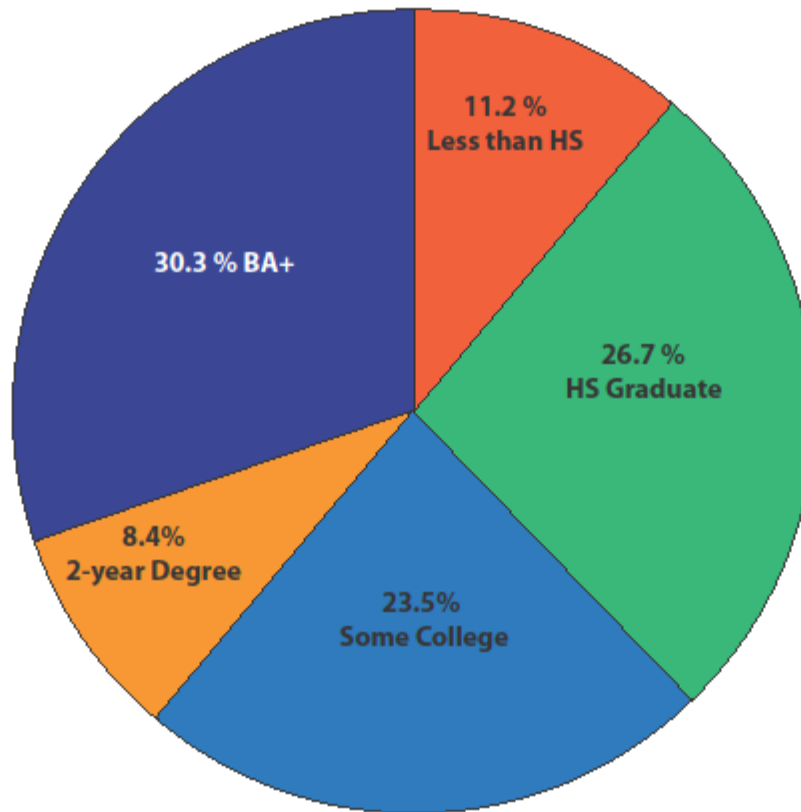
# KEY FINDINGS U.S. JOB MARKET

## 70% DO NOT HAVE A BACHELOR'S DEGREE

- The vast majority (70%) of the labor force in the United States do not have a Bachelor's degree, according to analyses of American Community Surveys (ACS) data collected by the Census Bureau in 2007, 2008, and 2009.
- 30% have earned a four-year college degree.
- 8% have obtained a two-year Associate degree.
- 24% have received some college education.
- 27% have a high school diploma.
- 11% have not graduated from high school.

Conclusion: A policy that encourages all high school students to aspire to a college degree is practically flawed since the vast majority of jobs do not require a four-year college degree.

# ONLY 30% HAVE A BACHELOR'S DEGREE

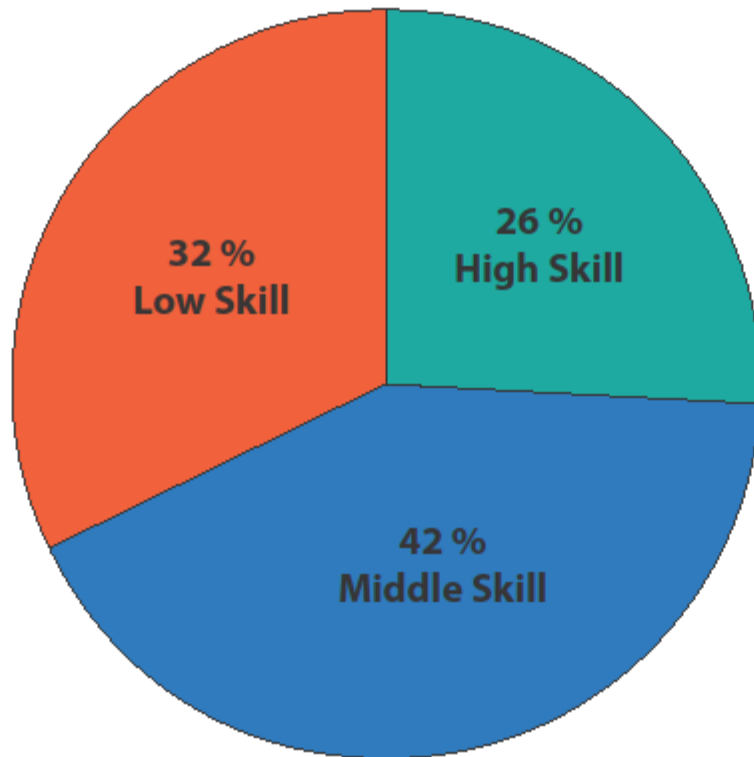


## ONLY 26% WORK IN HIGH-SKILL JOBS

- ◉ The smallest portion (26%) of the labor force are currently employed on high-skill jobs such as managerial, professional, and technical occupations, according to 2007-09 ACS data.
- ◉ The largest portion (42%) work on middle-skill jobs that normally require only some college education.
- ◉ The second largest portion (32%) work on low-skill jobs that typically only require a high school diploma or even less.

Conclusion: Given that three quarters of jobs in the nation are at the low- or middle-skill levels, the current job market does not require all students to go to college and earn a college degree. Vocational education would immediately help students develop career skills and land them a low- or middle-skill job soon after graduation from high school.

# ONLY 26% WORK IN HIGH-SKILL JOBS

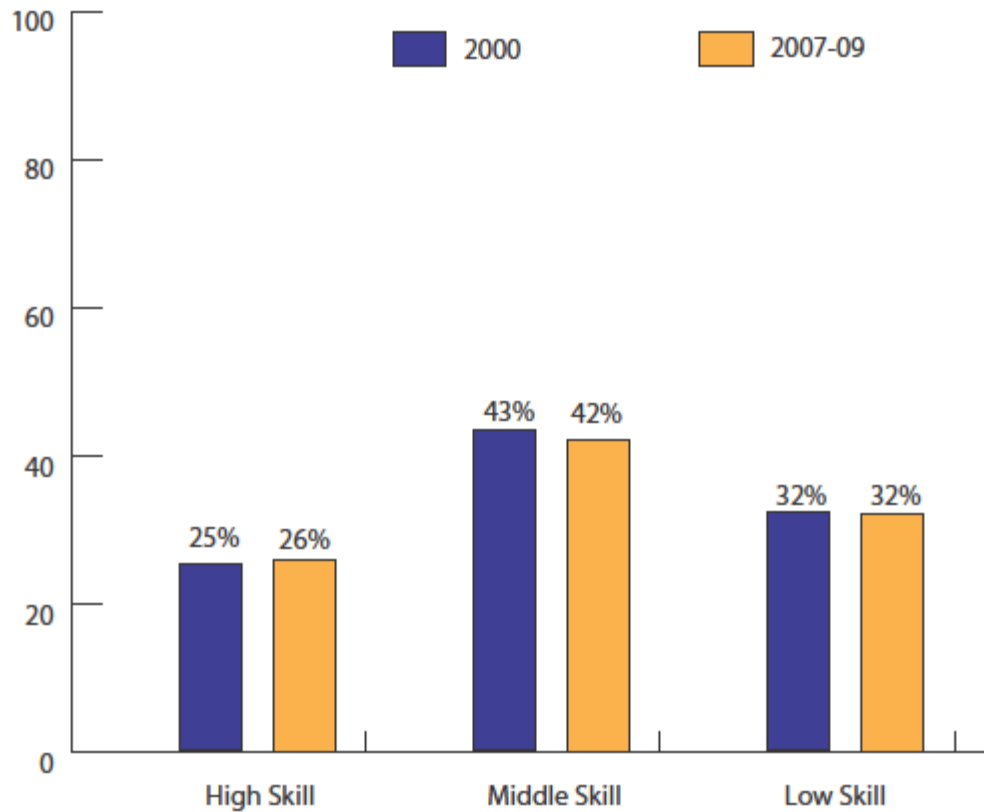


## JOB DISTRIBUTION HAS BEEN STABLE BY SKILL LEVELS

- ⦿ A detailed analysis of the 2002 Census data and 2007-09 ACS data shows that job distribution of the U.S. labor force has not changed significantly since 2000.
- ⦿ High-Skill jobs have increased 1% from 25% to 26%.
- ⦿ Middle-Skill jobs have decreased 1% from 43% to 42%.
- ⦿ Low-Skill jobs have been flat, staying at 32%.

Conclusion: Since the job distribution has been stable, continued emphasis on college degrees seems unwarranted.

# JOB DISTRIBUTION HAS BEEN STABLE BY SKILL LEVELS



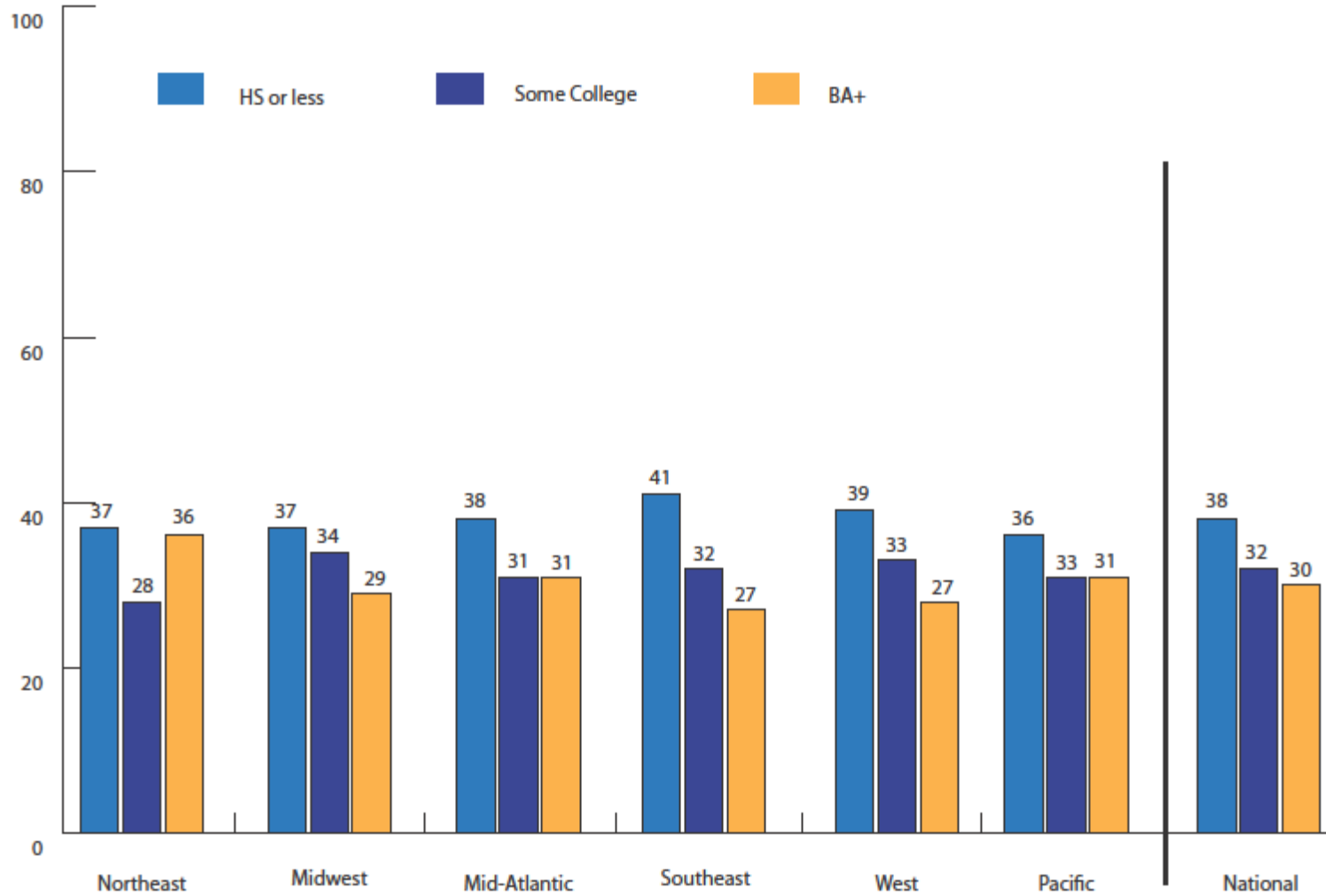
# EDUCATION ATTAINMENT BY REGION

Part of NBI 13 mandates NEA to provide job and education attainment data at the regional level. The 2007-09 ACS data shows the following education attainment among the six NEA regions:

- ◉ The Northeast region (36%) has the highest percentage of workers with a Bachelor's degree, followed by Mid-Atlantic (31%), Pacific (31%), and Mid-West (29%);
- ◉ The West (27%) and the Southeast (27%) have the smallest percentages of labor force with Bachelor's degrees; and
- ◉ The Southeast (41%) has the largest percentage of workers with a high school diploma or less, followed by the West (39%).



# EDUCATION ATTAINMENT BY REGION

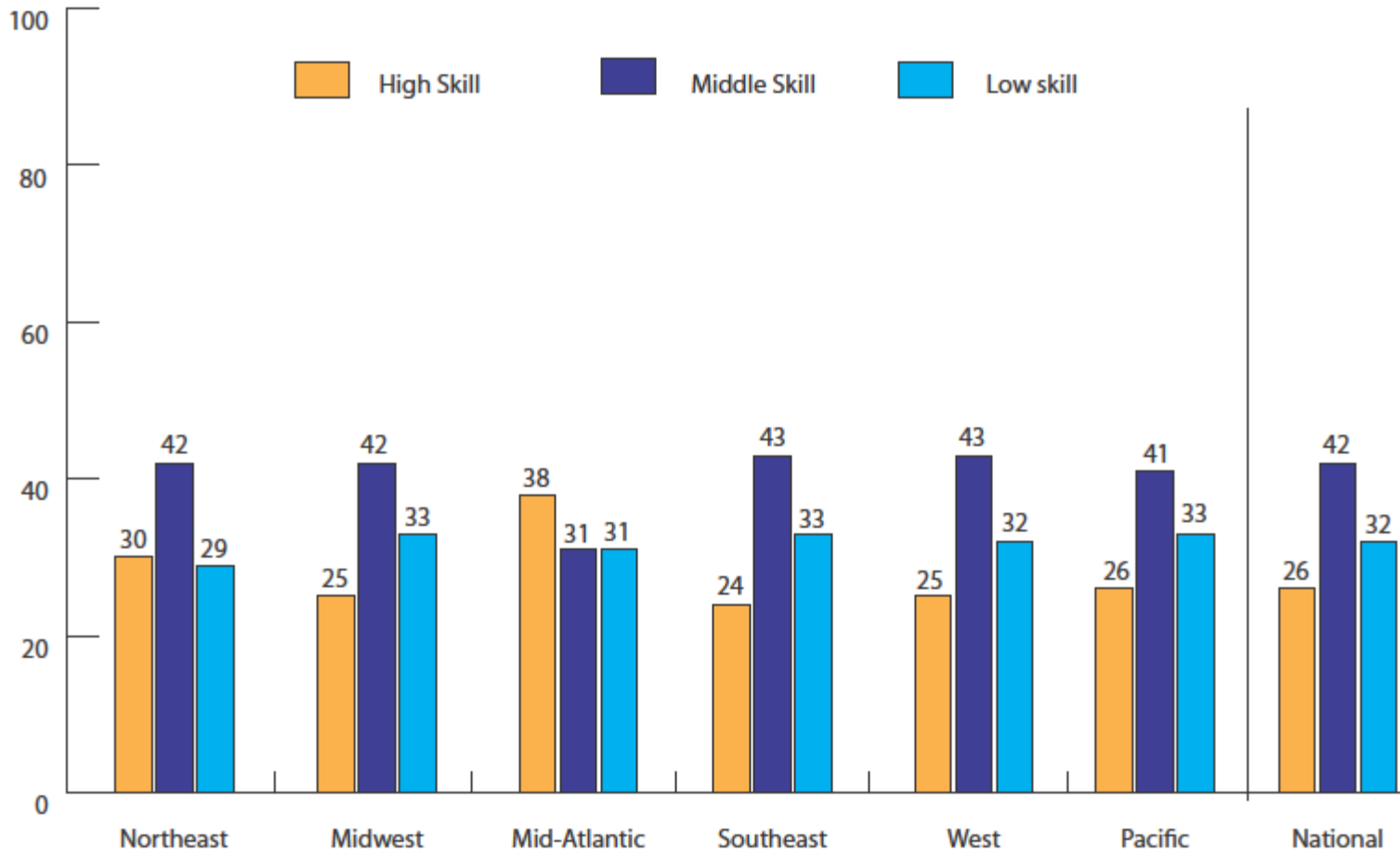


# JOB SKILLS BY REGION

The ACS data also show the following distribution of job skills among the six NEA regions:

- ⦿ The Mid-Atlantic (38%) has the highest percentage of high-skill jobs, followed by the Northeast (30%);
- ⦿ The Pacific (26%), the West (25%), the Midwest (25%), and the Southeast (24%) have almost the same share of high-skill jobs; and
- ⦿ The Pacific (33%) and the Mid-West (33%) have the largest percentages of low-skill jobs.

# JOB SKILLS BY REGION



## MIDDLE-SKILL JOB GAINS SINCE 2000

- ◉ Some middle-skill jobs gained significantly from 2000 to 2007-09, according to 2000 Census data as well as 2007-09 ACS data.
- ◉ The number of construction managers increased by approximately 271,000 from 631,524 to 902,588—a gain of 43%.
- ◉ Marked gains also happened in similar jobs such as real estate brokers and agents (32%) and property managers
- ◉ The number of food services managers increased by 38%.
- ◉ Gains were also noted in medical support jobs, medical assistants (34%) and nursing/health aides (23%).

Conclusion: While many categories of jobs have indeed been hard hit by the most recent economic recession, it may help vocational education programs succeed over time if they develop training courses in construction, property management, food services management, and medical support since jobs in these areas are usually in great demand.

# MIDDLE-SKILL JOB GAINS SINCE 2000

	2000	2007-09	Gain	Gain in %
Construction Managers	631,524	902,588	271,064	43
Food Services Managers	669,840	922,087	252,247	38
Medical Assistants	565,588	759,337	193,749	34
Security Guards/Officers	725,261	965,051	239,790	33
Non-Retail Supervisors	923,154	1,228,110	304,884	33
Real Estate Brokers/Agents	661,968	873,672	211,704	32
Property Managers	424,434	541,357	116,923	28
Bartenders	315,860	390,282	74,422	24
Nursing/Health Aides	1,671,538	2,062,274	390,736	23
File Clerks	320,960	374,444	54,348	17
Retail Supervisors	2,743,396	3,107,280	363,884	13

## LOW-SKILL JOB GAINS SINCE 2000

- ◉ Some low-skill jobs experienced significant gains in employment from 2000 to 2007-09, again according to 2000 Census data and 2007-09 ACS data. These jobs normally do not require college education at all, although some do require some career training.
- ◉ The number of personal and home care aides was almost tripled from 282,500 to almost 842,000.
- ◉ There was a 60% increase of couriers and messengers.
- ◉ Food preparation workers increased by 53%.

Conclusion: Vocational education programs may consider offering courses in personal and home care assistance and food preparation since these fields have been growing tremendously.

# LOW-SKILL JOB GAINS SINCE 2000

	2000	2007-09	Gain	Gain in %
Personal/Home Care Aides	282,531	841,980	559,449	198
Couriers/Messengers	191,387	306,437	115,050	60
Food Preparation Workers	496,350	760,412	264,062	53
Construction Laborers	1,106,732	1,679,348	572,616	52
Grounds Maintenance Workers	903,467	1,247,027	343,560	38
Host/Hostess	191,441	260,474	69,033	36
Counter Attendants, Café, etc	179,767	234,342	54,575	30
Janitors	1,868,119	2,417,476	549,357	29
Stock Clerks/Order Fillers	1,216,337	1,522,969	306,632	25
Waiters/Waitressed	1,659,649	2,055,476	395,827	24
Cooks	1,677,812	2,050,715	372,903	22
Cashiers	2,681,759	3,182,320	500,561	17

KEY FINDINGS  
STUDENTS' ACADEMIC AND  
CAREER PATHS

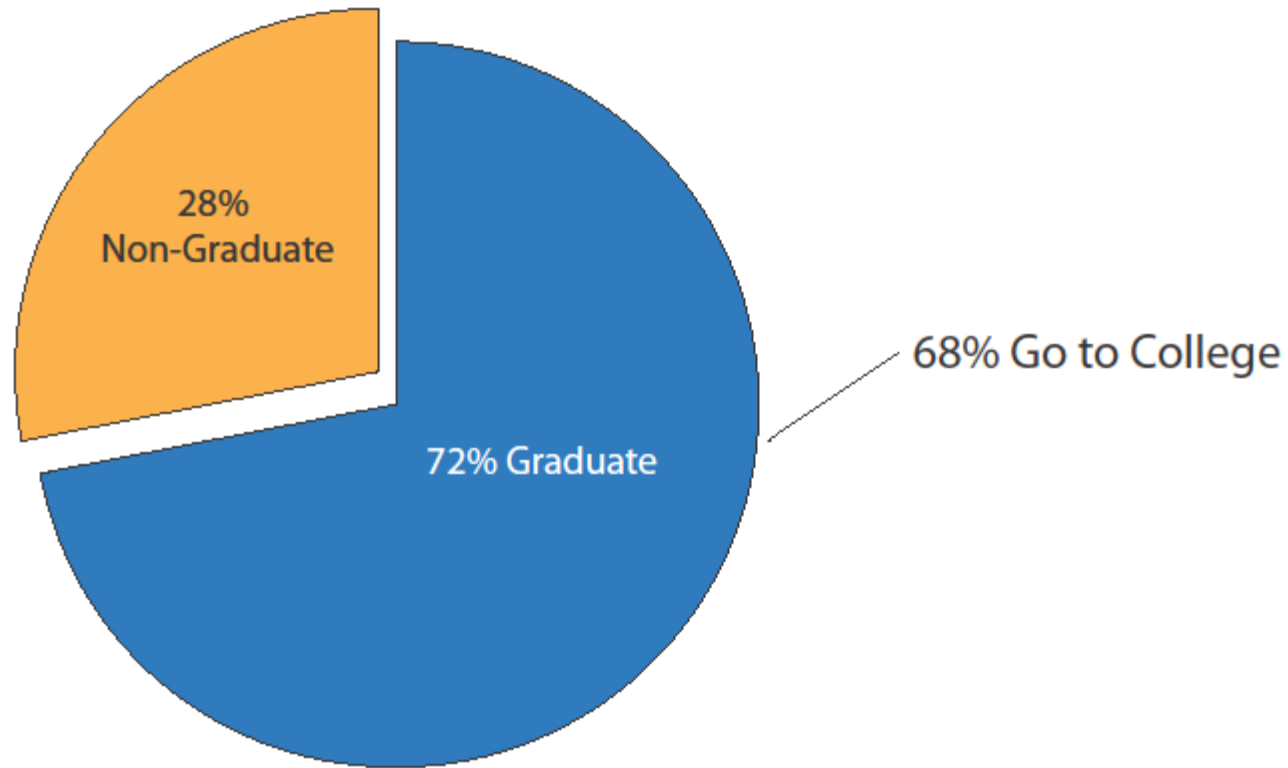


# ALMOST 30% DO NOT GRADUATE FROM HIGH SCHOOL

- ◉ Almost three in 10 (28%) did not graduate from high school in 2008, according to Current Population Survey (CPS) data collected by Bureau of Labor Statistics.
- ◉ Between October 2009 and October 2010, 340,000 students dropped out of high school.

Conclusion: Vocational education programs, if successfully developed, may motivate at-risk students, improve school attendance and reduce drop out rates, thus potentially reducing social and economic problems.

# 28% DID NOT GRADUATE FROM HIGH SCHOOL IN 2008

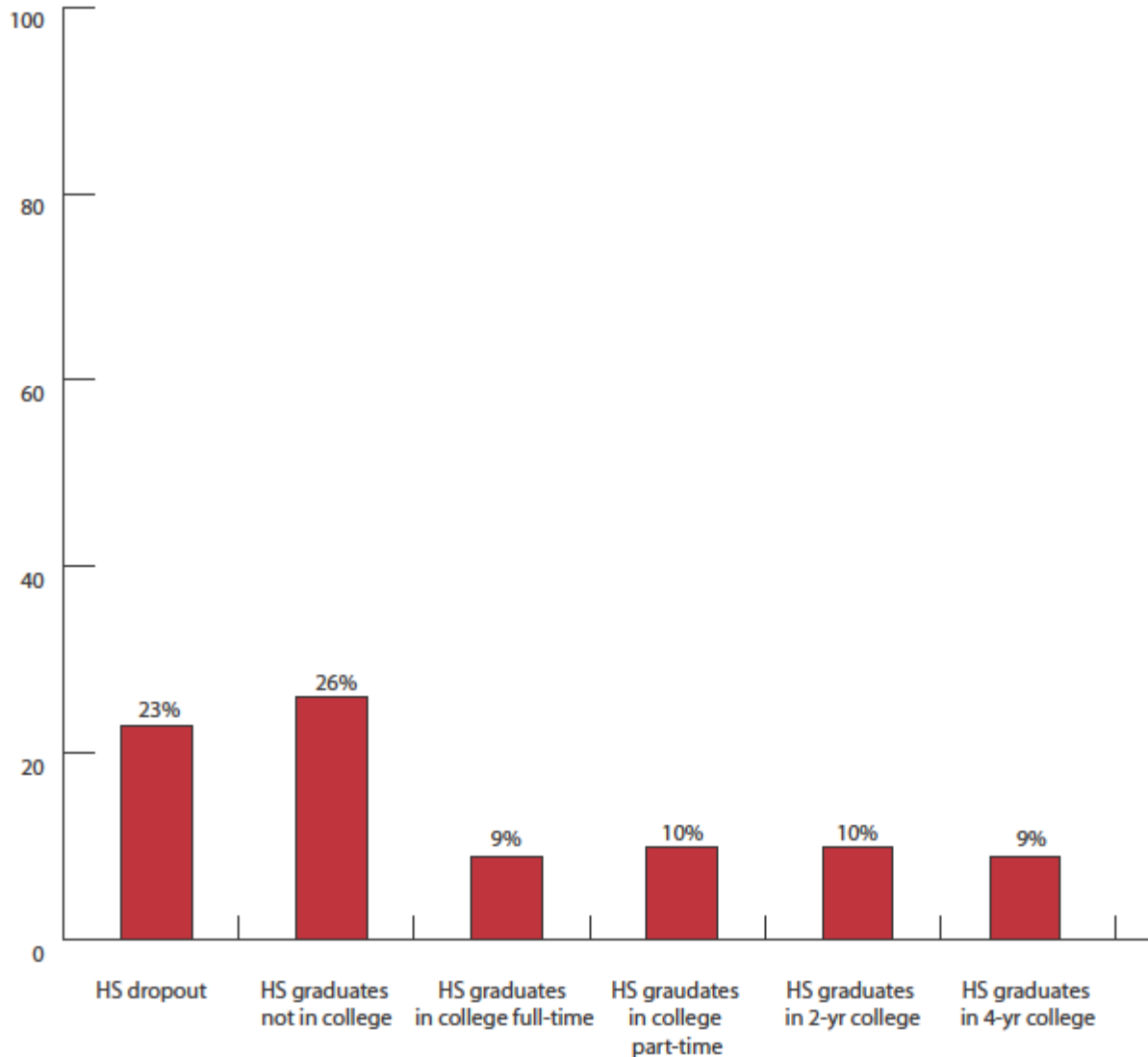


# PEOPLE WITH LESS EDUCATION ARE MORE LIKELY TO BE UNEMPLOYED

- ⦿ High school graduates who are not enrolled in college are the most likely to be unemployed, based on 2010 Current Population Survey data collected by Bureau of Labor Statistics.
- ⦿ High school dropouts (23%) are almost equally likely to be unemployed.
- ⦿ According to the definition provided by the U.S. Census Bureau, someone is “unemployed” if he or she is actively seeking but cannot secure employment.

Conclusion: These young people are at risk, and their high rates of unemployment tend to exacerbate existing social, economic, and political problems. They need help. Well developed vocational education might be the help they need!

# PEOPLE WITH LESS EDUCATION ARE MORE LIKELY TO BE UNEMPLOYED

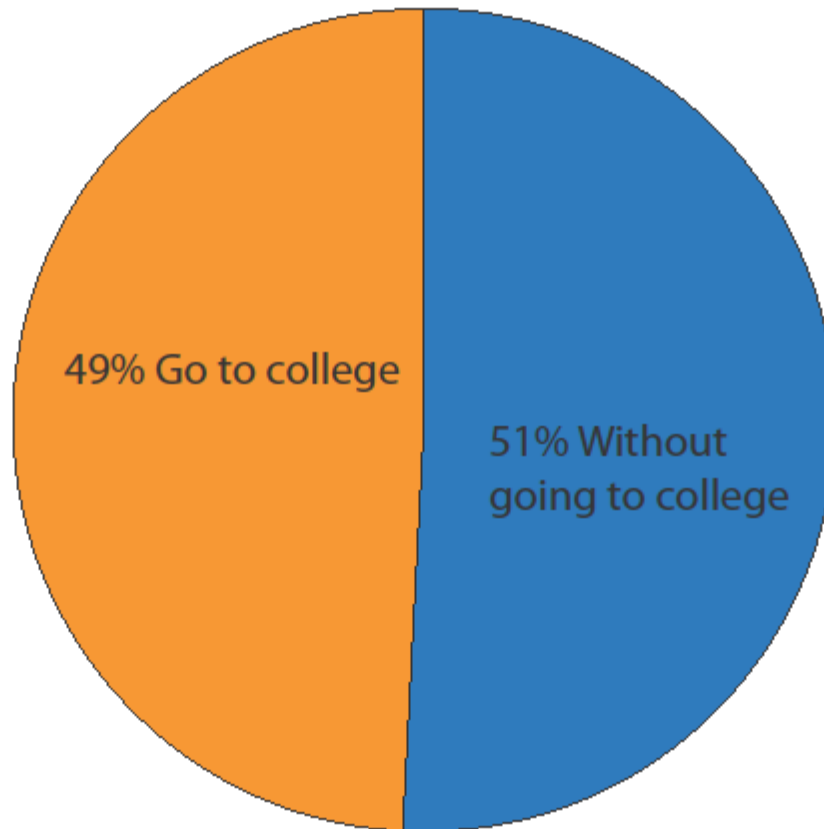


## ONLY ONE-HALF GO TO COLLEGE

- Only 49% of high school students in the class of 2010 were enrolled in college, based on CPS data collected by the Bureau of Labor Statistics.

Conclusion: Policy makers should never ignore the significant one half when making decisions on curricula for high school students. Enhanced vocational education would offer the other one half the alternate path to succeed in their life destination.

# HALF OF HS STUDENTS DO NOT GO TO COLLEGE IN 2010

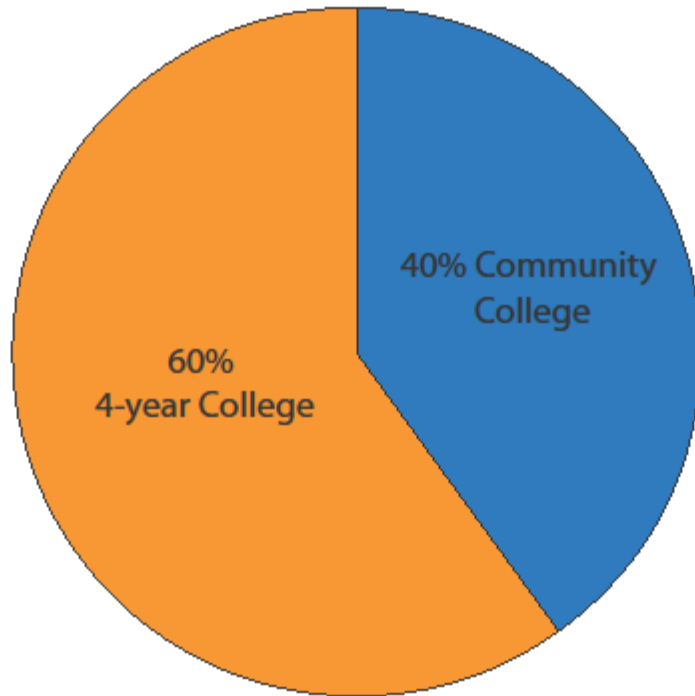


## A PLURALITY GO TO COMMUNITY COLLEGE

- ◉ Among those who were enrolled in college in 2010, 60% went to four-year colleges, with the remaining 40% going to community colleges, according to Bureau of Labor Statistics.

Conclusion: Community colleges have been attracting students due to their reasonable cost and lower entrance standards. It is also possibly attributable to the fact that vocational education provided there has helped students develop career technical skills that are helpful to find a low- or middle-level job.

# 40% ENROLLED IN COLLEGE ATTEND COMMUNITY COLLEGES



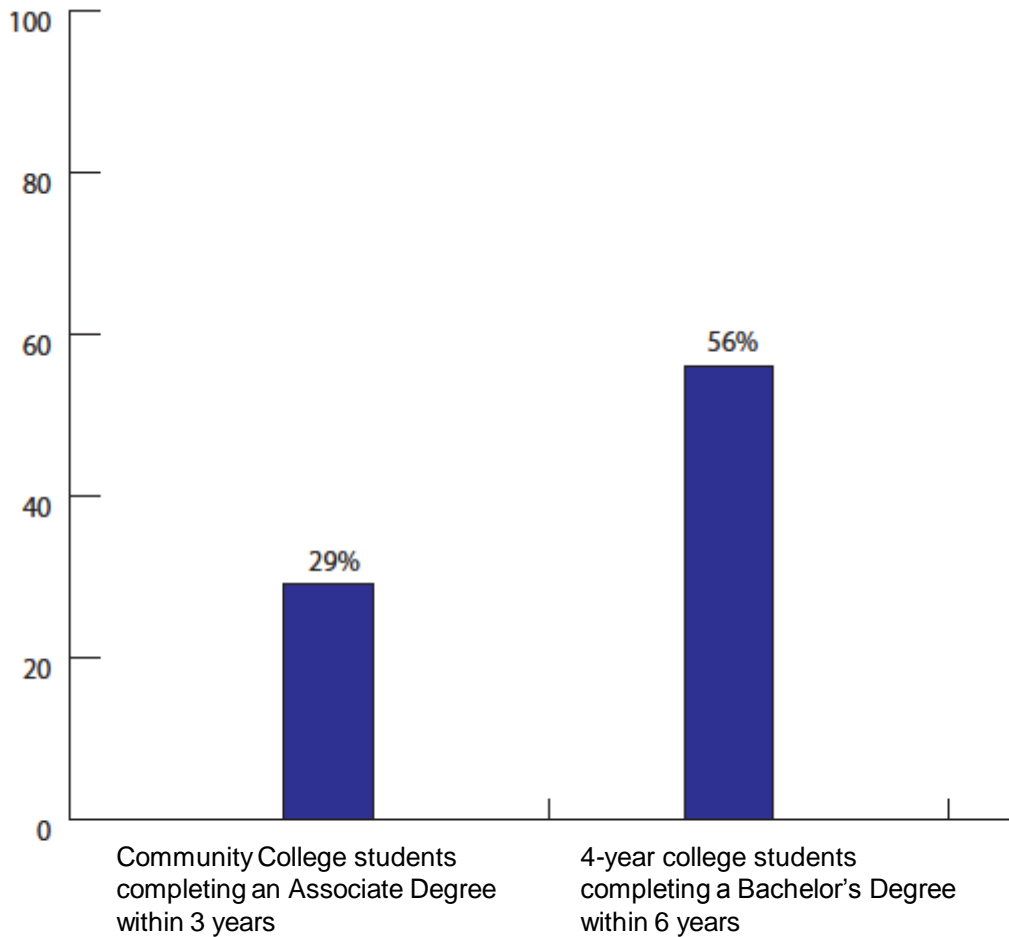


# IT TAKES MANY YEARS TO EARN A COLLEGE DEGREE

- ◉ It has not been easy to earn a college degree, according to [higheredinfo.org](http://higheredinfo.org), affiliated with National Center for Higher Education Management System.
- ◉ Among those who go to community colleges, almost seven in ten (71%) did not complete an Associate degree within three years.
- ◉ And among those four-year college students, only 56% successfully completed a Bachelor's degree within six years.

Conclusion: For many who are not able to receive a college degree, vocational education might be what they need in order to land a job.

# IT TAKES MANY YEARS TO RECEIVE COLLEGE DEGREES

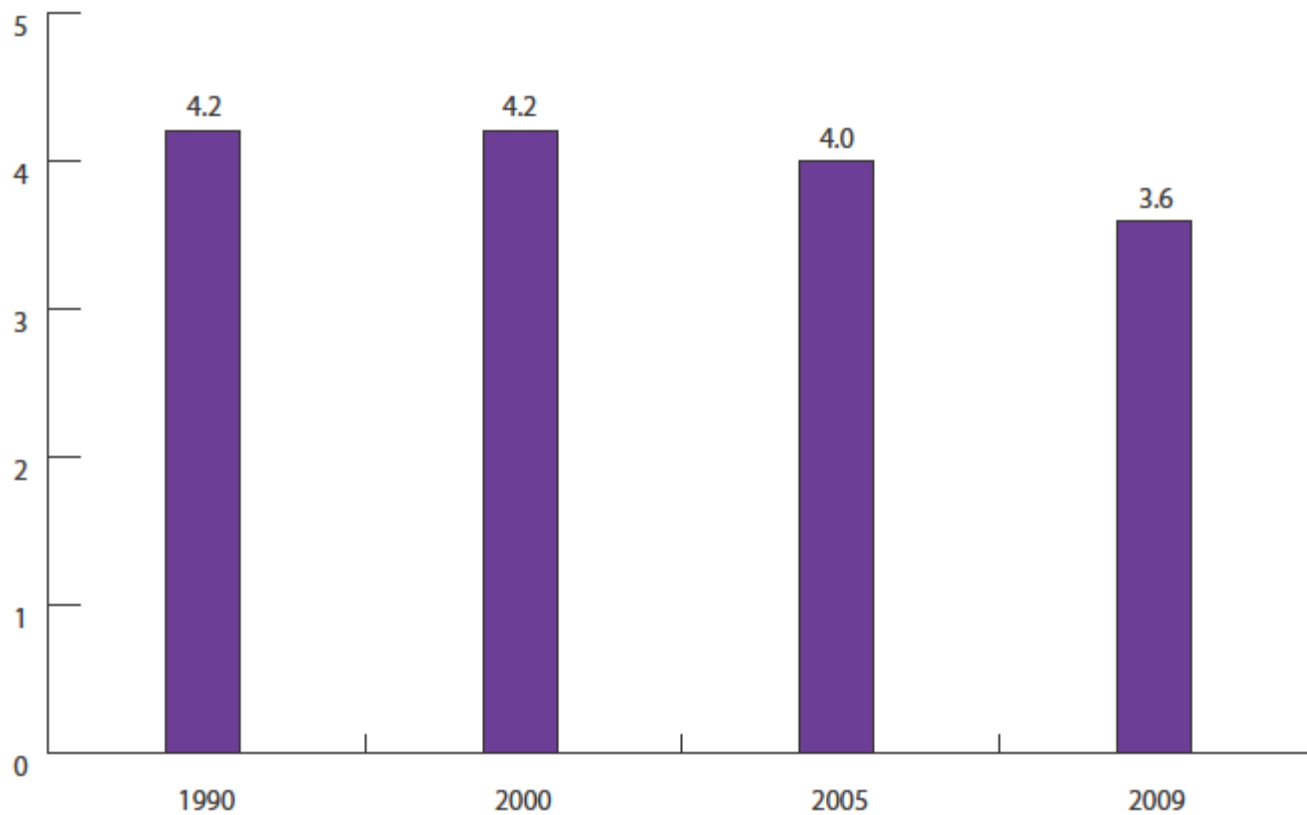


## HS GRADUATES HAVE BEEN TAKING FEWER CREDITS IN VOCATIONAL EDUCATION

- ⦿ Overall, high school graduates have been taking fewer credits in vocational education since 1990, according to data provided by National Center for Education Statistics (NCES).
- ⦿ High school graduates took an average of 4.2 credits in vocational education, and that average gradually dropped to 3.6 in 2009.

Conclusion: While there is no evidence that low- or middle-level jobs are less prevalent today than in prior years, it may not be wise policy to reduce vocational education.

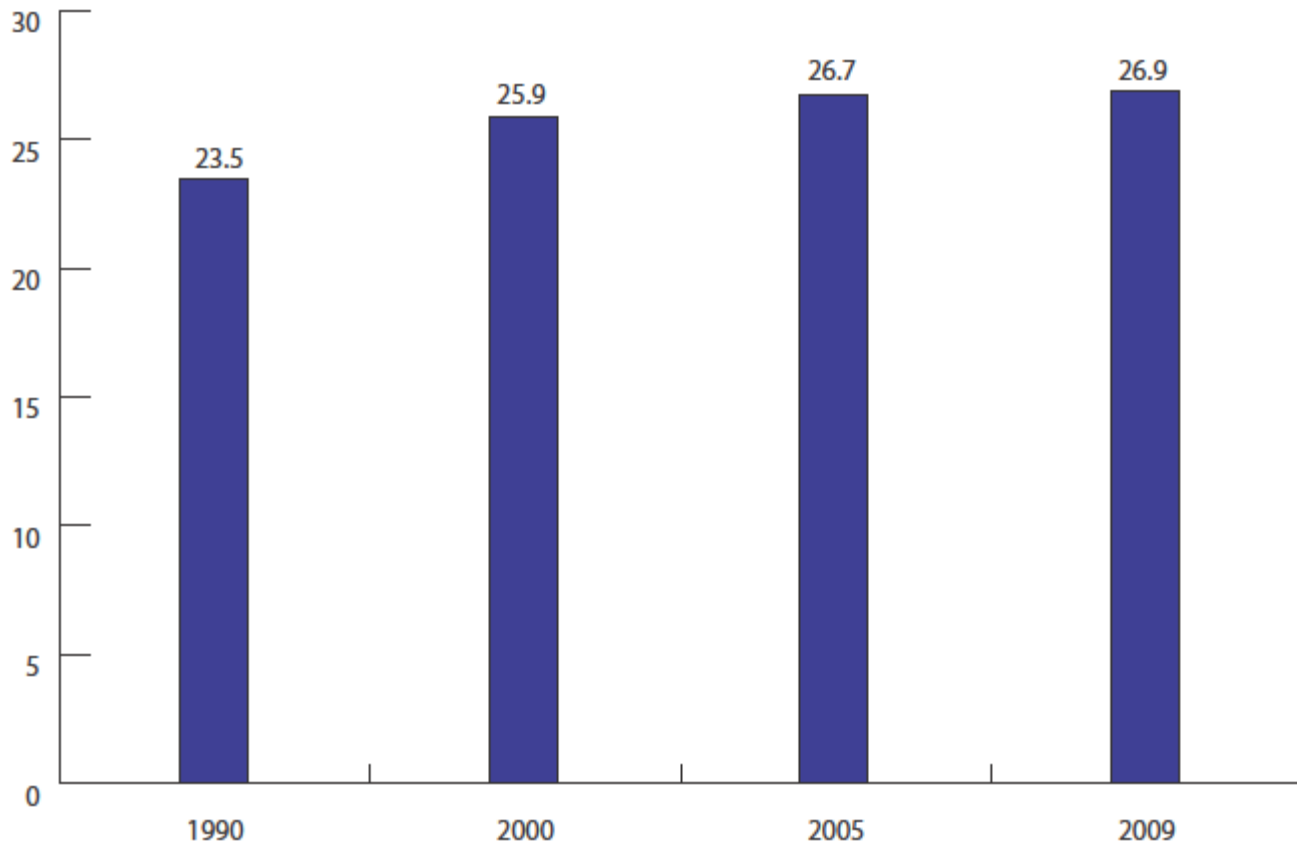
# HS GRADUATES HAVE BEEN TAKING FEWER CREDITS IN VOCATIONAL EDUCATION



# HS GRADUATES HAVE BEEN TAKING MORE ACADEMIC CREDITS

- ◉ By contrast, high school graduates have been taking more academic credits since 1990, according to NCES.
- ◉ High school graduates took an average of 23.5 academic credits in 1990. and the average increased steadily to 26.9 in 2009.

# HS GRADUATES HAVE BEEN TAKING MORE ACADEMIC CREDITS



# EXAMPLES OF QUALITY VOCATIONAL EDUCATION PROGRAMS

NEA Research has looked into the following three vocational education programs primarily by examining their websites, and characteristics of each program are being highlighted:

- ⦿ The Southeast Career Technical Academy in Clark County, Nevada;
- ⦿ The New Castle County VoTech School District in Delaware; and
- ⦿ The Greater New Bedford Regional Vocational Technical High School in Massachusetts.



# SOUTHEAST CAREER AND TECHNICAL ACADEMY

This school has been recognized as a high achieving vocational education school by the state of Nevada.

- ◉ The four-year high school offers 17 career and technical majors including architectural engineering, automotive technology, business and financial services, construction, computer programming/web design, culinary arts, graphic design, and health sciences.
- ◉ The school also provides internships and work study opportunities, helping students find an entry-level job immediately after graduation.
- ◉ Students can earn a high school diploma, in addition to career and technical certifications or professional licensure as well as college credits.
- ◉ Due to its success, the Clark County school district has decided to plan and construct four more similar vocational education academies.

# NEW CASTLE COUNTY VOTECH HIGH SCHOOLS

These are four technical schools that provide vocational-technical education to students in New Castle county, Delaware.

- These schools combine academic instruction, career trainings, and structured work experience designed to bridge the gap between classroom learning and workplace skills.
- Students visit a workplace so they can observe someone at work in a specific career field.
- Students are also paired with adult mentors who explain workplace norms and customs, provide caring and consistent support and guidance, and review students' progress.
- The schools provide paid and un-paid work experience structured to help demonstrate practical applications.
- The schools also provide a program that combines career and technical coursework with part-time paid work experience during the school year.
- Students can earn high school diploma, in addition to career and technical certifications or professional licensure.

# GREATER NEW BEDFORD REGIONAL VOCATIONAL TECHNICAL HIGH SCHOOL

This school provides vocational-technical education to students in the Greater New Bedford area, Massachusetts.

- Freshmen are enrolled in an exploratory program to be acquainted with the type of work and skills required to be successful.
- Students are then placed in permanent programs of two dozen career majors.
- Qualified students participate in the Co-Op program that allows them to work at a job within their chosen field during school, being paid by cooperating firms as regular employees at pay scales comparable to those of other entry-level workers performing similar tasks.
- The school has also served as a community center, with students helping construct animal shelters at the zoo and playing host to civil and cultural events such as job fairs and home and garden shows.
- Many of the graduates have gone on to become leaders in business and industry or in civil and political life in the region.

# APPENDIX DATA SOURCES

# DATA SOURCES

- 2000 Census, Census Bureau
- 2007 American Community Survey, Census Bureau
- 2008 American Community Survey, Census Bureau
- 2009 American Community Survey, Census Bureau
- *Average number of credits and percentages of total credits earned by public high school graduates: 1990, 2000, 2005, and 2009*, National Center for Education Statistics, 2011
- *College Enrollment and Work Activity of 2010 High School Graduates*, Bureau of Labor Statistics, 2011
- Web site of the Greater New Bedford Regional Vocational Technical High School in Massachusetts (<http://www.gnbvt.edu/>)
- Web site of the National Center for Higher Education Management System (<http://higheredinfo.org/>)
- Web site of the New Castle County VoTech School District in Delaware (<http://www.nccvotech.com/>)
- Web site of the Southeast Career Technical Academy in Clark County, Nevada (<http://swcta.net/>)