



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 (entry-level aerospace assembler training program) and RCW 28A.700.110 (enhanced manufacturing skills programs)

2015 Annual Report

Forecasting and Research Division
Office of Financial Management
August 2015

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

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 2012–13, 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 2012–13 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, 2012–13

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

The Education Research and Data Center (ERDC) in the Office of Financial Management (OFM) is directed to collect student participation and completion data for grant-recipient high schools and

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.

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 superintendent of public instruction, other appropriate state agencies, and the appropriate education and fiscal committees of the legislature.”

The first cohort (Cohort 1) of students in the programs is composed of program participants attending schools receiving start-up funding in 2012–13. Additional cohorts will be defined based on students participating in the programs that receive start-up funding in 2013–14 and beyond.

Table 2 shows availability of data for three reporting topics: participant characteristics, postsecondary enrollment and employment. The first complete two-year follow-up of postsecondary enrollment and employment for Cohort 1 will be available in the 2017 report.

Table 2: Schedule for Postsecondary Education and Employment Follow-Up

Report Year	K-12 Participant Characteristics (all grades)	Postsecondary Enrollment (high school exiters)	Employment (high school exiters)
2014	Cohort 1 (preliminary)	Follow-up data not available	Full year of data not available
2015	Cohort 1	One-year follow-up for 2013 K-12 completers (Cohort 1)	Full year of data not available
2016	Cohorts 1-2	Two-year follow-up for 2013 K-12 completers in Cohorts 1 and 2	One-year follow-up for 2013 K-12 completers in Cohort 1
2017	Cohorts 1-3	Two-year follow-up for 2014 K-12 completers in Cohorts 1 and 2	Two-year follow-up for 2013 K-12 completers (Cohort 1)
2018	Cohorts 1-4	Two-year follow-up for 2015 K-12 completers in Cohorts 2 and 3	Two-year follow-up for 2014 K-12 completers in Cohorts 1 and 2

Cohort 1 = students attending schools receiving grants in 2012–13; Cohort 2 = students attending schools receiving grants in 2013–14; Cohort 3 = students attending schools receiving grants in 2014–15; Cohort 4 = students attending schools receiving grants in 2015–16

Identifying Program Participants

ERDC receives data from the OSPI Comprehensive Education Data and Research System. This information contains student-level course enrollment and completion data as well as the identification of the instructor for each course. Also included is information about the course itself, including the local course ID, course title and CIP code.

For some Career/Technical Education (CTE) programs, knowing the CIP code associated with a program is sufficient to identify student participants. In the case of the Aerospace Assembler and Enhanced Manufacturing Skills programs, more specific information is required. To assist in identifying 2012–13 program participants, OSPI provided additional information from local vocational directors. This included the local course name, the associated CIP code(s), the name of the staff member associated with the relevant class(es), the number of students served and, in some cases, the section number of the class. All this information was used to identify members of Cohort 1.

Characteristics of Program Participants

The following tables describe the characteristics of the 510 program participants in 2012–13. Because there are small counts of students in the tables presented here, conventions to protect

personally identifying information suggested by the U.S. Department of Education are followed in the following series of tables.²

Table 3 shows the end-of-year enrollment status of the 2012–13 program participants. For participants in the Aerospace Assembler Program, the end-of-year enrollment status is based on records from the school offering the Aerospace Assembler Program. For those participating in the Enhanced Manufacturing Program at a skills center, the end-of-year enrollment status is based on records from the student’s home high school. More than 95 percent of the 12th-graders participating in the program in 2012–13 either graduated or continued enrollment.

Table 3: Cohort 1 End-of-Year Status

Grade	Total Participants	End-of-Year Status by Grade		
		Continuing	Dropout/Unknown	Graduate
Grade 9	68	≥95%	≤5%	–
Grade 10	143	≥98%	≤2%	–
Grade 11	129	≥98%	≤2%	–
Grade 12	170	20-24%	3-4%	75-79%

Table 4 shows demographic and K-12 program participation characteristics for Cohort 1.

Table 4: Cohort 1 Characteristics

Characteristic	Share of Total	Characteristic	Share of Total
<i>Race/ethnicity</i>		<i>Gender</i>	
American Indian or Alaska Native	≤1%	Male	93%
Asian	3%	Female	7%
Black or African-American	3%		
Hispanic	14%	<i>Program participation</i>	
Native Hawaiian or Other Pacific Islander	≤1%	Free or reduced-price lunch eligible	37%
Two or more races	6%	Special education	12%
White	73%	Bilingual education	2%

² “Statistical Methods for Protecting Personally Identifiable Information in Aggregate Reporting” (NCES SLDS Technical Brief #3) <nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2011603>

Table 5: Cohort 1 GPA Distribution

GPA Category	Share of participants
3.50-4.00	12%
3.00-3.49	16%
2.50-2.99	25%
2.00-2.49	19%
<2.00	28%
Total	100%

Table 5 shows grade point average (GPA) distribution for Cohort 1.

Note: Individual cell values may not add to 100% due to rounding.

Preliminary Postsecondary Follow-Up

One year of postsecondary education data follow-up is available for program participants who exited high school in 2012–13. Included in the postsecondary enrollment data are enrollments in Washington public four-year institutions, the state’s community and technical colleges (CTCs) and private and out-of-state institutions. Table 6 shows the college-going rates by high school GPA for the 2012–13 high school exiters in Cohort 1. Overall, 56 percent of those enrolled in postsecondary education in 2013–14 enroll in a Washington CTC. The CTCs dominate enrollment for all GPA categories except for the highest — 3.50 to 4.00 — where more than 55 percent of students enrolling are in one of Washington’s public four-year institutions.

Table 6: One-year Postsecondary for Cohort 1 2012-13 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	40-44%	20-29%	50-59%	10-19%
3.00-3.49	25-29%	50-59%	30-39%	≤10%
2.50-2.99	15-19%	50-59%	20-29%	10-19%
2.00-2.49	15-19%	≥80%	*	*
<2.00	5-9%	≥80%	*	*
Total	19%	55-59%	30-34%	10-14%

*Suppressed because of small cell size

2016 Annual Report

For the program participants in 2012–13, the 2016 Annual Report will include:

- A full two-year postsecondary education follow-up and a one-year employment follow-up of those who exited high school in 2012–13. (This group had access to the program for only one year.)
- A characterization and one-year postsecondary education follow-up for those who exited high school in 2013–14. (These students had access to the program for one additional year and may have taken additional program coursework.)

For participants in programs receiving start-up funding through the competitive state process in 2013–14, the 2016 Annual Report will include a characterization and one-year postsecondary education follow-up for those who exited high school in 2013-14.

