

**WASHINGTON STATE
WORKFORCE TRAINING AND EDUCATION COORDINATING BOARD
MEETING NO. 143
NOVEMBER 19, 2009**

GAP ANALYSIS OF OVERALL SUPPLY & DEMAND - MID-LEVEL JOBS

This is the annual review of the potential for gaps between the supply and demand for workers with mid-level skills.

This presentation analyzes the aggregate - or overall - supply and demand, across all mid-level occupations. Separate analyses for specific high-demand fields will be available in the coming months.

Given the unusual conditions prevailing across labor markets during this major recession, relevant policy questions may include:

How can we ensure an adequate supply of workers in the near-term for those few occupations in which unmet demand continues despite the recession?

How can we be efficient in using limited resources to support training at a time when the opportunity cost of training is very low, both to workers and to society?

What strategy is needed during the recession to shape training capacity and the skills training of current participants to be prepared for economic recovery by:

- Meeting the demand for workers in areas that will have substantial growth in the recovery
- Avoiding excess workforce and capacity for fields that will not recover to their former share of the economy

Board Action Required: None. For discussion only.

Background

The Workforce Board staff annually prepares an updated forecast of the supply and demand for “mid-level” workers, focusing on the question of how many additional or “new” workers are likely to be needed. The definition of “mid-level” occupations is derived from the federal Bureau of Labor Statistics (BLS) categorization of “Level 2” jobs, as those requiring more than a year of post-high school training or education, but less than a bachelor’s degree. Most jobs requiring sub-baccalaureate credentials are in this category.

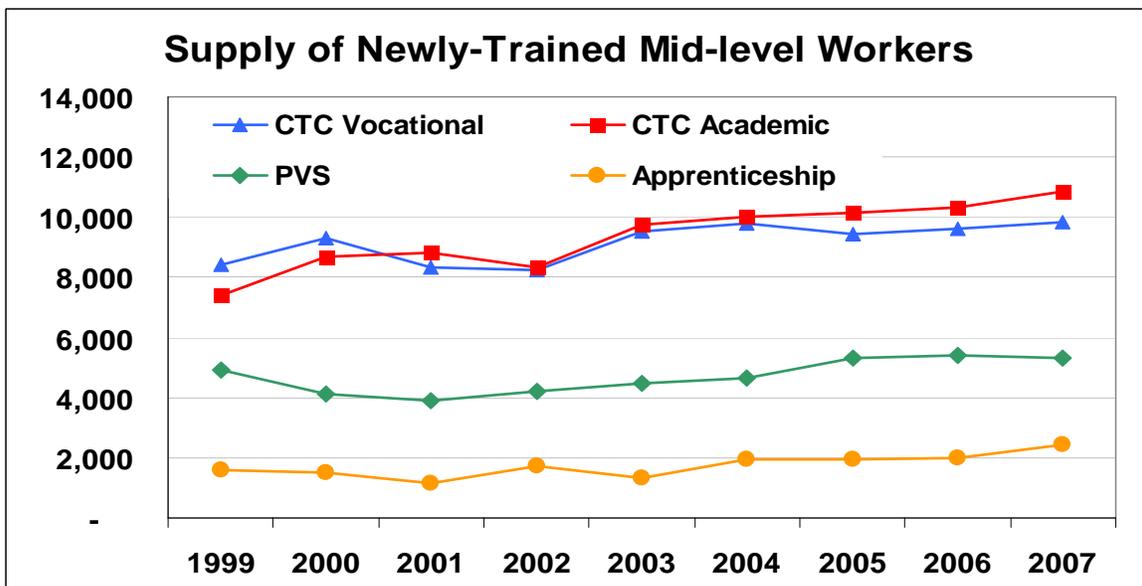
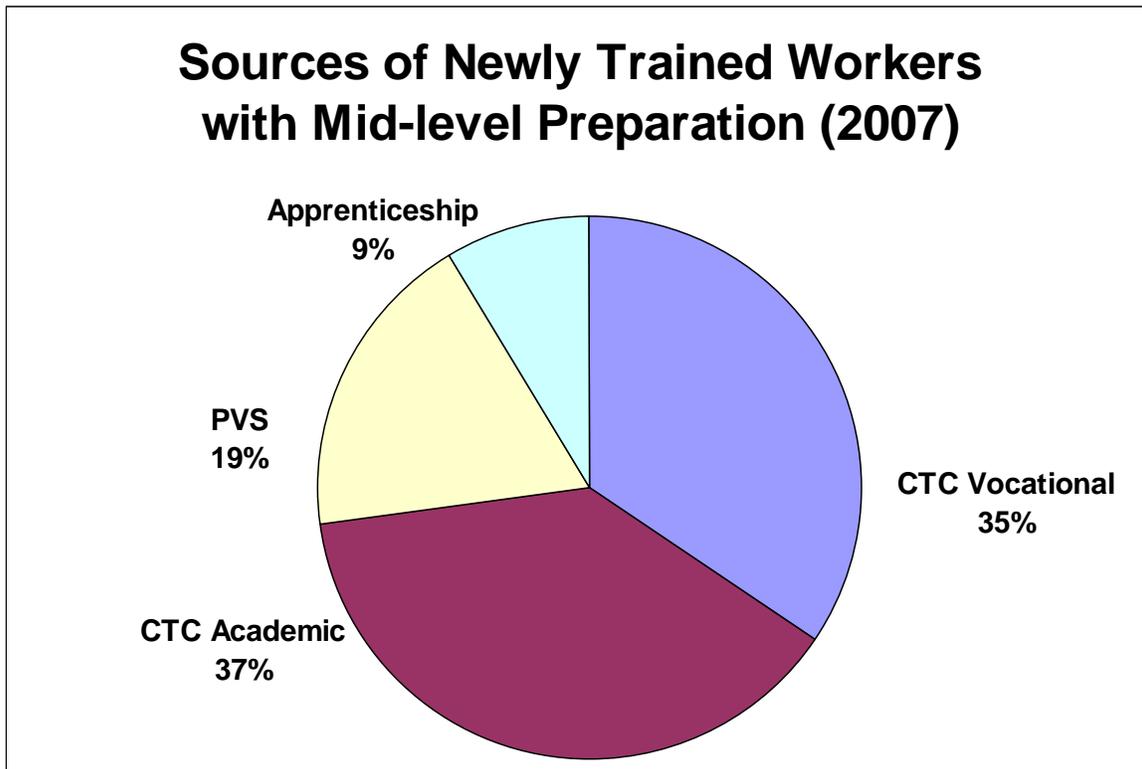
The forecast is prepared at an overall or aggregate level, for the summed demand across all mid-level occupations and the sum of the supply of additional workers across all types of mid-level training who come out of the state’s education and training system during the year and do not proceed to further education.

The supply data is based on counts of participants leaving training programs in Washington state with “mid-level” training, such as Apprenticeship programs, programs at the Community and Technical Colleges (CTCs), and Private Vocational School (PVS) programs. The demand data is derived from BLS forecasts of projected “net openings” for mid-level jobs in Washington. “Net openings” is the best available series that approximates how many “new” workers will be needed in an occupation. Two ways of thinking about what the “net openings” count represents:

Net openings for any given occupation is the sum of increase in jobs plus the number of workers in that occupation who leave the workforce—such as through retirement.

Technically, it is the number of openings minus the number of those openings that are filled by someone already working in that occupation.

What's Included in Supply



Not included are CTC academic students who transfer to other institutions.*

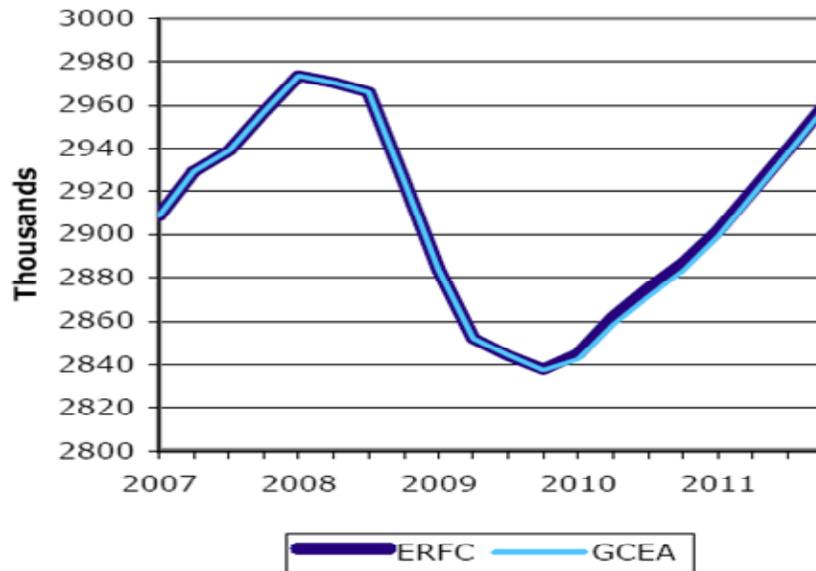
* There are also a significant number of students who leave baccalaureate programs before completion who meet the requirements for some mid-level occupations. However, for both non-transferring Academic CTC students and baccalaureate non-completers, there is an imperfect match between skills acquired and the majority of mid-level openings. As in prior estimates, the total number of CTC Academic non-transfers is included but not the number of baccalaureate non-completers.

Employment During the Great Recession

Employment graphs from both the Economic & Revenue Forecast Council and the Governor's Council of Economic Advisors show a significant drop in total employment, followed by a recovery process stretching out over several years.

Washington Forecast Comparison

Nonfarm Payroll Employment



Almost by definition, recessions are marked by near-term oversupply of labor, at least in some sectors. In a recession of this magnitude, labor oversupply can be expected to exist in most occupations, across high, middle, and low skill levels.

Even a fairly modest sustained decline in employment results in a sharper increase in the unemployment rate, as the workforce continues to expand with population growth. This effect is further magnified in the decline in net job openings, as retirements also decline.

The Mid-Level Gap

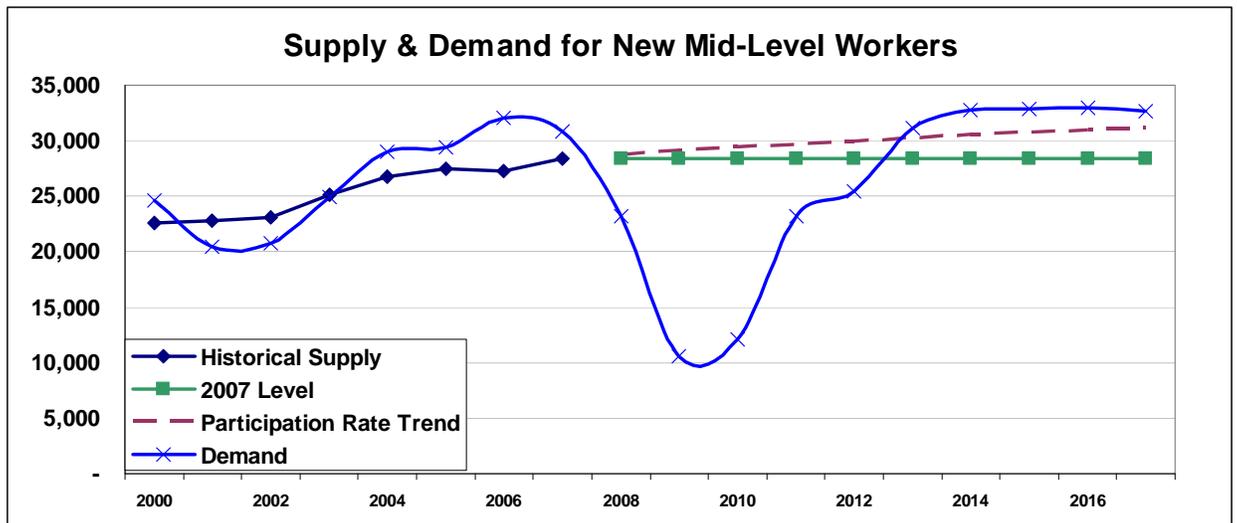
It is not surprising that, like the overall labor market, the market for mid-level workers is in temporary recession- induced oversupply.

The demand line shows a year-by-year estimate of projected annual net openings. It is developed by combining multi-year forecasts of net openings in Washington by occupation with a forecast of annual civilian employment in Washington.

Two different projected supply lines are shown.

A continuation of recent levels of per capita participation in training, using forecasts of population growth by age group. This is approximately the trend line of recent supply growth. This would require proportionate increases in public funding support. Some components of supply, such as PVS are significantly outside of public policy.

Limiting supply at current output levels.



The data indicate that demand will again exceed supply in the late stages of recovery, under either projection of supply growth.

There is an element of optimism in this prediction, because the model used does not carry over an accumulation of unemployed or under-employed workers from the recession.

At the end of the recovery, a gap between the number of newly trained workers and net job openings can be expected to reappear. This table shows the forecasted size of the gap between demand and the level of supply, if supply is not increased beyond the 2007 level.

Year	Supply	Demand	Demand Met	Demand Met, 6-year Forward	Mid-Level Gap, 6-year Forward
2000	22,600	24,600	92%		
2001	22,800	20,500	111%		
2002	23,100	20,800	111%		
2003	25,100	24,900	101%		
2004	26,800	29,000	92%		
2005	27,500	29,400	94%		
2006	27,300	32,000	85%		
2007	28,400	30,800	92%		
2008		23,200			
2009		10,600			
2010		12,100			
2011		23,200			
2012		25,400			
2013		31,100		92%	8%
2014		32,800		88%	12%
2015		32,900		88%	12%
2016		33,000		89%	11%
2017		32,700		91%	9%
2018		32,200		93%	7%
2019		32,500		93%	7%
2020		33,000		92%	8%
2021		33,300		92%	8%
2022		33,600		92%	8%

Where Mid-Level Job Openings Will Be Rising and Falling

The following lists show the mid-level occupations with the largest increase in the number of net job openings, comparing 2007-2012 to 2012-2017.

OCCUPATIONAL TITLE	Annual Average Openings 2007-2012	Annual Average Openings 2012-2017	Increase
Carpenters	0	2,028	2028
First-Line Supervisors/Mgrs of Construction Trades & Extraction Workers	0	775	775
Registered Nurses	1,787	2,288	501
First-Line Supervisors/Mgrs of Office & Administrative Support Workers	555	1,045	490
First-Line Supervisors/Mgrs of Production & Operating Workers	4	288	284
Teacher Assistants	897	1,176	279
Cement Masons and Concrete Finishers	13	272	259
First-Line Supervisors/Managers of Retail Sales Workers	767	1,012	245
Maintenance and Repair Workers, General	146	384	238
Electricians	489	706	217
Welders, Cutters, Solderers, and Brazers	74	284	210
Plumbers, Pipefitters, and Steamfitters	297	477	180
First-Line Supervisors/Mgrs of Mechanics, Installers, & Repairers	183	333	150
Computer Support Specialists	511	657	146
Structural Iron and Steel Workers	32	170	138
Machinists	18	156	138
Industrial Machinery Mechanics	88	222	134
First-Line Supervisors/Managers of Non-Retail Sales Workers	303	429	126
Teachers and Instructors, All Other	554	676	122
Automotive Service Technicians and Mechanics	253	374	121
Fire Fighters	354	466	112
First-Line Supervisors/Mgrs of Food Preparation & Serving Workers	163	271	108
Managers, All Other	563	669	106
Police and Sheriff's Patrol Officers	292	397	105
Paralegals and Legal Assistants	199	299	100

This second list shows occupations with the largest declines in net job openings.

Ten Occupations with Declining Demand for Mid-Level Workers			
OCCUPATIONAL TITLE	Annual Average Openings 2007-2012	Annual Average Openings 2012-2017	Decline
Hairdressers, Hairstylists, and Cosmetologists	653	470	-183
Massage Therapists	257	156	-101
Cooks, Institution and Cafeteria	351	275	-76
Library Technicians	208	153	-55
Cooks, Restaurant	796	770	-26
Forest and Conservation Technicians	99	82	-17
Manicurists and Pedicurists	108	92	-16
Barbers	12	0	-12
Semiconductor Processors	47	37	-10
Skin Care Specialists	31	24	-7

Further analysis in progress will provide projections of occupation-specific supply and demand relationship for a number of high demand occupations such as health care.