

***Improving the Odds:
Preparing Washington's Students for Family-Wage Jobs***

Research Approach and Methodology

Background

To inform the *Improving the Odds* report of the College and Work Readiness Agenda, Partnership for Learning (PFL) sought data on the skills necessary to attain a job paying a wage sufficient to support a family in Washington State in the next several years. This research involved three main questions:

- What is a “family wage” in Washington State?
 - How does the family wage differ by region?
- Which jobs pay this wage?
- What education levels are necessary to obtain a job paying at least this wage?

PFL contracted with Education First Consulting (EFC) to prepare the *Improving the Odds* report and with the Washington State University Social and Economic Sciences Research Center (SESRC) to answer these questions. Jennifer Vranek and Jessica de Barros of EFC were the primary authors of the report and conducted secondary research; David Pavelchek led the primary research with John Peca-Medlin and Kyra Kester of SESRC.

Determining a Family Wage in Washington State

To determine a family wage in Washington State, PFL and SESRC jointly decided to use the living wage standards developed by the University of Washington's Northwest Policy Center for the Job Gap Study in 1999. SESRC researchers inflated the living wage levels from the Job Gap study's 2004 update to 2006 dollars.

To account for differences in family wages by region across Washington State, SESRC used regional cost-of-living differentials from the Pearce-Brooks Self-Sufficiency standards developed by Dr. Diana Pearce and Jennifer Brooks of the University of Washington. The Washington State Office of Financial Management (OFM) uses the Pearce-Brooks standards to calculate regional differences in cost-of-living, as well.

Using this methodology, the average family wage for Washington State calculated by SESRC for the *Improving the Odds* report is \$22.29 per hour (or \$46,372 for a household of three with one working adult, one preschool-age child and one school-age child) and \$12.73 per hour per worker assuming two workers in a household (or \$52,966 for a household of four with two working adults and two school-age children). SESRC then adjusted for regional differences to compute living wage levels within Washington State for the seven Workforce Development Areas (WDAs) used in the federally-funded Workforce Development system. The family wages calculated for each Washington region are shown in the following table. These hourly rates assume full-time, year-round work.

Family Wages for Households in Washington State Regions		
Workforce Development Areas By Region	Income 1 Working Adult with 1 Preschool-Age Child & 1 School-Age Child	Income 2 Working Adults with 2 School-Age Children
King and Snohomish Counties	Hourly: \$25.24 Annually: \$ 52,509	Hourly Per Worker: \$13.73 Annual Total: \$ 57,097
Pierce County	Hourly: \$23.04 Annually: \$ 47,916	Hourly Per Worker: \$13.64 Annual Total: \$56,745
NW and SW Workforce Development Areas	Hourly: \$21.48 Annually: \$44,676	Hourly Per Worker: \$12.52 Annual Total: \$52,075
Olympic and Pacific Mountain	Hourly: \$19.18 Annually: \$39,893	Hourly Per Worker: \$11.00 Annual Total: \$45,766
Spokane	Hourly: \$20.07 Annually: \$41,750	Hourly Per Worker: \$11.98 Annual Total: \$49,819
Eastern and North/Central WA	Hourly: \$18.20 Annually: \$37,846	Hourly Per Worker: \$11.19 Annual Total: \$46,563
Tri Cities and Yakima	Hourly: \$18.72 Annually: \$38,928	Hourly Per Worker: \$11.64 Annual Total: \$48,429
State Average	Hourly: \$22.29 Annually: \$46,372	Hourly Per Worker: \$12.73 Annual Total: \$52,966

This family wage standard is higher than the federal poverty level, which specifies a very low family income and is used as basic eligibility for many public benefits. This family or living wage is also slightly higher than the level of poverty that OFM considers “economic distress,” which is 200 percent of the federal poverty level. It includes basic necessities such as:

- Food;
- Housing and utilities;
- Child care;
- Health care;
- Household, clothing and personal items;
- Taxes; and,
- Some savings.

The family wage assumes workers are covered by employer-paid health care, but also assumes families are responsible for paying typical employee premiums, co-pays and other unpaid health expenses. Overall, the family wage used by SESRC constitutes a wage that allows a family to live frugally, and to save for some emergencies, but does not include many of the expenses considered normal for participation in middle class activities, such as eating out in restaurants, a cell phone, Internet access, cable television, or enrichment activities for children. This wage level also leaves the family vulnerable to major or multiple emergencies or reduced hours.

Identifying Jobs That Pay a Family Wage

After the family wages for each Washington WDA were determined, SESRC next obtained occupational projection data from the state Employment Security Department for 2004 through 2014. This decade is the longest period for which the state Employment Security Department makes detailed projections by occupation. SESRC conducted this analysis by identifying the total number of net job openings from 2004-2014 (newly-created jobs, with and without jobs open due to retirement) in all occupations that on average pay a family wage (in 2006 dollars). The occupational classifications used were defined by the national system maintained by the U.S. Department of Labor, Bureau of Labor Statistics.

The occupations were then ranked highest to lowest by the average annual number of job openings each occupation was projected to have between 2004 and 2014. This process was conducted separately for each of the seven regions in Washington State.

Net Job Openings vs. Growth Rate

The concept of average annual job openings (either “net openings” or “openings due to growth”) is different from “high job growth,” which usually refers to the number of jobs in occupations growing at the fastest rate (often referred to as “fastest-growing jobs”). The fastest-growing jobs indicate the direction in which the economy is shifting.

For the purposes of the CWRA study, SESRC strongly recommended estimating the number of job openings (due to both net openings and growth), instead of the fastest-growing occupations. Since the numbers of jobs within each occupation in each region of Washington State are relatively low, the researchers believed fast-growing jobs measured by the growth rate alone could misrepresent occupational demand. For example, if an occupation currently has a very small number of jobs, yet the number of jobs is expected to double between 2004 and 2014, this occupation could be considered one of the fastest-growing in a particular region – even though the total number of openings would still be very low, and other slower-growing jobs could have many more openings.

The methodology looks at openings in two ways: openings due to growth and total net openings. This shows how the picture changes between a pure growth perspective focused on new and expanding industries, and one that includes the openings created by the retirement (of baby-boomers, for example), and mid-life changes in occupation.

PFL determined that showing both average annual numbers of job openings (growth openings and growth plus net turnover openings) would capture a fuller picture of projected employment and be more representative of Washington’s economy.

Education Levels Needed to Obtain Family-Wage Jobs

After determining the jobs that are projected to pay a family wage in 2014, SESRC identified the education levels associated with these jobs. The distribution of education levels was defined by the percentages of current workers, ages 25-44, in each occupation, with education levels of “high school or below,” “some college,” or “bachelor’s degree.” These data are collected by the U.S. Department of Labor Bureau of Labor Statistics (BLS). SESRC then applied these

percentages to the numbers of family-wage jobs in each occupation in Washington State to estimate the education levels necessary to obtain family-wage jobs through 2014.

The research team carefully considered how apprenticeships and other job training fit into the education level categories. All Washington State apprenticeships require at least 144 hours per year of classroom education, which is often taught in community or technical colleges. In Washington, such apprenticeship training is usually reported as “some college.” However, each state defines apprenticeships and job training differently; there is no nation-wide standard. Since this report uses national BLS data compiled from all states across the country, it is unclear whether apprenticeship training is included in the “some college” category across-the-board. For example, in Washington State apprenticeship programs for electricians require rigorous math education taught in the classroom, which is clearly “some college,” yet the national BLS data show only 48.6 percent of electricians nation-wide have some college or a bachelor’s degree. Actually, the number could be much higher if apprenticeships and other classroom-based job training were included.

In addition to collecting information on the education levels of current workers in each occupation, BLS assigns a “most significant source of postsecondary education or training” for workers in each occupation. These include categories such as “short-term on-the-job training,” “long-term on-the-job training,” “bachelor’s degree,” “postsecondary educational award,” and others. SESRC believed the education levels of current workers more precisely described the distribution of relevant education levels attained than the assigned “most significant source.”

Which Jobs Pay a Family Wage?

The following table shows the number and percentages of projected job openings - both those due only to job creation (“growth”), and projected total “net openings” due to both job creation and “separations (retirements and career changes) - for those occupations that on average pay a family wage, with the percentages of current workers whose education levels are high school or less (HS), some college (SC) and bachelor’s/college (C). For example, of the projected net job openings in 2014 in occupations that will on average pay a family wage for a one-worker household, 23% of current workers have a high school diploma or less (HS), 26% have some college (SC), and 52% have a bachelor’s degree.

Education Levels of Workers in Projected 2014 Jobs Paying a Family Wage						
	Openings Due to Growth			Net Openings		
	HS	SC	C	HS	SC	C
1-Worker Household	22%	25%	53%	23%	26%	52%
	4,262	4,951	10,307	9,362	10,591	21,235
2-Worker Household	36%	29%	34%	37%	30%	33%
	15,112	12,265	14,338	34,247	27,354	30,480

The next table shows the same numbers and percentages of projected job openings (both growth only and net openings) for the occupations that do NOT pay a family wage on average, with the education levels of current workers. There are much higher percentages of workers with an

education level of high school or less (54% for a one-worker household), and much lower percentages of workers with college (15% for a one-worker household).

Education Levels of Workers in Projected 2014 Jobs Paying <u>Less</u> Than Family Wage						
	Openings due to Growth			Net Openings		
	HS	SC	C	HS	SC	C
1-Worker Households	54%	30%	15%	56%	30%	15%
	19,393	10,826	5,543	50,639	27,010	13,554
2-Worker Households	63%	26%	11%	64%	25%	11%
	8,544	3,512	1,511	25,755	10,246	4,309

It is important to recognize the limitations to the methodology of estimating education levels necessary to obtain family wage jobs. First, education levels of current workers in a given occupation are not necessarily the same as the education levels required to enter an occupation, either now or in the future. The entry requirements in the future could be higher than the education levels of current workers due to changing skill demands. Likewise, the entry requirements could be lower than the average education levels of current workers because some may have been “over-qualified” when hired, and others may have upgraded their education since they entered the occupation. The difference between education levels held by current workers and actual entry requirements is unknown based on this analysis. SESRC decided to use the education levels of current workers, as opposed to actual education levels required to enter occupations, because the entry requirements were not available from the BLS. However, it is a reasonable assumption that the education levels of current workers are the best indicator of what is necessary to competitively enter each occupation and be able to advance within the occupation.