

Performance Monitoring Report: Apprenticeship

February 21, 2017

Apprenticeship Purpose Definition

Offer related academic and technical support courses for joint labor/management apprenticeship programs.

Overview

Apprenticeship has been a cornerstone of technical education and a viable post-secondary learning option in Wisconsin for over a century. “On-the-job learning” of an employed apprentice, coupled with the applied learning at the technical college, continues to be a productive way for employers to train their workforce and for employees to gain crucial knowledge and skills in their career field.

Total enrollments increased by 94 students in 2015-16 as compared to 2014-15. The projected data for 2016-17 shows increasing enrollments. Efforts to increase the awareness of the value of apprenticeship across the trades are among many contributing factors to the forecasted growth.

Performance Scorecard

| PURPOSE | SCORE |
|------------------------------------|---|
| What we do (Products and Services) |  |
| For whom (Constituents) |  |
| At what cost (Financial) |  |

Questions for Board Discussion

This past year’s performance in the Apprenticeship area is a clear indication of the strength of this programming and our commitment to meeting our College purpose. While this performance monitoring report provides a view of our past, we also invite the Board to consider for discussion how to best meet the District’s future needs for apprenticeship programming. As you read this report, please consider:

- **What are our greatest areas of alignment with Vision 2020 and how have we benefited our community with apprenticeship programming?**
- **What, if anything, could improve alignment with Vision 2020 to continue to fulfill this purpose?**
- **What steps must we take to continue to understand the needs of the District in the future related to this purpose?**

We look forward to discussing these questions with the Board during the monitoring review.

FVTC Scorecard Legend

| Symbol | Description | Symbol | Description |
|---|--|---|---|
|  | <u>Full Green Arrow:</u> Results are meeting or exceeding expectations. No action is required. |  | <u>Partially Red Arrow:</u> Results are below the expected levels. Efforts are under way to take corrective actions and revise the plan |
|  | <u>Partially Green Arrow:</u> Results are progressing, but not at the expected levels. Monitoring of the plan will increase. |  | <u>Full Red Arrow:</u> Results are well below the expected levels and actions need to be taken immediately. |
|  | <u>Yellow Arrow:</u> Results are indicating caution with the existing efforts and there is a need to review the existing plan. | | |

What We Do

The Bureau of Apprenticeship Standards (BAS), a branch of the Wisconsin Department of Workforce Development, regulates the training and certification for apprenticed trades in conjunction with employers, the Wisconsin Technical College System and trade advisory committees. Employers sponsor apprentices in selected industrial, construction and service trades for two to six years as paid employees and are responsible for teaching trade skills on the job. FVTC offers state-approved coursework related to the apprentice trade with an 80% common core curriculum statewide. While being sponsored (employed), the apprentice completes instruction related to their job (paid-related) through FVTC. In addition, some apprentices attend evening classes on an unpaid basis.

Employer advisory committees meet with FVTC staff at least two times per year to discuss enrollments, curriculum, technology, and equipment purchases. The committees give direction and input regarding the need for new apprenticeships and suggest necessary changes in facilities and curriculum to be in sync with workplace trends. Some trades have local and/or regional Joint Apprenticeship Committees (JACs) who review the progress of current apprentices toward the successful completion of requirements of their apprenticeship. FVTC staff participates with the local JACs which are composed of equal numbers of employees (labor) and employers (contractors). Union organizations that are directly involved with FVTC apprenticeships include Local 400 (plumbers and steamfitters) and Local 139 (Wisconsin Operating Engineers). FVTC has served both union and non-union affiliated apprenticeships since the organization of the Association of Builders and Contractors (ABC) of Wisconsin in 1987 as a non-union committee focused on the construction trades.

FVTC provides apprenticeship instruction in 15 program areas with 17 distinct apprenticeship programs. Table A identifies these programs as being in the industrial, construction, and service areas. These categories not only refer to the distinct setting of the apprentice job but involve some variation in the instructional experience and processes as well. Instruction blends classroom, hands-on, and technology enhanced learning through Interactive Television (ITV) and internet.

Table A: Program Areas of Apprenticeship Training

| Industrial | Construction | Services |
|--------------------------------------|------------------------------|-------------|
| Industrial Electrician | ABC Electrician | Cosmetology |
| Machinist | Electronic System Technician | |
| Maintenance Technician | Operating Engineer | |
| Maintenance Mechanic / Millwright | Pipe Fabricator | |
| Patternmaking* | Plumbing | |
| Pipefitting | Steamfitting | |
| Tool & Die | Steamfitting Service | |

*new in 2016-17

Internet instruction combines hands-on experiences enhanced with theory and resources delivered online through Blackboard, the Learning Management System used at FVTC. This

method allows for remote access of course resources by students and offers a discussion mechanism without meeting face-to-face.

FVTC apprenticeship staff work to enhance the quality of apprenticeship through active partnerships. One important collaboration involves sharing instructional staff with other technical college districts as outline in Table B. FVTC is also an active partner with training centers which enhances and maximizes the resources available for apprenticeship training.

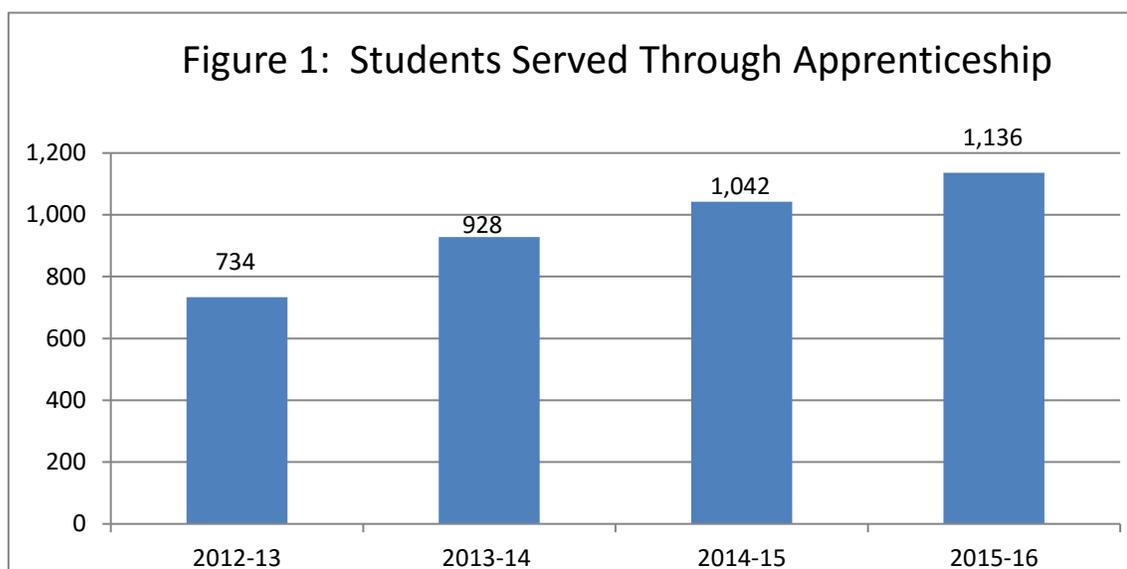
Table B: Apprenticeship Collaborations 2015-16

| Apprentice Programs | Collaborations with Other Colleges | Location |
|---|--|--|
| Steamfitting Steamfitting Service Pipe Fabricator | FVTC provides instruction to FVTC and NWTC apprentices at Local 400 Training Center in Kaukauna. | Appleton Steamfitters and Plumbers Training Center |
| Operating Engineer | FVTC courses are taught by Local 139 WTCS certified instructors to statewide apprentices at Training Center in Coloma. | Coloma Training Center |
| Plumbing | FVTC provides related instruction under contract with NWTC and Nicolet. | FVTC – Appleton Campus NWTC – Green Bay Campus NATC – Rhinelander Campus |
| Pipefitting | FVTC provides related instruction under contract with NWTC. | NWTC – Green Bay Campus |

Sustaining and growing the future workforce is a focal point in today’s apprenticeship related trades. The replacement of aging workers in local companies looms as a critical concern voiced by representatives at program advisory meetings and evident in state policy directions. In 2015, the Wisconsin Department of Workforce Development (DWD) and the Bureau of Apprenticeship Standards (BAS) revised and formalized the related policies and procedures to strengthen the path between Youth Apprenticeship (YA) and Registered Apprenticeship (RA). These revisions are intended to foster smooth transitions from YA to RA and build a framework for flexible options. The College’s efforts will center on dual credit opportunities that satisfy both the YA requirements and meet dual credit standards. An essential component to help the students make career decisions at a younger age is the experiential connection between employers and high school students.

For Whom

In 2015–16, FVTC had an increase in the number of apprenticeship students served (Figure 1). Table C shows the enrollment details of each apprenticeship area for the past three years. Projections for 2016-17 (Table C) indicate a continued upward turn in the total enrollments. For 2015-16, 402 employers had apprentices in the various trades at FVTC. Wisconsin Operating Engineers (Local 139) reports that their membership is over 600 employers, including out-of-state contractors. FVTC currently serves apprentices from more than 160 of their members.



Source: WTCS Portal Report – CLI 330 (updated 11-11-16)

Table C: Number of FVTC Apprenticeship Students by Program

| Trade Title | 2014-15 | 2015-16 | Number of Employers |
|--|-------------|-------------|---------------------|
| 50-502-1 Cosmetology | 27 | 24 | 20 |
| Service Trade Subtotal | 27 | 24 | 20 |
| 50-413-9 Electrician (ABC) | 172 | 176 | 38 |
| 50-427-5 Plumber | 64 | 78 | 69 |
| 50-435-2 Steamfitter (Construction) | 47 | 53 | 16 |
| 50-435-4 Steamfitter (Service) | 17 | 17 | 9 |
| 50-442-2 Pipe Fabricator | 68 | 104 | 7 |
| 50-447-1 Operating Engineer | 363 | 398 | over 160 |
| 50-451-8 Electronic System Technician | 19 | 11 | 5 |
| Construction Trades Subtotal | 793 | 837 | 307 |
| 50-413-1 Industrial Electrician | 71 | 84 | 37 |
| 50-420-2 Machinist | 42 | 43 | 36 |
| 50-425-1 Patternmaking | NA | NA | 1 |
| 50-493-3 Tool & Die Maker | 10 | 13 | 11 |
| 50-423-1 Maintenance Mechanic/Millwright | 101 | 105 | 40 |
| 50-423-3 Millwright/Pipefitter | * | * | 2 |
| 50-435-1 Industrial Pipefitter | 13 | 9 | 2 |
| 50-464-1 Maintenance Technician | 28 | 21 | 16 |
| Industrial Trades Subtotal | 270 | 282 | 74 |
| Grand Total | 1042 | 1136 | 402 |

Source: WTCS Report CLI330 * 50-423-3 Millwright – Pipefitter is reported under 50-423-1 in the WTCS reporting system

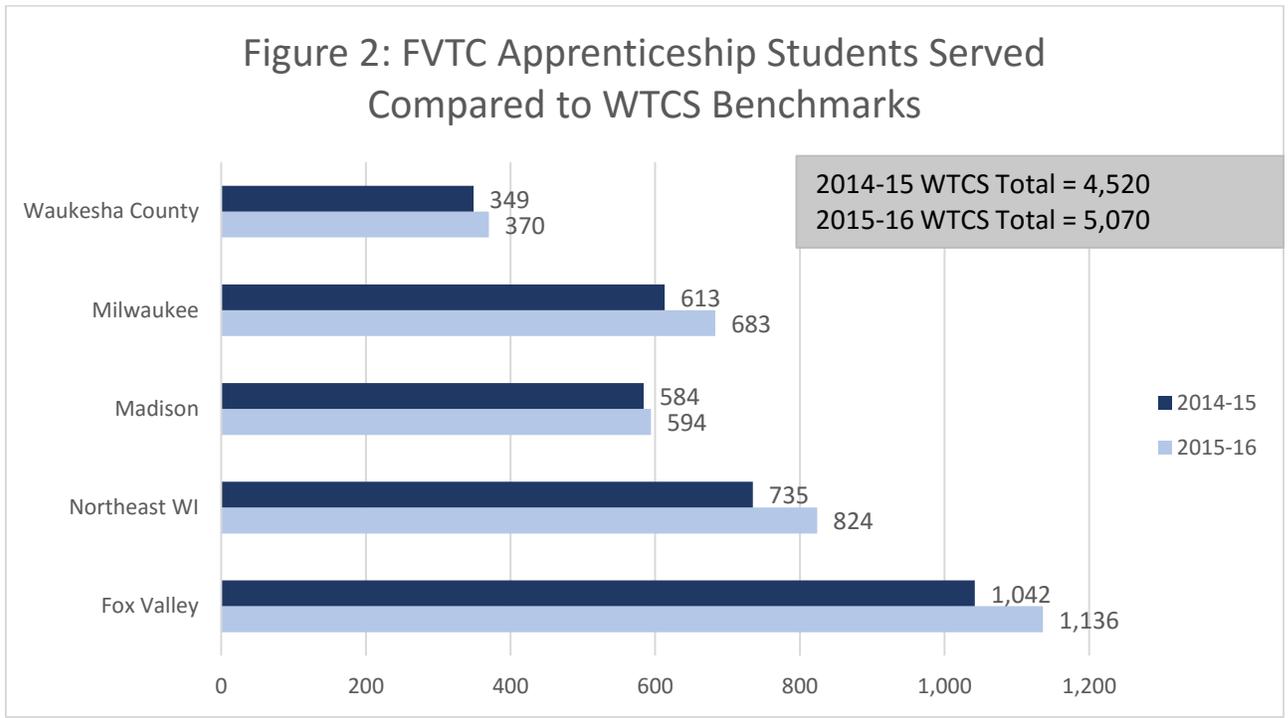
Table D shows new enrollments growing in most sectors. FVTC staff will continue their efforts to reach out to more K-12 districts to promote opportunities, as well as make connections with employers that have not previously had apprentices.

Table D: Number of New Apprenticeship Students

| Trade Title | 2015-16 |
|--|----------------|
| 50-502-1 Cosmetology | 10 |
| Service Trade Subtotal | 10 |
| 50-413-9 Electrician (ABC) | 35 |
| 50-427-5 Plumber | 32 |
| 50-435-2 Steamfitter (Construction) | 11 |
| 50-435-4 Steamfitter (Service) | 4 |
| 50-442-2 Pipe Fabricator | 43 |
| 50-447-1 Operating Engineer | 178 |
| 50-451-8 Electronic System Technician | 0 |
| Construction Trades Subtotal | 303 |
| 50-413-1 Industrial Electrician | 24 |
| 50-420-2 Machinist | 23 |
| 50-425-1 Patternmaking | Starts in 2017 |
| 50-493-3 Tool & Die Maker | 3 |
| 50-423-1 Maintenance Mechanic/Millwright | 27 |
| 50-423-3 Millwright/Pipefitter | 3 |
| 50-435-1 Industrial Pipefitter | 0 |
| 50-464-1 Maintenance Technician | 8 |
| Industrial Trades Subtotal | 88 |
| Total New Enrollments | 401 |

Source: Apprenticeship office records

FVTC continues to outpace peer benchmark colleges in providing apprenticeship training to meet the demands of district employers. All the benchmark colleges, and the state as a whole, are experiencing an upward trend in apprentice enrollments which mirror the improving economy in many areas of Wisconsin (Figure 2). Apprenticeship enrollments at the College increased 9% compared with the statewide overall increase 12% from 2014-15 to 2015-16. The larger Wisconsin urban centers served by MATC Milwaukee and Madison College combined have 25% of the total WTCS apprenticeship enrollments with Milwaukee at 683 and Madison at 594. FVTC alone has 22% of the statewide total apprenticeship enrollments.



Source: WTCS Portal Report – CL1330

Completer Satisfaction and Wages

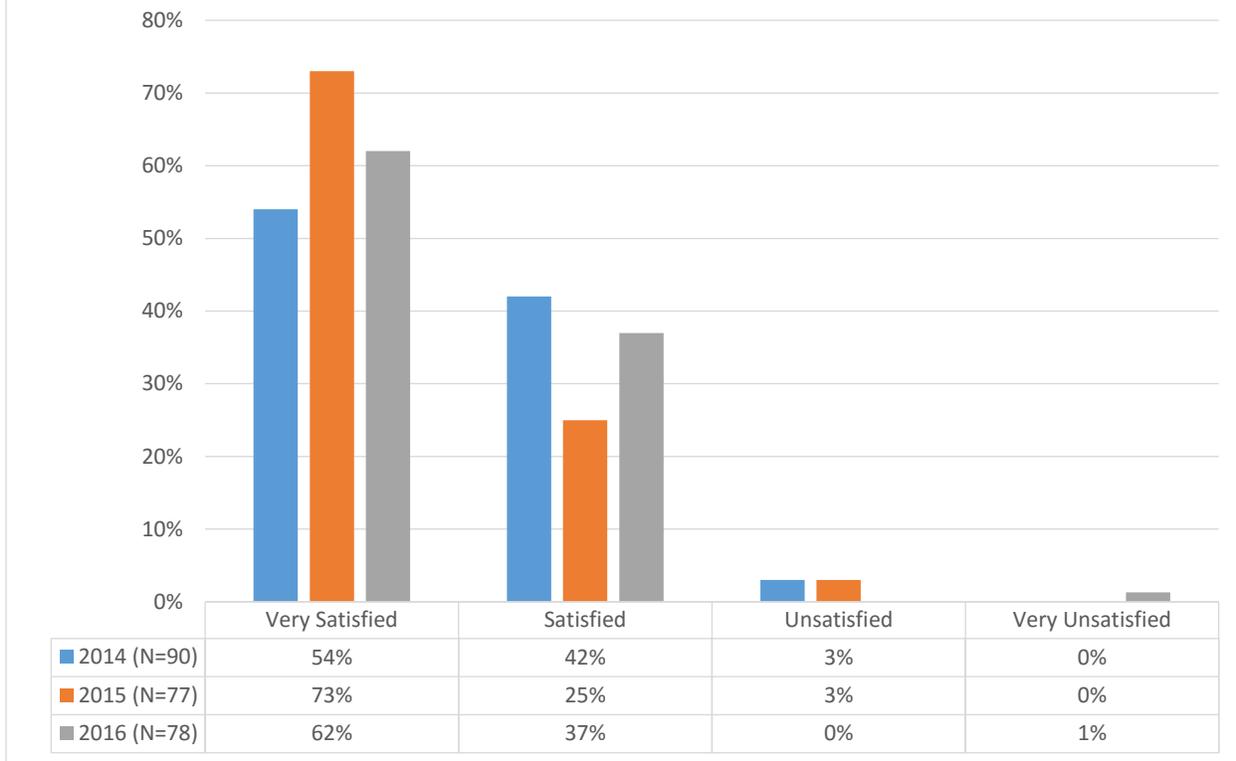
Workers are reporting wages averaging \$56,787 annually in 2015-16 as a result of their apprenticeship completion as noted in Table E. Although FVTC apprenticeship completers had a 11-point decrease in “very satisfied” ratings from 73% in 2015 to 62% in 2016 (Figure 3), the 2015 rating was significantly higher than previous annual trends in the 52-54% range. The employment outlook of completers may also be a consideration in rating satisfaction. For example, the highest number of completer responses were from Operating Engineers (29 of the 78 responses). Their ratings (17 = very satisfied and 12 = satisfied) may be influenced by statewide employment trends or uncertainty in future road construction projects.

Table E: Wage Impact Data for 2015-16 Apprenticeship Completers

| Apprenticeship Program | Hourly Wage | Annual Wage | Hours Per Week |
|-----------------------------------|-------------|-------------|----------------|
| Operating Engineer Apprentice | \$34.92 | \$72,635 | 47 |
| Plumbing Apprentice | \$27.67 | \$57,547 | 43 |
| Industrial Electrician Apprentice | \$26.58 | \$55,279 | 44 |
| Maintenance Mechanic/Millwright | \$26.39 | \$54,900 | 48 |
| Electrician Apprentice (ABC) | \$26.00 | \$54,080 | 43 |
| Electronic Systems Technician | \$22.25 | \$46,280 | 43 |

Source: 2016 Apprenticeship Graduate Survey

Figure 3: Percent of Completers Satisfied with Apprenticeship Instruction



Source = 2014, 2015 & 2016 Apprenticeship Survey
 Note: Totals may not add up to 100% due to rounding

Alignment with Vision 2020

In August of 2016, FVTC launched Vision 2020 with the new Mission and Vision statements and Strategic Directions. Performance data in this report relates primarily to the Strategic Direction of Workforce & Community Development.

Strategic Direction: Workforce & Community Development

Work with regional partners to develop solutions to address workforce gaps in key employment sectors.

Vision 2020 Strategies related to Apprenticeship:

- **Assess unmet workforce needs and develop targeted strategies throughout the District.**
- **Expand incumbent worker training, enhancing existing workforce skillsets.**
- **Partner with employers by providing opportunities to populations with untapped potential.**
- **Engage regional workforce and economic development organizations as full partners in addressing the talent shortage.**

All of the four strategies outlined above under the *Vision 2020 Strategic Direction: Workforce & Community Development* have a degree of connection to Apprenticeship due to its strong relationship with employers across the region. The measures for this Strategic Direction (Table 4) are related to Measure 3.3.

Measure 3.3 is part of WTCS Outcomes Based Funding Criteria 7 – “Share of Credits Earned in Employer Paid Training, Apprenticeship, Professional Development Seminars and Customized Instruction”. Apprenticeship credits made up 18% of the total credits in the most recent Outcomes Based Funding cycle with FVTC having the highest number of apprenticeship credits among the 16 WTCS colleges. This significantly contributed to FVTC securing the top ranking with the highest total of workforce training credits earned in the WTCS.

Table 4. Vision 2020 Measures Related to Apprenticeship Programming

| SD Workforce & Community Development Measures | 2015-16 Baseline | 2016-17 Target | 2019-20 Goal |
|---|-------------------------|-----------------------|---------------------|
| Measure 3.3 – Number of credits earned in workforce training categories [OBF7*] | 32,590 | 33,000 | 35,000 |

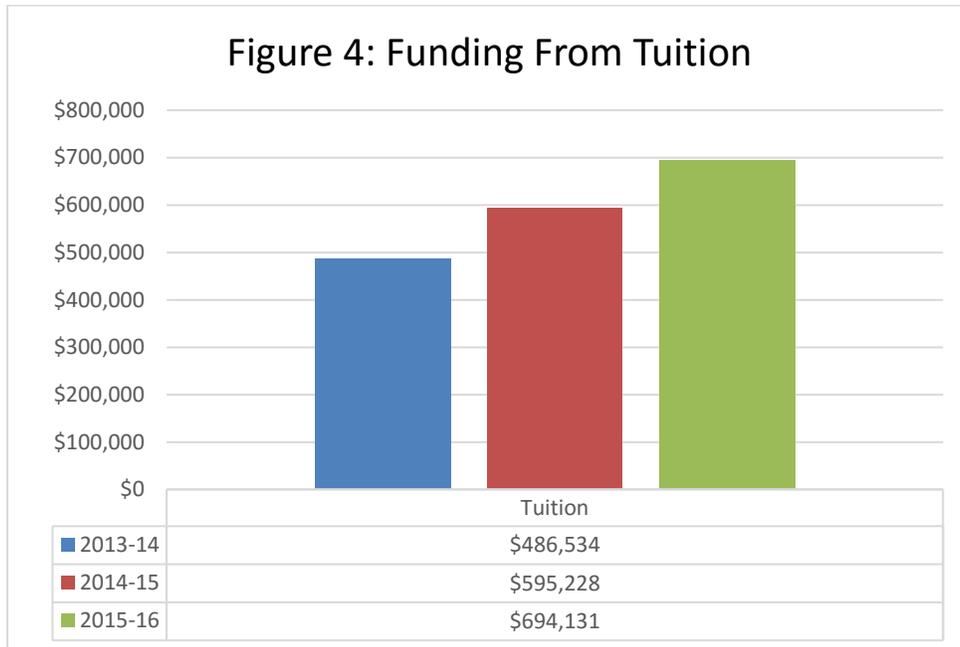
**OBF = Outcomes Based Funding **2,054 Final tally*

Vision 2020 Strategies to advance apprenticeship opportunities for more students and employers include:

- The Wisconsin Department of Workforce Development (DWD) has been awarded a \$5 million grant by the U.S. Department of Labor (DOL) to enhance the agency's already leading-edge apprenticeship program. The grant supports the expansion of apprenticeship into Information Technology and Health career areas, as well as promoting the traditional advanced manufacturing trades. FVTC is exploring apprenticeship opportunities in all three grant emphasis areas.
- Wisconsin Operating Engineers (WOE) launched virtual classes through the Destinations Career Academy virtual school. The classes emphasize heavy equipment operator career exploration. In the Spring of 2017, the new classes will be the first two of four of the first year classes in the WOE apprenticeship. Dual credit arrangements are pending. The goal is that high school students would earn up to 4 credits toward the WOE apprenticeship upon successful completion of all the courses offered.
- Oiler/Lubrication Technician is a new apprenticeship under development. These apprentices work with industrial machinery and equipment components to apply lubricants required for proper operation. The apprenticeship is a two-year commitment with 288 hours of related instruction. Local employers have expressed a need for people with a more focused skill in this area as machinery becomes more complex and the fluid maintenance of the machinery becomes more technical. Over the past two years, advisory committee discussions have prompted the investigation of this apprenticeship offering at FVTC.

At What Cost

Figure 4 reflects the fact that tuition revenue increased with the rise in enrollment shown in Figure 1. The apprenticeship area does not have a discrete budget since the College budgets according to academic division area and not by type of instruction (aid code).



Source: FVTC Database
*Exclusive of Tax Levy & State Aid

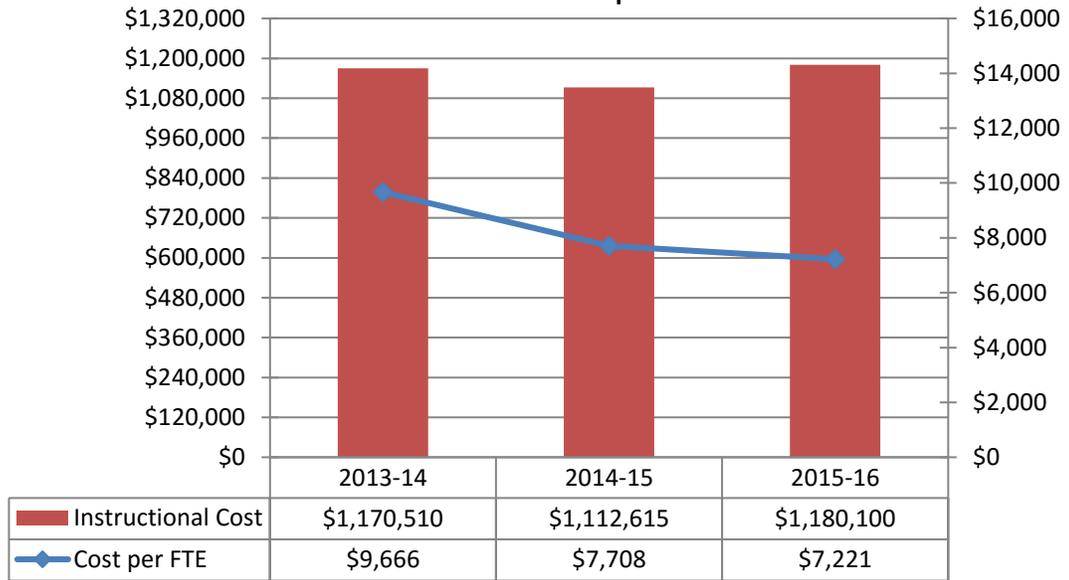
Figure 5 indicates a 6.1% increase in instructional costs for the apprenticeship purpose. From 2014-15 to 2015-16, there was a 13% increase in FTE from 144 FTE to 163 FTE. The cost per FTE declined 6.3% from the previous year. Instructional cost per FTE declined because classes ran fuller (closer to capacity, on average) than the year before. Specific areas of FTE growth include Operating Engineer, Electricity, and Pipe Fabricator.

Costs include the support of the following instructional staff who teach in a variety of the apprenticeship programs:

- 8 FVTC full-time apprenticeship instructors
- 9 FVTC full-time instructors with apprenticeship classes as part of their teaching load
- 3 adjunct faculty who teach apprenticeship classes
- 30 instructors employed through training centers supported through a reimbursement arrangement (Local 139 and Local 400) and certified with FVTC

FVTC supports ongoing investments to maintain state-of-the-art dedicated laboratory facilities for apprenticeship programs. This level of service for district apprentice trades is frequently referenced as an effective model of apprenticeships and therefore helps FVTC remain a leader among apprentice programs in the WTCS.

Figure 5: Apprenticeship Instructional Costs and Instructional Cost per FTE



Source: Internal Staff Accounting (Instructional Expenditures)