

**WASHINGTON STATE  
WORKFORCE TRAINING AND EDUCATION COORDINATING BOARD  
MEETING NO. 172  
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**SKILLS GAP RESEARCH IN WASHINGTON**

This tab includes a brief paper summarizing the major studies of skill gaps in Washington and the key findings. The paper includes only studies that are statewide in scope.

**Board Action Requested:** For discussion only.

## SKILLS GAP RESEARCH IN WASHINGTON

A summary of key research and findings on the projected shortfall between employers demand for skilled workers and the supply of Washington workers with the required education and training.

This paper briefly summarizes three types of research on skills gaps in Washington:

- I. Quantitative comparisons of the annual supply of newly educated/trained workers vs. the annual number of job openings.
- II. Reports on how employers view the skills and qualifications of job applicants and new employees.
- III. Job vacancy information.

The paper is limited to statewide research and does not cover studies of local areas of the state.

### **I. Quantitative Comparisons of the Annual Supply of Newly Educated/Trained Workers vs. the Annual Number of Job Openings**

This type of research examines whether Washington is supplying the number of new graduates of education/training per year to keep up with employer demand.

**“A Skilled and Educated Workforce”** - Washington Student Achievement Council, the State Board for Community and Technical Colleges, and the Workforce Training and Education Coordinating Board. This biennial study analyzes the gap between the number of postsecondary students graduating each year in Washington and the number of net job openings expected for them. (Net job openings are openings due either to employment growth or retirements. Demand is estimated four to nine years into the future and is based on “Washington Occupation Employment Projections” by the Employment Security Department.) The analysis is broken down by three levels of education/training: the mid-level (one year up to but less than four years of postsecondary education/training), baccalaureate, and graduate/professional; and by major categories of programs of study.

#### **Key Findings:**

- If Washington were to supply in-state the number of graduates required to fill net job openings in Washington, it would require an additional 9,000 to 10,000 graduates per year at each of the three levels of postsecondary education/training (mid-level, baccalaureate, and graduate/professional).
- At the mid-level, the programs of study for which there is a substantial gap between the annual supply of graduates and employer demand are: installation, maintenance and repair (1,770); manufacturing and production (1,120); accounting and bookkeeping (600); protective services (760); and health professions (370).
- At the baccalaureate level, the programs of study for which there is a substantial gap between the annual supply of graduates and employer demand are: computer science (1,170), engineering (660), health professions (400), physical sciences (150), and life sciences (100).

- At the graduate/professional level, the programs of study for which there is a substantial gap between the annual supply of graduates and employer demand are: health professions (750), computer science (700), engineering (440), life sciences (360), human and protective services (240), and physical sciences (200).

**“Health Care Personnel Skills Gap Analysis”** - Workforce Training and Education Coordinating Board. This study is similar in methodology to “A Skilled and Educated Workforce,” but focuses on a more detailed analysis of health care occupations that require one year or more of postsecondary education/training.

**Key Findings:**

- The health care occupations (requiring at least one year of postsecondary education/training) with the largest gap between supply and demand are: home health aides (378), physicians and surgeons (372), vocational rehabilitation counselors (368).

**“Aerospace Manufacturing Skills: Supply, Demand and Outcomes for Washington’s Aerospace Training Programs”** - Workforce Training and Education Coordinating Board and State Board for Community and Technical Colleges. In addition to other topics, this newly required study will examine supply and demand for aerospace workers (at the mid-level).

**II. Reports on How Employees View the Skills and Qualifications of Job Applicants and New Employees**

This type of research examines employers’ experiences in hiring new workers in order to provide insight regarding skill gaps in the labor market; for example, what type of skills do employers have difficulty finding in job applicants.

**“Washington Employer Survey: A Survey of Employer Needs and Practices”** - Workforce Training and Education Coordinating Board. This biennial study is based on a mass survey of employers in Washington (approximately 3,000 respondents). In the results, each employer is counted equally, no matter if they employ 10 people or 1,000 people.

**Key Findings:**

- In 2012, with unemployment still very high, 11 percent of Washington employers reported difficulty finding qualified job applicants (21 percent of employers that attempted to hire reported difficulty).
- The type of skills that employers were most likely to report difficulty finding were job specific (technical skills). Next, they were most likely to report difficulty finding “soft” or general “employability” skills such as problem solving, good work habits and attitudes, and communication skills.
- The education levels that employers were most likely to report difficulty finding in job applicants were vocational certificates and degrees, and bachelor degrees.

**“Washington State Centers of Excellence: Addressing Skill Gaps, Creating Careers”** - Association of Washington Business Institute. This report is based on 10 industry skills gap forums hosted by the Centers of Excellence in 2013, and attended by more than 100 employers.

There are 10 Centers of Excellence distributed among Washington's 34 community and technical colleges. The Centers of Excellence focus on a variety of target industries that drive the state's economy.

**Key Findings:**

- “All workforce programs should include a focus on employability skills.”
  - “College programs need to focus on developing leadership and management skills as identified by key industries.”
  - “Employees must embrace lifelong learning and participate in continued professional development...”
  - “Technical skills are critical across all industries.”
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### **III. Job Vacancy Information**

This type of research looks at job openings that are vacant in order to obtain information on employer demand that is left unfilled. In any economy there will be some job openings that are vacant as employees switch from one job to another, but some jobs go vacant because employers have difficulty finding qualified applicants. These latter vacancies are likely to require some form of postsecondary education/training.

**“Job Vacancy and Hiring Survey Report”** - Employment Security Department. Twice a year, the Employment Security Department surveys Washington employers about their jobs that are vacant and about new hires. For the most recent survey (Fall 2012) 5,000 employers responded.

**Key Findings:**

- The occupations requiring postsecondary education/training that have the largest number of job vacancies are: registered nurse (1,599), nursing assistant (1,526), aerospace engineer (1,267), business operations specialist (1,008), carpenter (819), and software developer (772).
- The industry sectors with the largest number of job vacancies are: healthcare and social assistance (12,548), agriculture/forestry/fishing (8,674), and manufacturing (8,204). There are 1,150 vacancies in the information sector.
- Two percent of the vacancies (1,620) require a graduate or professional degree, 13 percent (9,434) require a bachelor's degree, 9 percent (6,456) require an associate's degree, and 6 percent (3,905) require some postsecondary education/training but not a degree.

**“Great Jobs Within Our Reach”** - The Boston Consulting Group and the Washington Roundtable. This study is based on data from the “Job Vacancy and Hiring Survey Report,” data from Roundtable member companies, “A Skilled and Educated Workforce,” and “Washington Occupation Employment Projections” by the Employment Security Department.

**Key Findings:**

- There are approximately 25,000 “acute” job vacancies that have been open for three months or more due to a lack of qualified candidates. Some 80%, or 20,000 vacancies are for “highly skilled” science, technology, engineering, math, or health care occupations.
- The number of acute job vacancies is likely to reach 50,000 by 2017.