Student Participation and Postsecondary Outcomes: Entry-Level Aerospace Assembler Training and Enhanced Manufacturing Skills Programs

Report prepared by the Washington State Office of Financial Management as directed by RCW 28A.700.100 and RCW 28A.700.110

2016 Annual Report

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Background

The Washington Office of Superintendent of Public Instruction (OSPI) awards start-up grants to high schools and skills centers to implement training programs in aerospace assembly and enhanced manufacturing skills. The one-time awards may be used to purchase or improve course curriculum, purchase course equipment and support professional development for program teachers[1].

In 2013, 10 high schools received Entry-Level Aerospace Assembler Training program grants and two secondary skills centers received grants for Enhanced Manufacturing Skills programs.

Schools and skills centers receiving program grants in 2013 are shown in Table 1. Also shown in Table 1 are the Classification of Instructional Programs (CIP) codes corresponding to the programs implemented at each school. These are broad categories and may include a variety of specific classes in addition to those related to the programs studied here.

Table 1: Aerospace assembler training/enhanced manufacturing skills program grant recipients, 2013

District code	School code	School district	School	CIP code	CIP title
Aerospace assembler training programs					
17408	2795	Auburn	Auburn High School	48.0503	Machine Shop Technology/Technician
18100	3109	Bremerton	Bremerton High School	14.9992	Engineering Design 2
18401	2615	Central Kitsap	Central Kitsap High School	15.0613	Manufacturing Technology/Technician
19401	2996	Ellensburg	Ellensburg High School	01.0201 46.0100	Agricultural Mechanization, General Architecture and Construction Foundations
27003	4540	Puyallup	Emerald Ridge High School	15.0801 15.1301 49.0102	Aeronautical and Aerospace Engineering Technology Drafting and Design Technology General Airline/Commercial Pilot and Flight Crew
17216	3330	Enumclaw	Enumclaw High School	48.0508	Welding Technology
06037	2179	Vancouver	Ft. Vancouver High School	48.0508	Welding Technology
27402	2876	Franklin Pierce	Franklin Pierce High School	14.9992	Engineering Design 2
17403	3741	Renton	Lindbergh High School	48.0701	Woodworking Foundations
31201	2428	Snohomish	Snohomish High School	15.0613 47.0000 48.0503	Manufacturing Technology/Technician Manufacturing Foundations Machine Shop Technology/Technician
27403	4158	Bethel	Spanaway Lake High School	47.0000	Manufacturing Foundations
13073	4254	Wahluke	Wahluke High School	15.0613	Manufacturing Technology/Technician
Enhanced manufacturing skills programs					
29320	5960	Mount Vernon	Northwest Career and Technical Academy	47.0616	Marine Maintenance and Ship Repair Technology/Technician
32356	5278	Central Valley	Spokane Valley Skill Center	15.0613	Manufacturing Technology/Technician

[1] RCW 28A.700.100 established the Entry-Level Aerospace Assembler Training Program. RCW 28A.700.110 established Enhanced Manufacturing Skills Programs. Background information from OSPI is available at www.k12.wa.us/legisgov/2012documents/aerospaceadvancedmanufacturing.pdf.

The Education Research and Data Center (ERDC) in the Office of Financial Management is directed to collect student participation and completion data for grant-recipient high schools and skills centers and to follow students to employment or further training and education in the two years following the students' completion of the program. ERDC is to report the findings "to the governor, the office of the superintendent of public instruction, other appropriate state agencies, and the appropriate education and fiscal committees of the legislature."

Complete two-year postsecondary enrollment and employment follow-up for aerospace assembler and enhanced manufacturing skills students who left high school in 2013 will be possible in the 2017 annual report. This report updates postsecondary enrollment follow-up and includes employment outcomes for the first full calendar year after high school exit.

Preliminary postsecondary follow-up (updated from 2015 report)

One year of postsecondary education data follow-up is available for program participants who exited high school in 2013. Included in the postsecondary enrollment data are enrollments in the state's community and technical colleges (CTCs), Washington public four year institutions, in-state private institutions and out-of-state institutions. Table 2 shows the college-going rates by high school grade point average (GPA) for the 2013 high school exiters. Overall, 50–54 percent of those enrolled in postsecondary education in 2013 enrolled in a Washington CTC. The CTCs dominate enrollment for all GPA categories except for the highest — 3.50 to 4.00 — where more than 50 percent of students enrolling are in one of Washington's public four-year institutions and more than 80 percent are enrolled in either a Washington public four-year institution or a private or out-of-state institution.

Table 2: One-year postsecondary follow-up for cohort 1 2013 high school exiters

GPA category	College-going rate (2013-14)	Share of college enrollment		
		Washington CTC	Washington public four-year	Private or out-of-state institution
3.50-4.00	70-74%	*	*	*
3.00-3.49	55-59%	50-59%	*	*
2.50-2.99	40-44%	60-69%	*	*
<2.50	25-29%	80-89%	*	*
Total	40-44%	50-54%	25-29%	15-19%

*Suppressed due to small cell size.

Preliminary employment characteristics for 2014 (one-year follow-up)

Approximately 110 high school graduates who participated in aerospace assembler or enhanced manufacturing skills students were employed in 2014. Table 3 shows the median earnings of the graduates by postsecondary enrollment status and by the number of calendar quarters in 2014 in which they were employed. Individuals earning at least $100 in a quarter are considered employed. Individuals working at least 30 hours per week are considered to be employed full-time.

Table 3: Earnings in 2014 by employment status

Enrollment status	Number of exiters (rounded)	Share of exiters	Median earnings (rounded)
Employed	110	100%	$8,700
Employed 4 quarters	50		$18,000
Not enrolled	60	58%	$12,600
Employed 4 quarters	40		$20,600
Enrolled	40	42%	$7,400

Note: Totals may not add due to rounding.

Many factors are in play in assessing employment outcomes, particularly for a group where many members are combining work with postsecondary enrollment. Table 3 shows that the median earnings of all employed aerospace/enhanced manufacturing exiters in 2014 was approximately $8,700. For those not enrolled in postsecondary education, median earnings were $12,600. Adding the number of quarters worked into the equation illustrates the obvious: Those working all four quarters in 2014 had significantly higher earnings than those working fewer quarters and those working full-time for all four quarters had even higher earnings.

2017 and 2018 annual reports

The 2017 annual report will be the final report for 2013 high school exiters completing entry-level aerospace assembler training and enhanced manufacturing skills programs, including complete descriptions of participant characteristics in high school and a full two-year postsecondary education and employment follow-up.

The 2018 annual report will be the final report for 2014 high school exiters completing entry-level aerospace assembler training and enhanced manufacturing skills programs.