BC Student Outcomes
Shaping Post-Secondary Education

2014 APPRENTICESHIP STUDENT OUTCOMES SURVEY

report of findings

ita
YOUR TICKET.

BRITISH COLUMBIA

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Acknowledgments

The Apprenticeship Student Outcomes (APPSO) Survey, which targets former apprenticeship students who have completed the final level of their technical training, is one of three annual surveys that make up BC Student Outcomes.

The BC Student Outcomes surveys are conducted with funding from the Ministry of Advanced Education and the participating British Columbia post-secondary institutions. Additional funding for the APPSO Survey is provided by the Industry Training Authority.

The British Columbia Student Outcomes Research Forum (the Forum) oversees all aspects of the Program, from data collection to the reporting of survey results. The Forum represents a longstanding partnership among the ministry responsible for post-secondary education, participating post-secondary institutions, and system-wide organizations, such as the BC Council on Admissions and Transfer, the Council of Senior Student Affairs Leaders, and the BC Registrars' Association.

BC Stats acts as steward of the Student Outcomes data and is responsible for providing operational support, day-to-day management, advice, and reports, as directed by the Forum.

Highlights

The 2014 Apprenticeship Student Outcomes (APPSO) Survey was aimed at former students who completed the final year of their apprenticeship training in a B.C. post-secondary institution between July 1, 2012 and June 30, 2013. A total of 2,027 former traditional apprenticeship students completed the survey by telephone or online between January and May 2014. The APPSO Survey response rate for traditional apprentices was 54 percent. **The following are highlights from the survey findings for former traditional apprenticeship students only.**[1]

Former traditional apprenticeship students

- 95 percent were male
- 29 was the median age
- Of the 43 percent who had some previous post-secondary education:
  - 61 percent had achieved a prior credential
  - 32 percent had earned a trades program diploma, certificate, or citation prior to starting their apprenticeship program
- 52 percent were in one of three program groups: Electrician, Carpentry, or Plumbing
- 31 percent relocated from their home community to attend their in-school training
- 76 percent took their in-school apprenticeship training in public post-secondary institutions

In-school experiences of former traditional apprenticeship students

- 93 percent said they were *very satisfied* or *satisfied* with their in-school training
- Former traditional apprenticeship students generally found that their courses helped them develop (*very well* or *well)* the following skills:
  - Math: 84 percent
  - Analysis and critical thinking: 81 percent
  - Teamwork: 80 percent
  - Reading comprehension: 80 percent
- 85 percent said the quality of their instruction was *very good* or *good*
- 65 percent said the length of their program was *about right*
- 81 percent rated the content of their training *very good* or *good* at covering the standards used in their field
- 88 percent said they received their British Columbia Certificate of Qualification
- 93 percent reported that their training was *very useful* or *somewhat useful* to them in preparing to write the certification exam

1 Traditional apprenticeship programs have multiple levels of in-school technical training taken during block release periods from work. These programs result in certification only upon completion of all levels of the program.

Workplace experiences of former traditional apprenticeship students

- 91 percent with workplace experience said they were *very satisfied* or *satisfied* with their overall workplace training
- 88 percent said their in-school technical training was *very related* or *somewhat related* to their workplace experience

Employment of former traditional apprenticeship students

- 98 percent were in the labour force (employed or looking for work)
- 4.9 percent of those in the labour force were unemployed
- 93 percent of former traditional apprenticeship students were employed
- Of the former traditional apprenticeship students who were employed:
  - 98 percent were working full-time
  - 5 percent were self-employed
  - 92 percent said their employment was *very related* or *somewhat related* to their in-school training
  - 94 percent said the knowledge and skills they gained through their training had been *very useful* or *somewhat useful* in performing their job
  - $30 was the median hourly wage

Introduction

In British Columbia, it is projected that there will be nearly one million job openings by 2022, with 43 percent requiring trades and technical training. Over the next 10 years, about 530,000 youth will enter the job market. B.C.'s Skills for Jobs Blueprint has been designed to align training and education with in-demand jobs, helping British Columbians to seamlessly transition from high school through post-secondary and into the work force.[2]

The apprenticeship training system in B.C. includes the Industry Training Authority, public post-secondary institutions, private training institutions, and employers. Currently, in B.C., apprenticeship training is available in more than 100 trades, offering career opportunities in a wide range of occupations. The majority of apprenticeship training is provided on-the-job, while approximately 20 percent is delivered as in-class technical training through a post-secondary institution or private training provider.

The majority of apprenticeships require a minimum of four years to complete, though the length of program varies by occupation, ranging from one to five years. A successful apprentice is one who completes the in-school technical training and the required work hours, passes examinations, and is recommended for certification by their sponsoring employer to earn a "ticket" in a skilled trade. That credential, referred to as a Certificate of Qualification (C of Q), is issued by the Industry Training Authority on behalf of the Province of British Columbia; about 50 trades are endorsed by the Interprovincial (IP) Red Seal program, which is recognized across Canada as a signal that the apprentice passed a standardized national exam.

The ministries of Advanced Education (AVED) and Jobs, Tourism and Skills Training (JTST), the Industry Training Authority (ITA), and the institutions that provide technical training share a commitment to expand and improve delivery of apprenticeship training in British Columbia. Information provided by the annual Apprenticeship Student Outcomes Survey is an important part of that process.

About the 2014 Apprenticeship Student Outcomes Survey

The 2014 Apprenticeship Student Outcomes (APPSO) Survey is the tenth annual survey of former apprenticeship students. A total of 3,743 traditional apprentices who completed their apprenticeship training at a B.C. post-secondary institution between July 1, 2012 and June 30, 2013 were eligible for this survey.[3] The survey was conducted by telephone and online from January to May 2014; there were 2,027 traditional apprenticeship respondents,

2 Source: B.C. Skills for Jobs Blueprint: Re-engineering Education and Training.

3 In total, 5,698 former apprenticeship students were eligible for the survey. Of these, 3,743 were traditional apprentices. The remainder were in progressive credential (n=1,745) or ACE IT (n=210) programs and are not included in the body of this report. ACE IT respondents have not been included in the progressive credential group.

making the response rate 54 percent. The respondents had completed apprenticeship programs from 36 post-secondary or training institutions (14 public and 22 private). (For more information on the survey, see Appendix A: Apprenticeship Survey Methodology.)

To provide insight into the apprenticeship experience, former students were asked to:

- rate aspects of their in-school and workplace training;
- evaluate the usefulness of the knowledge and skills they gained;
- quantify their level of satisfaction with their training; and
- describe their post-training employment.

Data from the apprenticeship student survey are currently used by AVED and ITA for policy development and to monitor the effectiveness of the training system. Participating B.C. post-secondary institutions use the survey information for program and curriculum reviews, for marketing and recruitment, and to assist prospective students with career decisions.

Feedback from former foundation or pre-apprenticeship trades training students is currently collected in the annual Diploma, Associate Degree, and Certificate Student Outcomes (DACSO) Survey, which provides AVED and the institutions with pertinent and valuable outcomes information for non-apprenticeship and pre-apprenticeship trades programs.

The 2014 APPSO Survey included 914 respondents from progressive credential programs. The ITA now offers apprenticeship completion and certification following each sequential training course for certain programs, and starting in 2010, the cohort selection criteria for the APPSO Survey were changed to include former students from these progressive credential programs.[4] See Appendix B: Progressive Credential Programs for an overview of the results for these former students.

In 2013, for the first time, a flag to identify former ACE IT students was included. The Accelerated Credit Enrolment to Industry Training (ACE IT) program allows high school students to take first level technical training that gives them dual credits for high school courses and apprenticeship or industry training courses. See Appendix C: ACE IT Programs for an overview of the results for these former students.

About this report

This report presents a summary of the findings for the 2014 APPSO Survey. The results presented in the body of the report are for respondents who took **traditional apprenticeship training**. Traditional apprenticeship programs are programs with multiple levels of in-school technical training taken during block release periods from work. These programs result in certification only upon completion of all levels of the program.

Results for progressive credential programs and ACE IT programs are in the appendices. See Appendix A: Apprenticeship Survey Methodology for the number of former students eligible for the survey, the number of respondents, and the response rate by program group.

4 Progressive credential programs provide both on-the-job training and in-school technical training that now result in certification upon completion of what was once a level of training.

In some cases, comparisons are made with the results from previous years' apprenticeship surveys. In the body of the report, these comparisons use data from traditional apprenticeship students only. When the terms *former students* or *former apprentices* are used, they refer only to the **former traditional apprenticeship students** who responded to one of the Apprenticeship Student Outcomes Surveys.

The report is organized into the following sections:

- details about the former students who were surveyed and what they studied;
- their in-school experiences;
- their workplace training experiences; and
- their subsequent labour force participation, employment, and occupations.

Survey respondents had apprenticed in a variety of trades. The trade programs named in this report have been organized according to the Classification of Instructional Programs (CIP) coding and grouped into nine categories to simplify reporting. To see how these program groups relate to institutions' program names, see the Excel file in Appendix D: Apprenticeship Program Groups and Institutions' Programs.

Former Traditional Apprenticeship Students

Former traditional apprenticeship students (n = 2,027) who responded to the 2014 Apprenticeship Student Outcomes Survey were asked about their previous education, including other trades training and credentials already completed. They were also asked about their citizenship or immigration status and Aboriginal identity. Age and gender information was collected from administrative records.

Who were former traditional apprenticeship students?

THE TYPICAL FORMER APPRENTICE surveyed in 2014 was...

... a **29** year old male who lived in the Mainland/Southwest region.

He probably took his in-school training at a public post-secondary institution, most likely in an Electrician program.

He had completed the requirements to receive his TICKET as a certified tradesperson and was working at a job RELATED to his training.

He was employed FULL-TIME and earning about

$30 per hour.

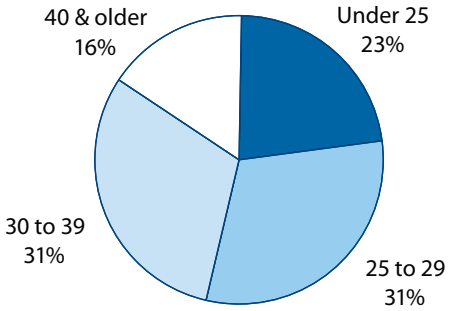
Former traditional apprentices were predominantly men, and men made up the majority in each program group. Women who completed traditional apprenticeships were typically in Culinary Arts & Personal Services programs.

Program Groups	Female Traditional Apprenticeship Respondents	Percent of Group
Automotive & Other Mechanics	#	#
Carpentry	5	2%
Culinary Arts & Personal Services	44	46%
Electrician	15	3%
Industrial & Heavy Duty Mechanics & Other Repair Trades	#	#
Plumbing	#	#
Welding & Precision Production	#	#
Other Construction Trades	7	6%
Other Trades	19	12%
Total	**104**	**5%**

Note: Low numbers have been masked to preserve confidentiality.

Though most former traditional apprentices were men, Culinary Arts & Personal Services programs were popular among women.

At the time of the survey, respondents' median age was 29 and ranged from 18 to 65.

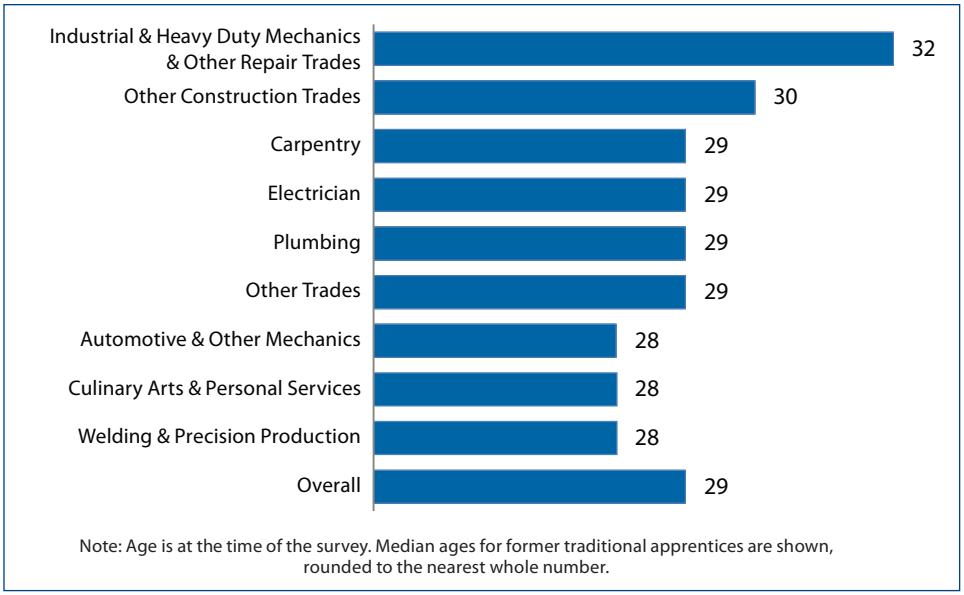


Note: Age is at the time of the survey.

More than half of traditional apprentices were under 30.

Age varied somewhat by apprenticeship program group. Industrial & Heavy Duty Mechanics & Other Repair Trades respondents tended to be older, while those who took programs in Automotive & Other Mechanics, Culinary Arts & Personal Services, and Welding & Precision Production tended to be slightly younger.

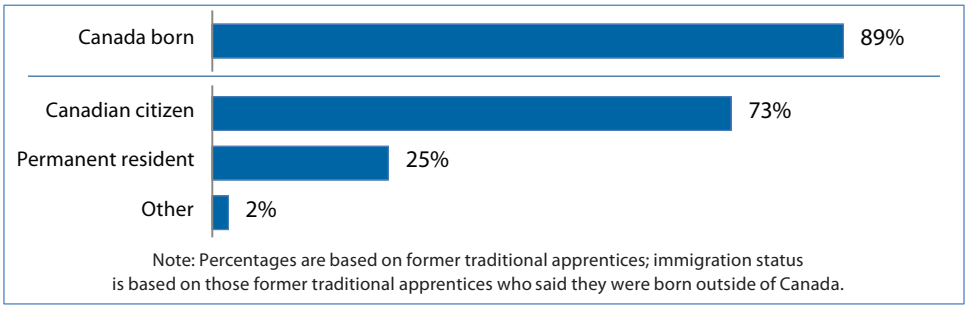
Median age varied by program group.



Note: Age is at the time of the survey. Median ages for former traditional apprentices are shown, rounded to the nearest whole number.

The majority of respondents were born in Canada. Of the former traditional apprentices whose country of origin was not Canada, almost three-quarters were citizens and one-quarter were permanent residents at the time of their training.

Typically, former traditional apprentices were born in Canada.



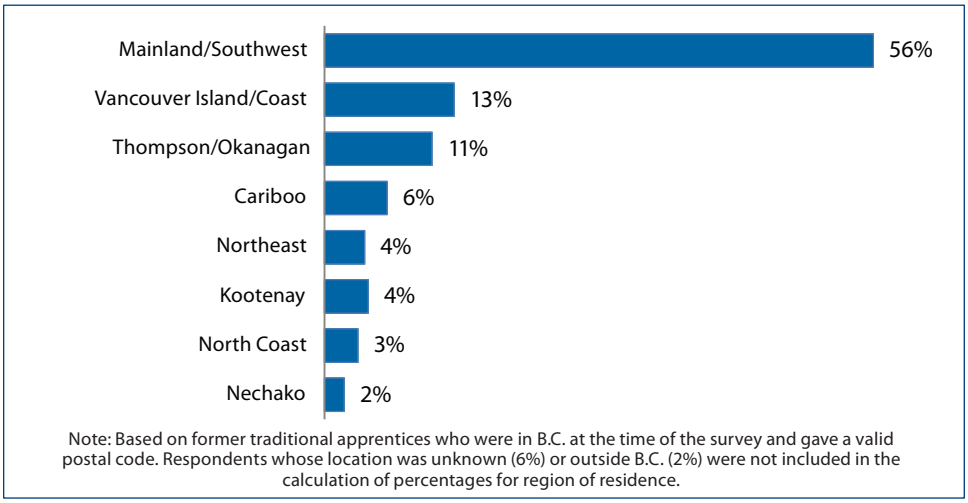
Note: Percentages are based on former traditional apprentices; immigration status is based on those former traditional apprentices who said they were born outside of Canada.

Among Canadian-born respondents, 6 percent identified themselves as Aboriginal. The majority (68 percent) of those who self-identified as Aboriginal further identified themselves as First Nations and approximately one-third (32 percent) identified themselves as Métis.[5]

At the time of the survey, former traditional apprentices' region of residence was predominantly in the Mainland/Southwest region.[6] Almost one-quarter lived in the Vancouver Island/Coast region and Thompson/Okanagan.

5 Respondents were allowed to provide multiple responses.

6 The location of 6 percent of respondents was unknown, and 2 percent of respondents were located outside of British Columbia. As such, these respondents were not included in the calculation of percentages for region of residence.

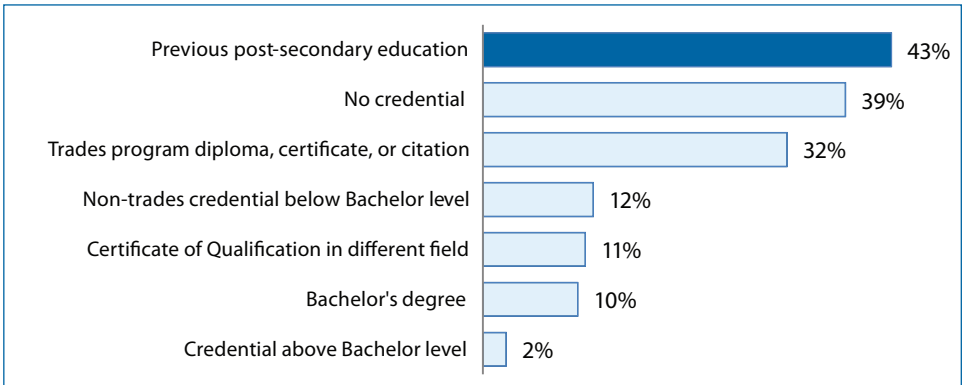


Note: Based on former traditional apprentices who were in B.C. at the time of the survey and gave a valid postal code. Respondents whose location was unknown (6%) or outside B.C. (2%) were not included in the calculation of percentages for region of residence.

The Mainland/ Southwest region is where more than half of former traditional apprentices lived at the time of the survey.

What previous education did traditional apprentices have?

Almost half of the former students said they had taken some post-secondary education prior to beginning their apprenticeships. Among those with previous education, almost one-third had a trades program diploma, certificate, or citation prior to starting their apprenticeship program.



Note: Percentages of credentials are based on former traditional apprentices who took previous post-secondary education. Respondents could report more than one type of post-secondary credential.

Prior post-secondary education was common for apprentices.

What traditional apprenticeship programs did respondents take?

The 2,027 former traditional apprenticeship students who were interviewed in 2014 had completed technical training in 36 different institutions across British Columbia. The programs they took have been organized into nine program groups, most of which are self-explanatory.[7]

7 The hundreds of courses offered by institutions have been grouped by CIP code into nine program categories for reporting. The category of "Other Construction Trades" included programs such as Roofer and Glazier. Another category, called "Other Trades," included Arborists, Utility Arborists, Landscape Horticulturalists, Dairy Production Technicians, Mobile Crane Operators, Piledrivers and Bridgeworkers, and Heavy Equipment Operators. To see which courses from each institution are included in each program group, refer to Appendix D: Apprenticeship Program Groups and Institutions' Programs.

In 2014, almost two-thirds of respondents were in one of the following four groups: Electrician, Carpentry, Plumbing, and Industrial & Heavy Duty Mechanics & Other Repair Trades.

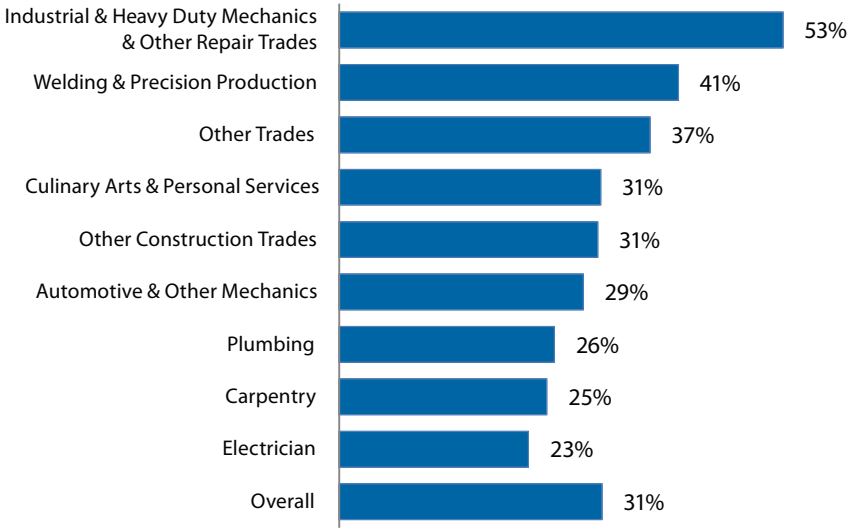
The distribution of respondents over the program groups was similar in 2014 and 2013—the Electrician program group was the largest, and the top four groups accounted for the majority of respondents.

Electrician programs were the most popular in both 2014 and 2013.

Program group	Former traditional apprentices			
	2014		2013	
	n	Percent	n	Percent
Electrician	477	24%	543	23%
Carpentry	294	15%	368	15%
Plumbing	273	13%	346	14%
Industrial & Heavy Duty Mechanics & Other Repair Trades	260	13%	331	14%
Automotive & Other Mechanics	186	9%	242	10%
Welding & Precision Production	175	9%	194	8%
Other Trades	156	8%	150	6%
Other Construction Trades	110	5%	125	5%
Culinary Arts & Personal Services	96	5%	94	4%
Total	2,027	100%	2,393	100%

Overall, almost one-third of respondents said they relocated from their home community to attend their in-school traditional apprenticeship training. Relocation varied by program group: over half of the former students from Industrial & Heavy Duty Mechanics & Other Repair Trades moved to study, while fewer than one-quarter of former Electrician students relocated.

Almost one-third of former traditional apprentices left their home community for training.



Did apprentices study in public or private institutions?

Former traditional apprenticeship students were more likely to have attended public institutions than private.

Public Institutions	Respondents	% of Total Respondents
B.C. Institute of Technology	693	34%
Okanagan College	116	6%
Thompson Rivers University	115	6%
College of New Caledonia	98	5%
Vancouver Community College	88	4%
Camosun College	86	4%
Vancouver Island University	82	4%
Kwantlen Polytechnic University	54	3%
University of the Fraser Valley	51	3%
Northwest Community College	50	2%
Northern Lights College	48	2%
College of the Rockies	23	1%
North Island College	21	1%
Selkirk College	16	1%
Total	**1,541**	**76%**

Just over three-quarters of traditional apprentices attended public institutions.

Private Institutions	Respondents	% of Total Respondents
Pacific Vocational College	98	5%
R.C.A.B.C. Roofing Institute	52	3%
Joint Apprentice Refrigeration Trade School	45	2%
IUOE Local 115 Training Association	39	2%
Sheet Metal Workers Training Centre	32	2%
UA Piping Industry College of B.C.	32	2%
The Finishing Trades Institute of BC	30	1%
BC Hydro	23	1%
Funeral Service Association of BC	18	1%
Taylor Pro Training	18	1%
Electrical Industry Training Institute	14	1%
VanAsep Training Society	14	1%
Greenbelt Veterinary Services	12	1%
Broadband Institute	9	<1%
Enform Canada	9	<1%
Glazing Contractors Association of BC	9	<1%
Trowel Trades Training Association	8	<1%
BC Wall & Ceiling Association	7	<1%
Christian Labour Association of Canada	5	<1%
BC Floor Covering Joint Conference Society	#	<1%
Pacific Horticulture College	#	<1%
Piledrivers, Divers, Bridge, Dock, Loc. 2404	#	<1%
Total	**486**	**24%**

Note: Low numbers have been masked to preserve confidentiality.

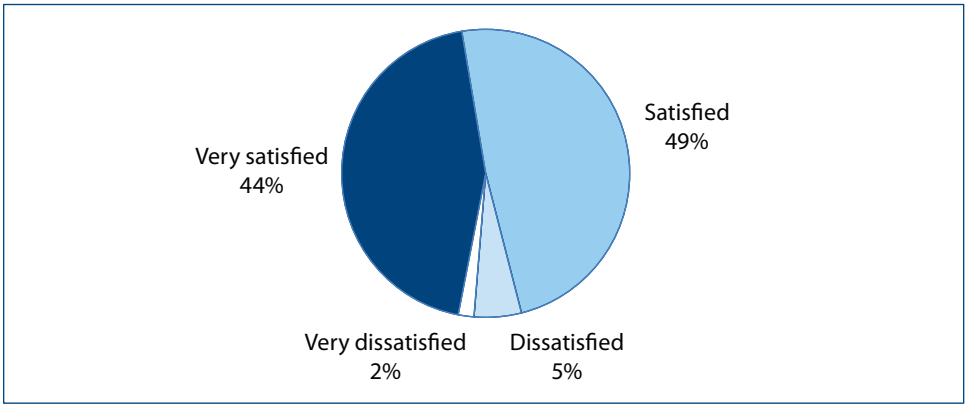
In 2014, there were 22 private institutions represented in the survey.

In-School Experiences

Former apprenticeship students were asked to evaluate several aspects of their in-school training. They rated the length of training, availability of courses, the quality of their instruction, the content of their program, and the opportunities they were given to develop skills.

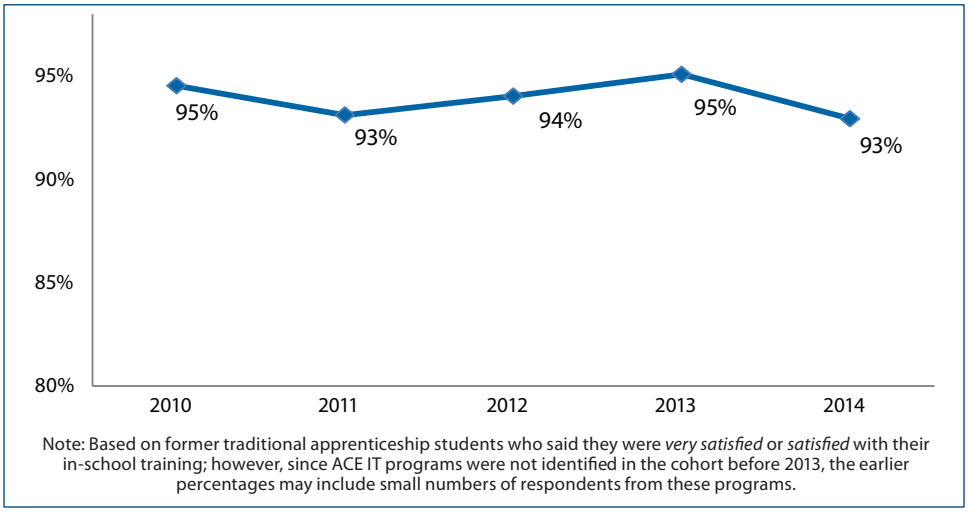
How satisfied were respondents with their in-school training?

Most former traditional apprenticeship students said they were *very satisfied* or *satisfied* with the in-school training they received as part of their apprenticeship program.



Satisfaction with in-school training was common.

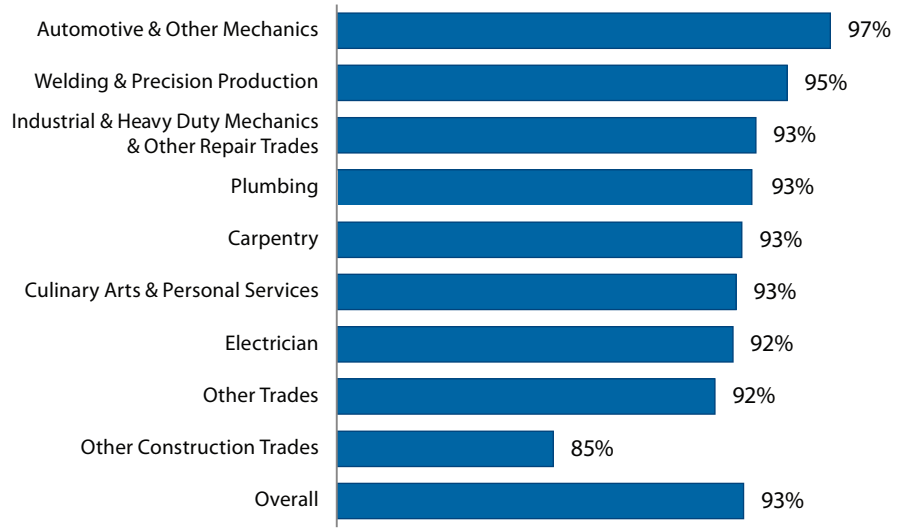
Overall satisfaction with in-school training has remained high over time.



Note: Based on former traditional apprenticeship students who said they were *very satisfied* or *satisfied* with their in-school training; however, since ACE IT programs were not identified in the cohort before 2013, the earlier percentages may include small numbers of respondents from these programs.

High satisfaction with in-school training has been sustained over time.

For most program groups, levels of overall satisfaction with in-school training were similar—generally, more than nine out of ten reported satisfaction with in-school training. These results are fairly consistent with those from 2013.



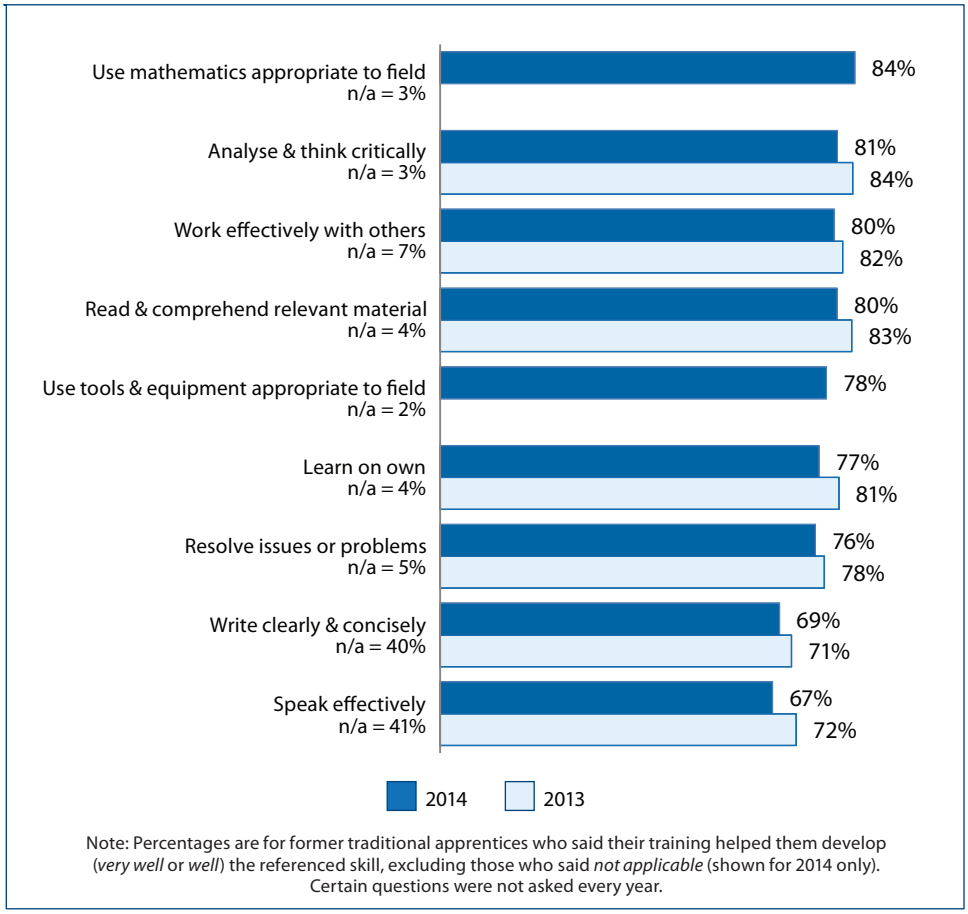
Note: Percentages are for former traditional apprentices who were *very satisfied* or *satisfied* with their in-school training. Excludes those who said *not applicable*.

Satisfaction with in-school training was high across program groups.

Did in-school training provide opportunities to develop skills?

Respondents were asked to rate the extent to which their in-school training provided them with opportunities to develop various professional skills. If a particular skill was not relevant to their training, it was deemed *not applicable*.

The majority of respondents said that their training helped them to develop (*very well* or *well)* a number of important skills, such as mathematics appropriate to their field, analysis and critical thinking, working effectively with others, and reading and comprehending relevant material. In both 2014 and 2013, critical analysis and thinking and teamwork were rated as two of the top three skills developed during apprenticeship training.

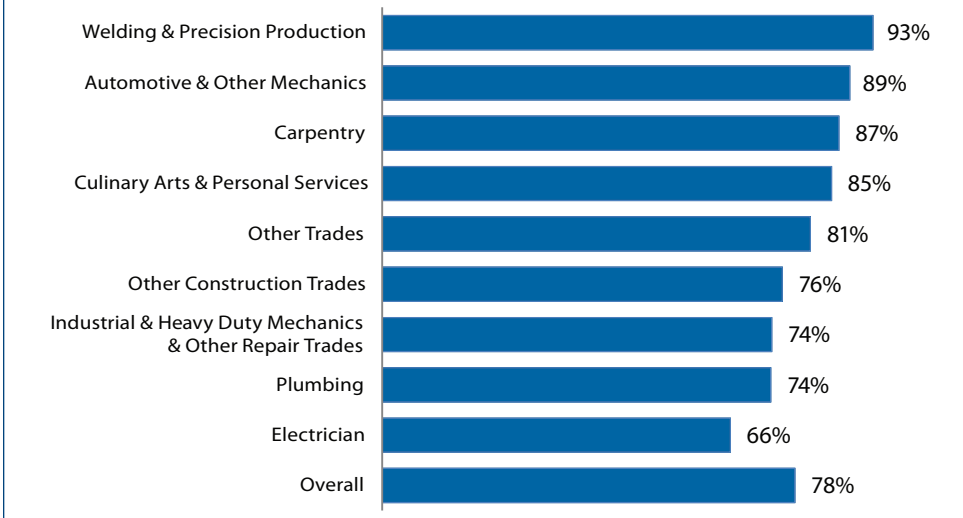


Note: Percentages are for former traditional apprentices who said their training helped them develop (*very well* or *well*) the referenced skill, excluding those who said *not applicable* (shown for 2014 only). Certain questions were not asked every year.

Former traditional apprentices thought their training helped them develop skills.

Skill development ratings varied by program group in several areas—tool and equipment use, mathematics, and teamwork. Despite the variability, Welding & Precision Production respondents were most likely to say their training helped them develop in each of these three areas.

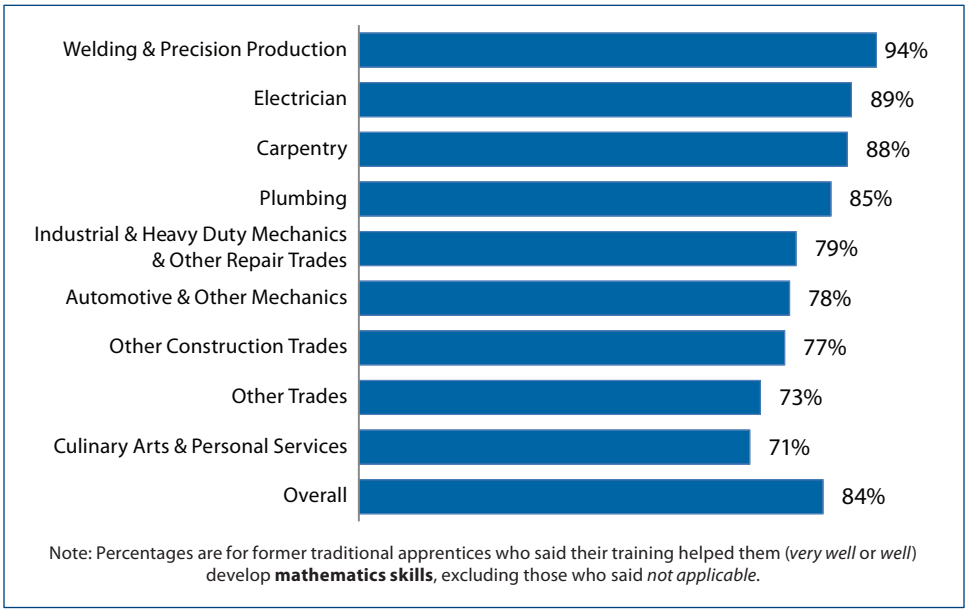
Welding & Precision Production respondents were much more likely than those from Electrician programs to say they were well-prepared to use field-appropriate tools and equipment.



Note: Percentages are for former traditional apprentices who said their training helped them (*very well* or *well*) develop **tool and equipment skills**, excluding those who said *not applicable*.

Ratings of the training for tool and equipment skill development ranged widely, with the highest ratings from Welding & Precision Production programs.

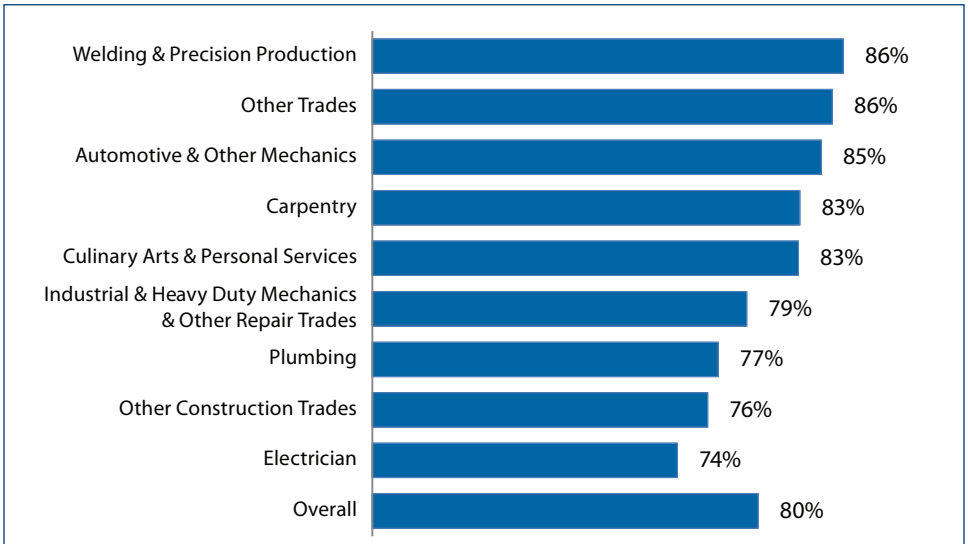
Skill development in mathematics was also rated differently across the program areas. Former Welding & Precision Production apprentices were most likely to say that their programs helped them develop field-appropriate mathematics skills, while those from Culinary Arts & Personal Services were least likely to report being helped to develop this skill.



Note: Percentages are for former traditional apprentices who said their training helped them (*very well* or *well*) develop **mathematics skills**, excluding those who said *not applicable*.

The training for mathematics skill development was rated highest by former Welding & Precision Production apprentices.

In both 2014 and 2013, former students' ratings of the development of teamwork skills varied across program groups. In 2014, former Welding & Precision Production students and those in Other Trades were most likely to report that they were well-prepared to work effectively with others, while former Electrician students were least likely to report that their training helped them develop this skill.



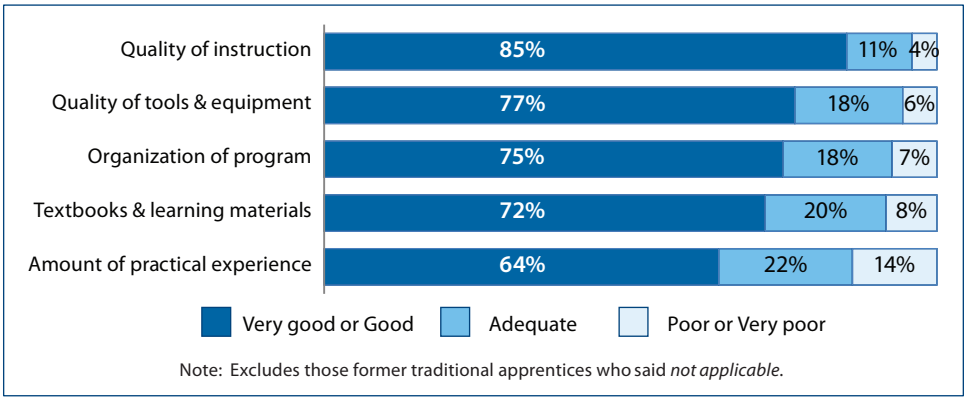
Note: Results for 2014 are presented. Percentages are for former traditional apprentices who said their training helped them (*very well* or *well*) develop **teamwork skills**, excluding those who said *not applicable*.

Training in teamwork skills was rated highest among Welding & Precision Production and Other Trades program groups.

How did respondents rate the quality of their in-school training?

Former traditional apprenticeship students were asked to rate aspects of their in-school training using a 5-point scale: *very good, good, adequate, poor,* or *very poor*. Very few respondents indicated that these items were *not applicable*.

Traditional apprenticeship respondents gave the highest ratings to the quality of instruction, followed by quality of tools and equipment and program organization. The results are consistent with those from 2013.

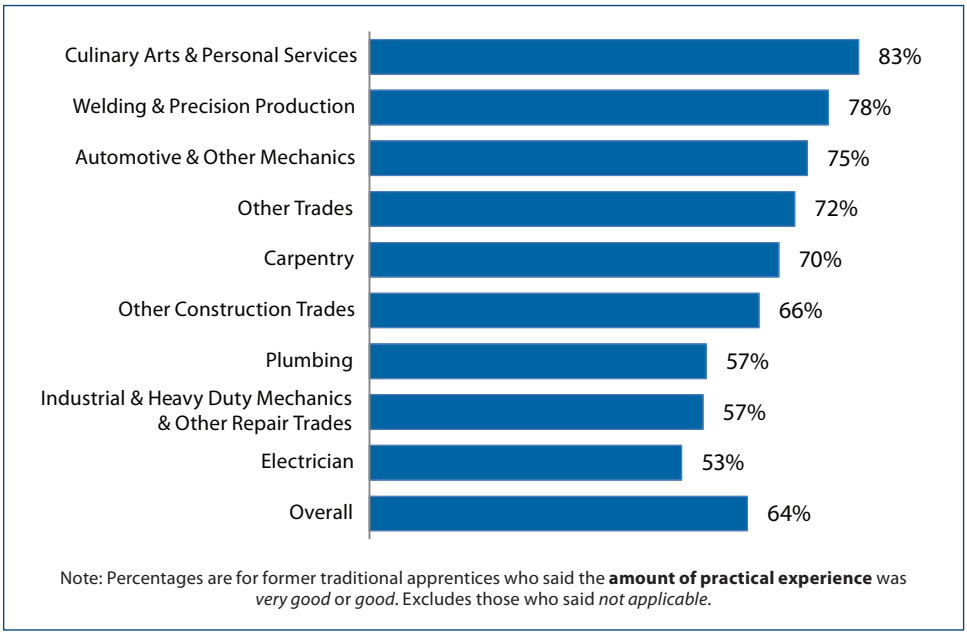


Note: Excludes those former traditional apprentices who said *not applicable*.

Former traditional apprentices gave high ratings to the quality of the instruction they received.

When asked about the amount of practical experience they received, their textbooks and learning materials, and the quality of tools and equipment used in their program, respondents from different program groups had varying things to say.

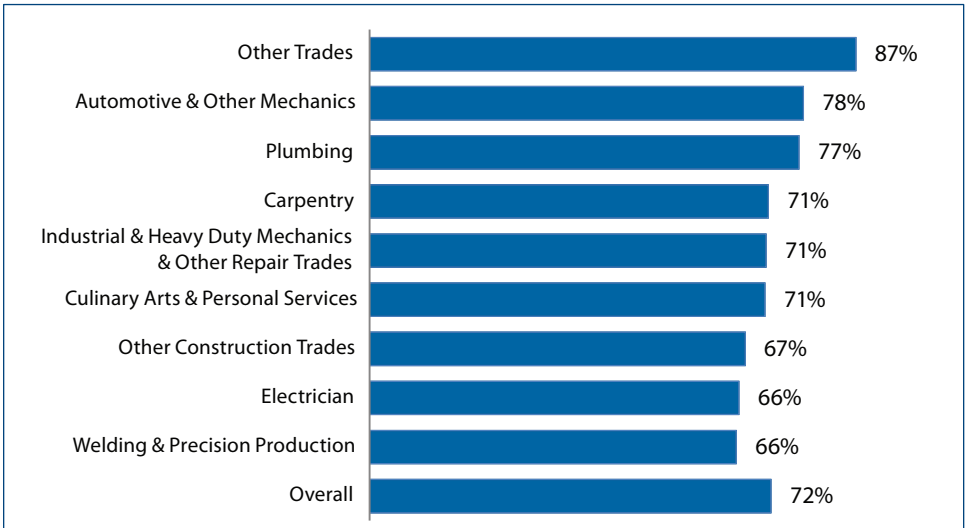
Former Electrician apprentices were least likely to say that the amount of practical experience they received was *very good* or *good*, while those from Culinary Arts & Personal Services programs were most likely to give positive ratings to this aspect of their in-school training.



Note: Percentages are for former traditional apprentices who said the **amount of practical experience** was *very good* or *good*. Excludes those who said *not applicable*.

Ratings of the amount of practical experience varied widely, with the highest ratings from former Culinary Arts & Personal Services apprentices.

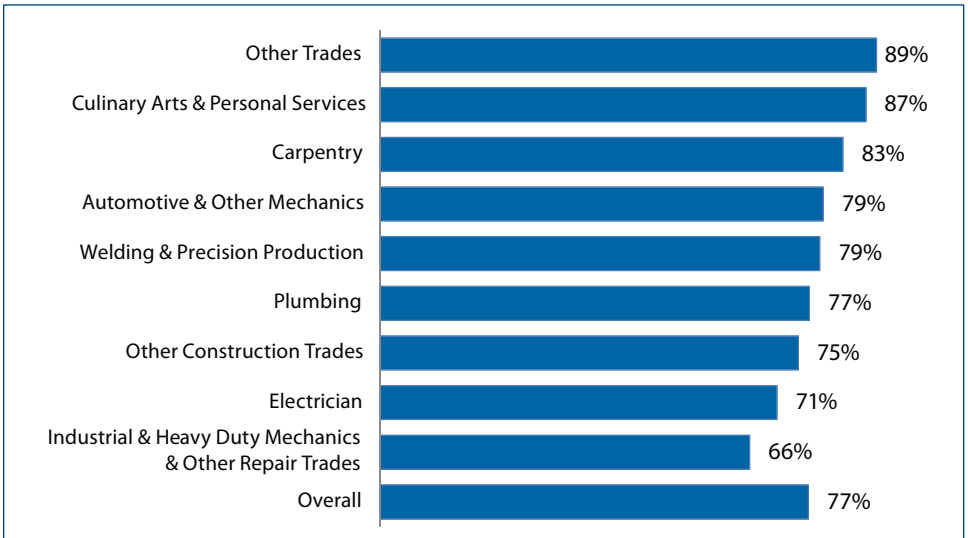
Ratings of textbooks and learning materials also varied across program groups. Almost nine out of ten respondents from Other Trades programs gave positive ratings to this aspect of their training. The lowest ratings were from Welding & Precision Production respondents.



Note: Percentages are for former traditional apprentices who said the **textbooks and learning materials** were *very good* or *good*. Excludes those who said *not applicable*.

Textbooks and learning materials were rated the most favourably by former traditional apprentices from Other Trades programs.

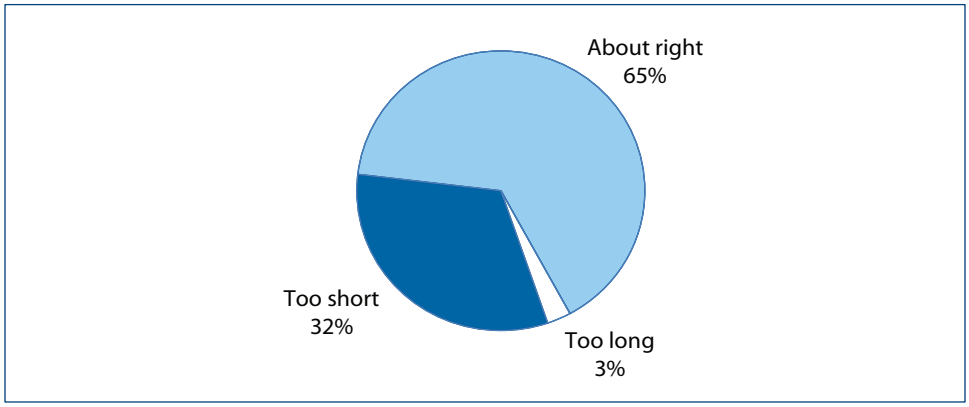
The quality of tools and equipment used in the programs were rated the most favourably by former apprentices from Other Trades programs. Industrial & Heavy Duty Mechanics & Other Repair Trades respondents were least likely to give positive ratings to this aspect of their program.



Note: Percentages are for former traditional apprentices who said the **quality of tools and equipment** was *very good* or *good*. Excludes those who said *not applicable*.

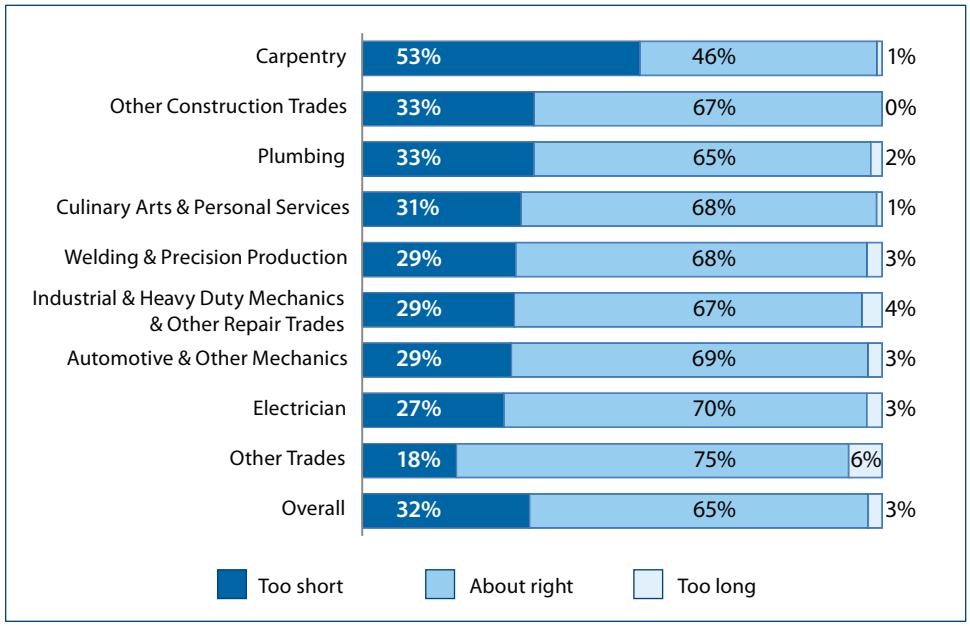
Ratings for the quality of tools and equipment varied across program groups. The greatest room for improvement was in Industrial & Heavy Duty Mechanics & Other Repair Trades.

Almost two-thirds of traditional apprenticeship respondents said the length of their in-school training was about right to cover the material taught. Almost all of the remaining respondents thought their program did not give them enough time to cover the material adequately; very few said their program was too long.



Almost one-third said their program was too short.

Respondents' perceptions of the adequacy of their program's length varied by program group. Over half of former Carpentry apprentices said their programs were too short to cover the material adequately. This was higher than any other program group by a wide margin.

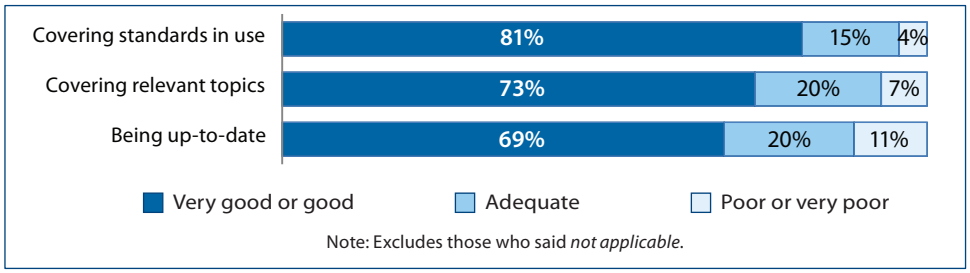


Former Carpentry apprentices were most likely to say their program was too short.

How did respondents rate the content of their in-school training?

Former traditional apprenticeship students were asked to rate the content of their in-school training in the following three areas: covering the standards being used in their field, covering the topics most relevant to their field, and being up-to-date. These areas were rated on a 5-point scale, from *very good* to *very poor*. The majority of respondents gave either a *very good* or *good* rating to each content area.

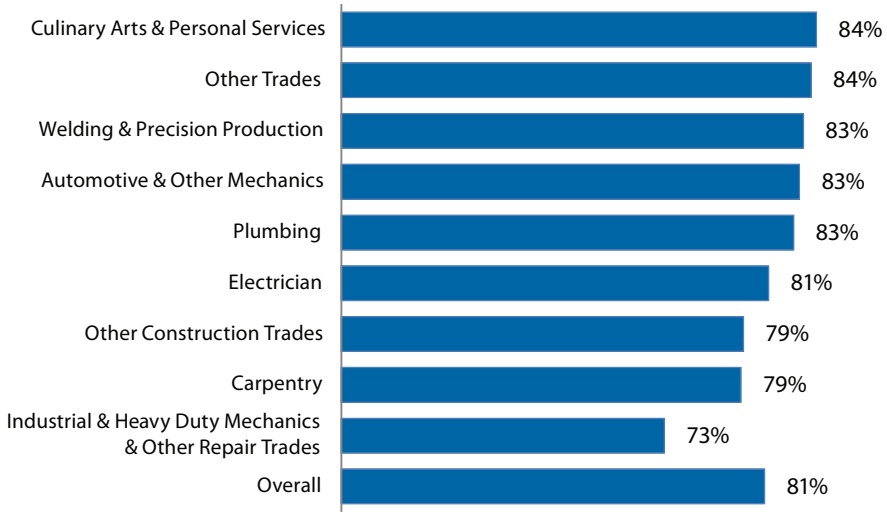
Approximately eight out of ten former traditional apprenticeship students said that their program's coverage of current standards was *very good* or *good*.



Note: Excludes those who said *not applicable*.

Coverage of current standards received the highest ratings.

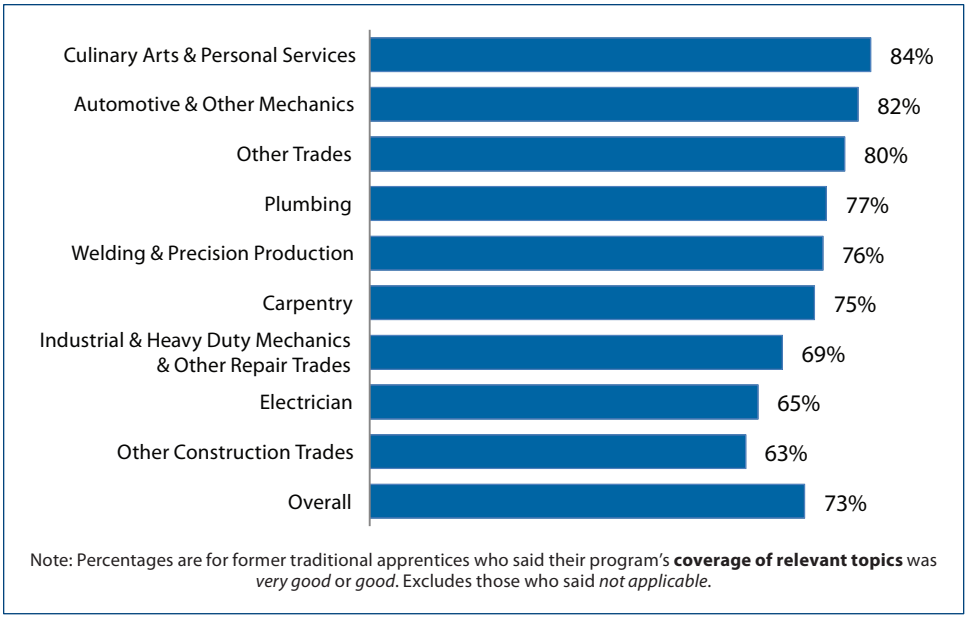
In 2014, former apprenticeship students' ratings of their program's coverage of current standards did not vary much by program group. Former Culinary Arts & Personal Services apprentices were most apt to say that their programs did a *very good* or *good* job of covering current standards, while those from Industrial & Heavy Duty Mechanics & Other Repair Trades were least likely.



Note: Percentages are for former traditional apprentices who said their program's **coverage of current standards** was *very good* or *good*. Excludes those who said *not applicable*.

Ratings of their program's coverage of current standards varied little across most program groups.

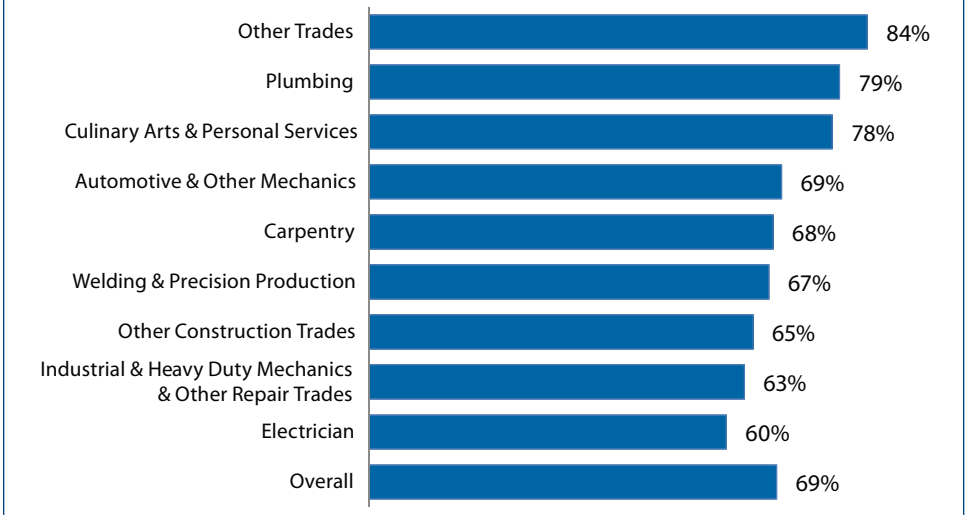
In 2014, as in the previous year, there were differences among the program groups regarding the extent to which relevant topics were being covered. Former Culinary Arts & Personal Services apprentices were most likely to report that relevant topics were addressed by their program, while those from Other Construction Trades were least likely.



Note: Percentages are for former traditional apprentices who said their program's **coverage of relevant topics** was *very good* or *good*. Excludes those who said *not applicable*.

Former Culinary Arts & Personal Services apprentices gave the highest ratings when asked about their program's coverage of relevant topics.

In both 2014 and 2013, the extent to which former apprentices thought their program was up-to-date varied by program group. While more than eight out of ten respondents from Other Trades said that their program did a *very good* or *good* job of staying current, only six out of ten respondents from Electrician programs thought this was true.



Note: Percentages are for former traditional apprentices who said the degree to which their program was **up-to-date** was *very good* or *good*. Excludes those who said *not applicable*.

Ratings of programs being up-to-date varied by program group.

How could in-school training be improved?

Suggestions for improving in-school training focussed on the need for longer programs, updating, more practical experience, and better instruction.

The former traditional apprentices surveyed were asked how the training in their programs could be improved. The majority of respondents (88 percent) answered the question, and of those who provided a response, 24 percent said the program was fine or needed no improvement. Many of the respondents who made suggestions for improvement commented on more than one topic. Selected responses are shown below.

Almost one-quarter (22 percent) of those who offered a suggestion said that their program should be longer or that they needed more time.

> *Spend more time on every topic...[Y]ou should space it out a bit longer and get more in-depth...*
>
> *Make it one or two weeks longer…The amount of time spent on a project or learning skills…didn't give us a lot of time to use most of the machines…*
>
> *Provide more time…especially for studying for the IP at the end.*
>
> *A week or two longer would be perfect. Everything was very, very rushed. I felt like we needed a couple more weeks.*

At least 20 percent of the former apprentices who made a comment thought that their in-school training facilities or material were outdated.

> *Facilities need to be updated.*
>
> *Upgrade the text books and update the materials…and curriculum.*
>
> *More updated equipment.*
>
> *Getting more up-to-date technological tools…*

Almost one-fifth (17 percent) of respondents who made a suggestion indicated that they wanted more hands-on experience.

> *A bit more hands-on work, experience, shop time.*
>
> *Put more emphasis on practical information. More hands-on training as opposed to just in the books, theory.*
>
> *More time in labs working on running equipment and less time sitting in [class] rooms.*

Approximately 14 percent said that improvements to equipment, technology, computers or tools were needed. The majority of the comments related to tools and equipment suggested that the tools should be more up-to-date, though there were also a number of comments about the need for better tools, more variety, and more time with tools.

> *More equipment, more time on the equipment.*
>
> *Provide newer learning tools, better machinery, more variety of tools.*
>
> *Provide different kinds of hands-on projects, using different tools…*
>
> *More new technology…*

Another 13 percent of the respondents who commented made suggestions about their exams and testing.

> *Prepare the students better for the Red Seal exam.*
>
> *The material could be more closely linked to the interprovincial exam.*
>
> *More time in class time to do mock exams and prep.*
>
> *A week or two longer would be perfect, especially for studying for the IP at the end.*

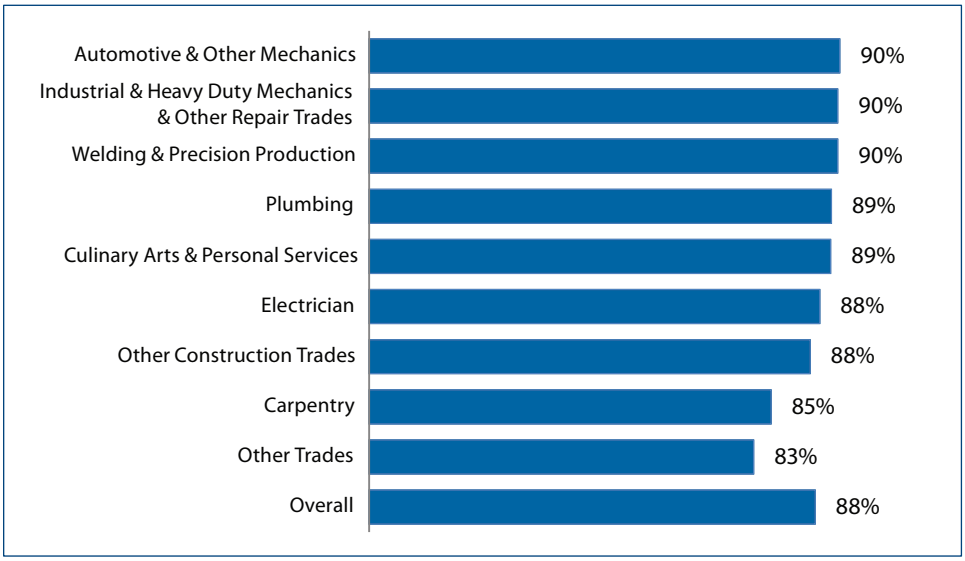
More than one out of ten (12 percent) of the former apprentices who made a suggestion spoke of needed improvements to instruction or teaching.

> *More one-on-one time with the teacher.*
>
> *Have the same instructor throughout [the course].*
>
> *Instruction could be better.*
>
> *More instructors.*

How many received certification?

The majority of former traditional apprenticeship students said they received their British Columbia Certificate of Qualification (C of Q)—many with Interprovincial or Red Seal endorsement. To receive certification, apprentices must successfully complete a number of work-based training hours, complete or successfully challenge all required levels of technical training, pass examinations, and be recommended for certification by their employer-sponsors (also referred to as employer sign-off).

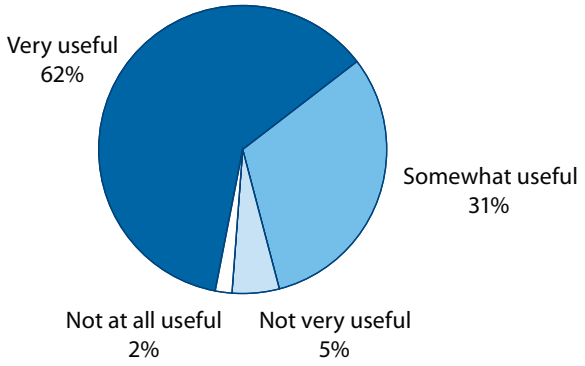
Certification rates were fairly consistent across program groups. Between eight and nine out of ten former apprentices had received their C of Q by the time of the survey.



Overall, about nine out of ten apprentices received their C of Q.

Respondents were asked how useful the knowledge and skills they gained from in-school training were in preparing to write their certification examinations (whether they had written them yet or not). Most (93 percent) said that their training was *very useful* or *somewhat useful* when they were preparing to write their certification exam. Very few said the question was *not applicable*.

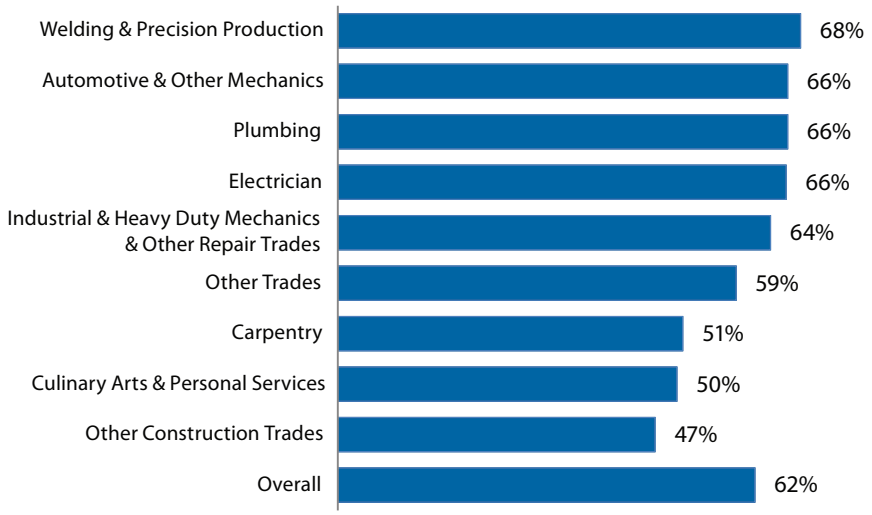
In-school training was useful in certification exam preparation.



Note: Excludes those who said *not applicable* (2% of total).

Across program groups, the proportion who said the knowledge and skills they gained were *very useful* in their certification exam preparation ranged from just over two-thirds of former apprentices in Welding & Precision Production to slightly less than half of those in Other Construction Trades.

About half to two-thirds said their in-school training was very useful in preparing for their C of Q exam.

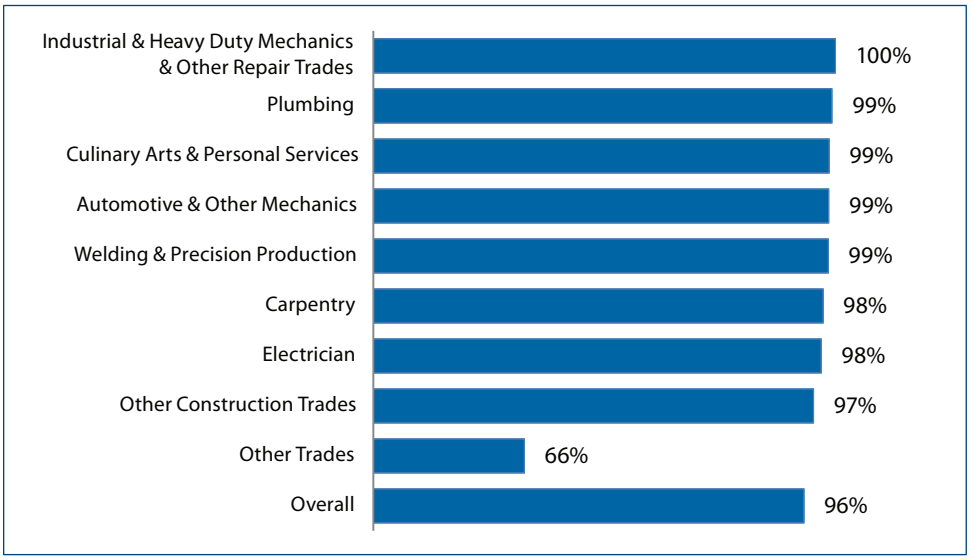


Note: Percentages are for former traditional apprenticeship students who said the knowledge and skills they gained were *very useful* to them in preparing for their certification exams. Excludes those who said *not applicable*.

Workplace Experiences

Former students were asked if they had been employed as an apprentice or had a work placement outside their institution. Those who had workplace experiences were asked to rate their overall satisfaction with their workplace experience and to say how related their workplace experience was to their in-school training.

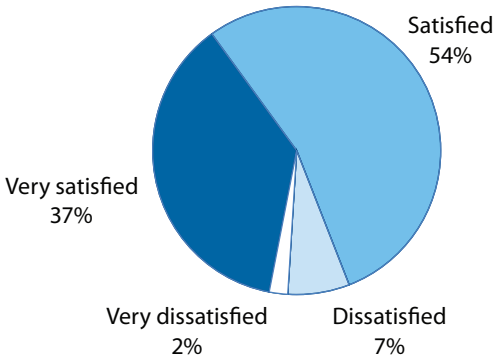
Most said they had been employed as an apprentice or had a work placement outside of the institution where they took their training. Workplace participation rates varied by program group. While almost all former apprentices from eight of the program groups said they did a work placement, just two-thirds of those from Other Trades reported this workplace experience. The Other Trades program group includes Heavy Equipment Operator programs. About half of the respondents in these programs were not employed as an apprentice nor did they have a work placement outside of their institution.



Most respondents had been employed as an apprentice or had a work placement outside their institution.

How satisfied were respondents with their workplace training?

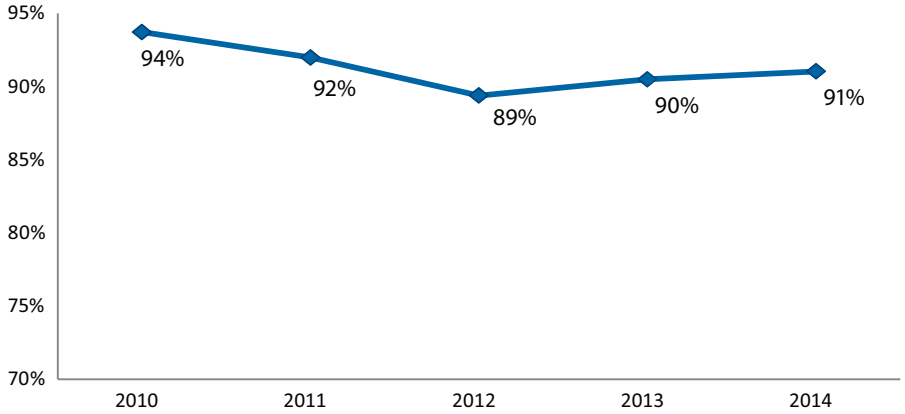
Most former traditional apprenticeship students were *very satisfied* or *satisfied* with their overall workplace training experience.



Note: Based on those who were employed as an apprentice or had a work placement outside of their institution.

Former students were generally satisfied with their overall workplace training experience.

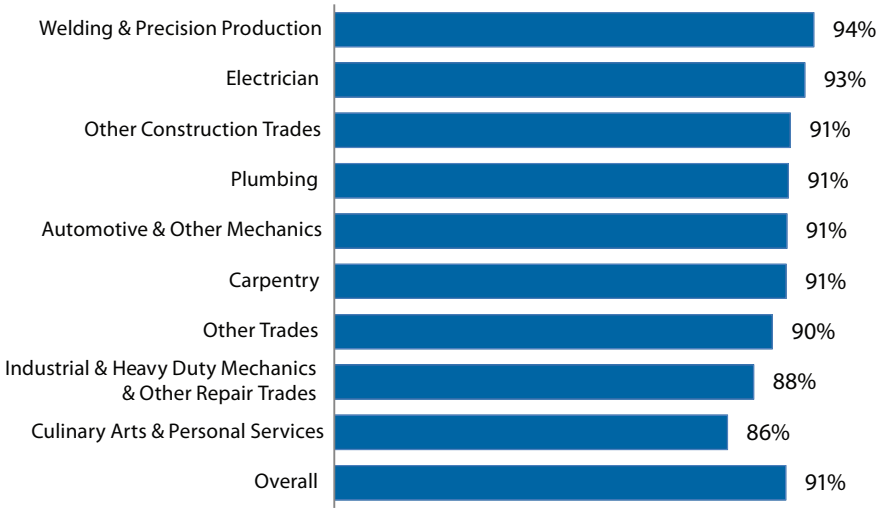
This level of satisfaction with workplace training is consistent with that reported in 2013, but has fluctuated somewhat over time.



Note: Percentages are for former traditional apprenticeship students who said they were *very satisfied* or *satisfied* with their workplace training experience. Based on those who indicated they were employed as an apprentice or had an external workplace training experience. Since ACE IT programs were not identified in the cohort before 2013, the earlier percentages may include small numbers of respondents from these programs.

Satisfaction levels have varied over time.

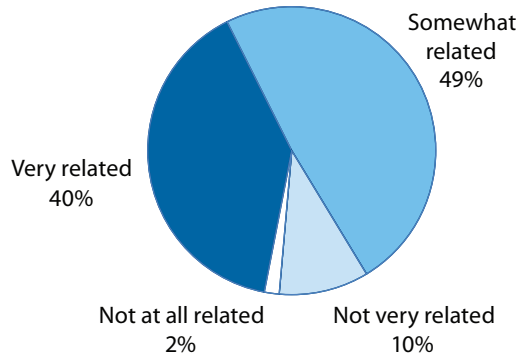
Levels of satisfaction with overall workplace experiences were consistently high across program groups.



Note: Percentages are for former traditional apprenticeship students who said they were *very satisfied* or *satisfied* with their workplace training experience. Based on those who indicated they were employed as an apprentice or had an external workplace training experience.

Satisfaction levels were high in all program groups.

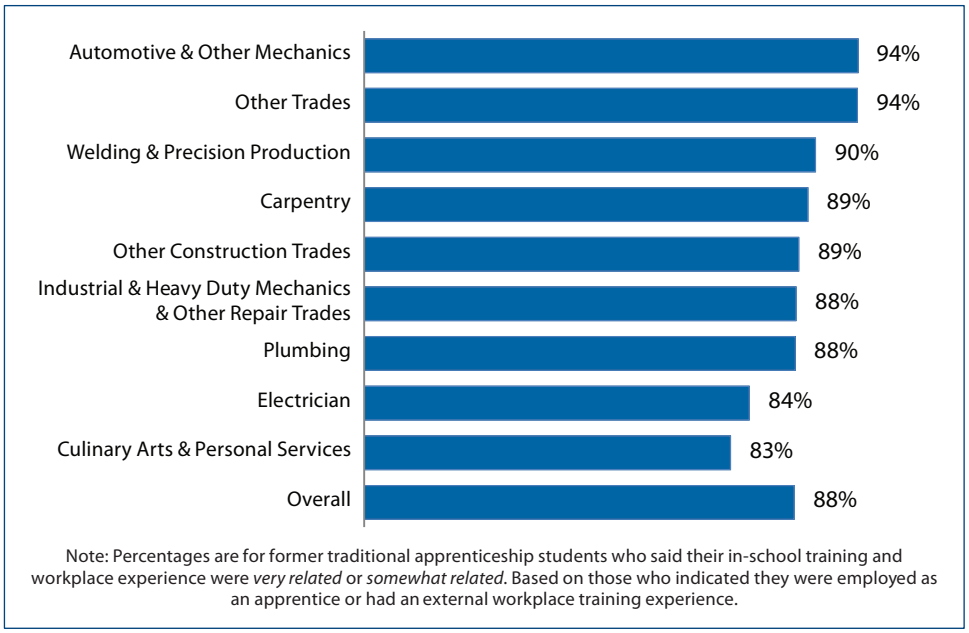
The majority of respondents said their in-school training was *very related* or *somewhat related* to their workplace experience. Very few said their in-school and workplace training were *not at all related*.



Note: Based on those who indicated they were employed as an apprentice or had an external workplace training experience.

In-school training was seen as related to workplace experiences.

Respondents from Automotive & Other Mechanics and from Other Trades program groups were the most likely to say that their in-school training was *very related* or *somewhat related* to their workplace experience.

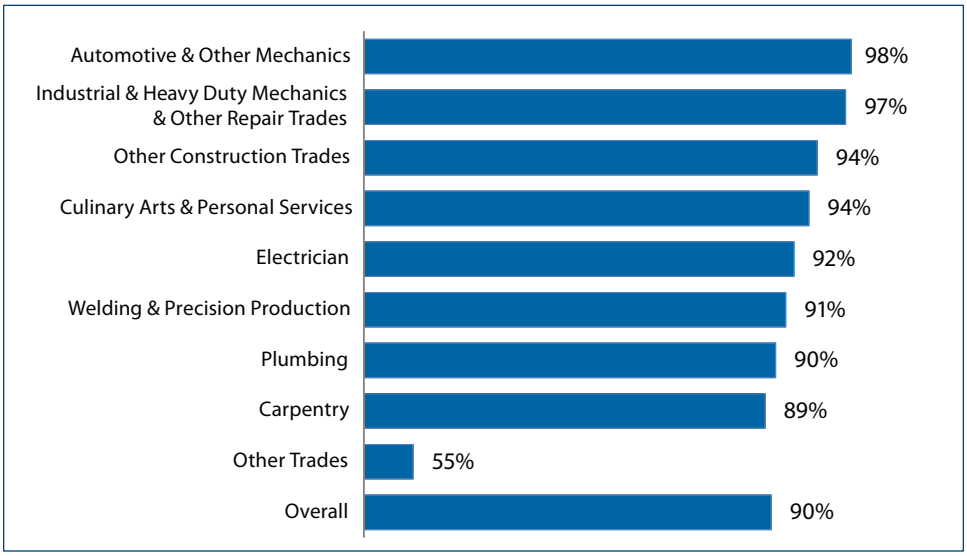


Note: Percentages are for former traditional apprenticeship students who said their in-school training and workplace experience were *very related* or *somewhat related*. Based on those who indicated they were employed as an apprentice or had an external workplace training experience.

Former Automotive & Other Mechanics and Other Trades apprentices were most likely to say their in-school and workplace training were related.

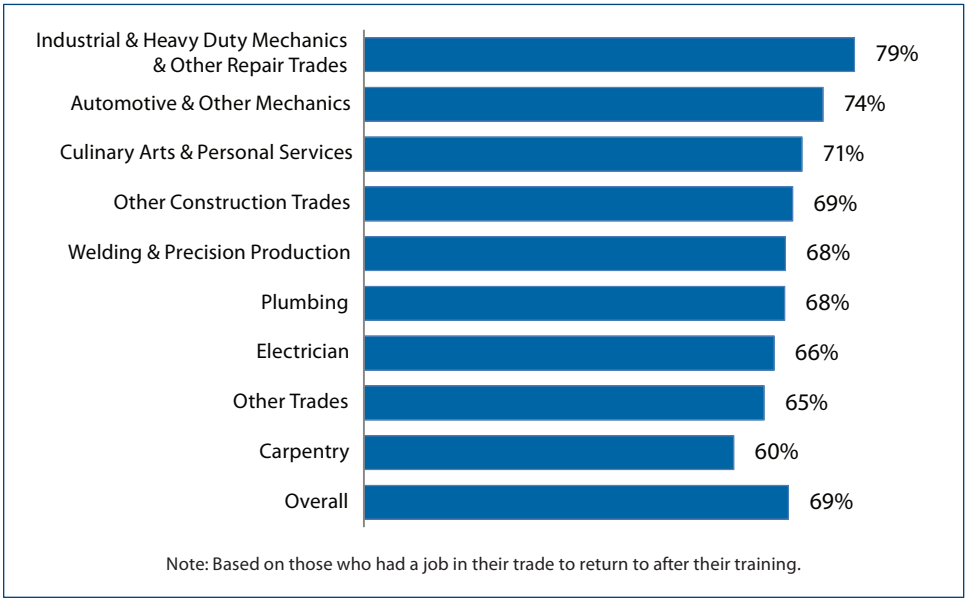
Did respondents return to a job in their trade after finishing school?

Overall, nine out of ten former traditional apprenticeship students had a job in their trade to go back to after their final in-school training. Almost all former Automotive & Other Mechanics apprentices and Industrial & Heavy Duty Mechanics & Other Repair Trades apprentices returned to a job in their trade. The rate was much lower for those from Other Trades programs; the majority of respondents who were in Heavy Equipment Operator programs did not have a trade-related job to return to after their training.



In most program groups, about nine out of ten had a job in their trade to go back to after their final in-school training.

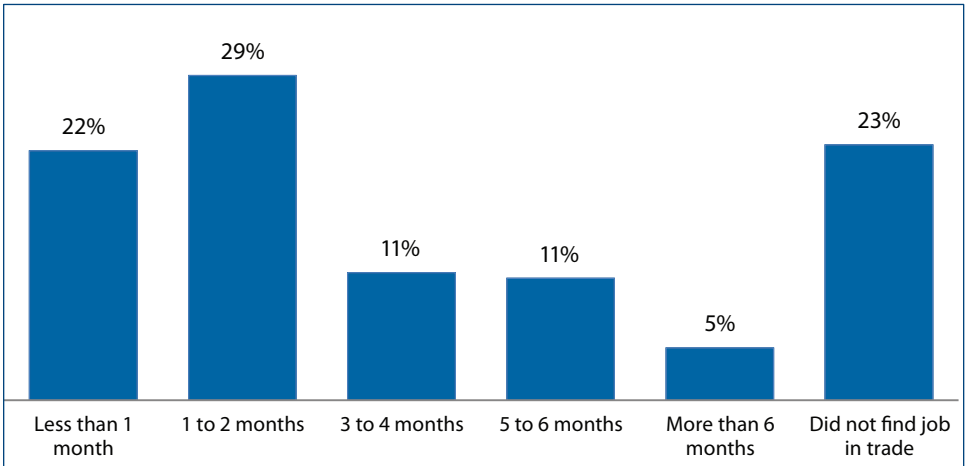
Almost seven out of ten of the former students who said they had a job to return to after their training were still working for the same employer at the time of the survey. Continuing with the same employer varied by program group, with Industrial & Heavy Duty Mechanics & Other Repair Trades respondents being most likely to remain with their previous employer, and those from Carpentry being the least likely.



Note: Based on those who had a job in their trade to return to after their training.

The majority who had a job to return to after their training were still working for the same employer at the time of the survey.

Of those who did ***not*** have a job in their trade to return to after completing their in-school training, about half found a job in their trade within two months.



Note: Based on the 10% of former traditional apprentices who did not have a job in their trade to return to after completing their in-school training.

About half of those who did not return to a job in their trade found one within two months.

Employment

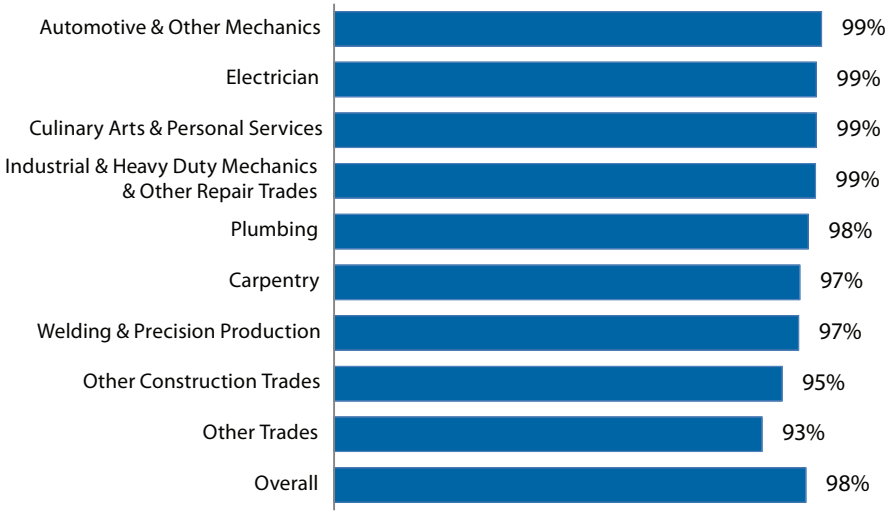
Former apprenticeship students were asked a number of questions to determine their labour force status at the time of the survey. Employed respondents were asked about their occupation, hours of work, earnings, and the relation of their current employment to their apprenticeship training.

What was the labour force participation of respondents?

Almost all (98 percent) of the former traditional apprenticeship students surveyed were in the labour force—that is, they were either employed or looking for work. In comparison, the labour force participation rate (unadjusted) for the B.C. population aged 20 to 54 was 83 percent, in March of 2014.[8]

The 2014 and 2013 labour force participation rates among former apprentices were comparable. Reported labour force participation did not vary by region.[9]

The labour force participation rate for each program group was high and varied only minimally across groups.



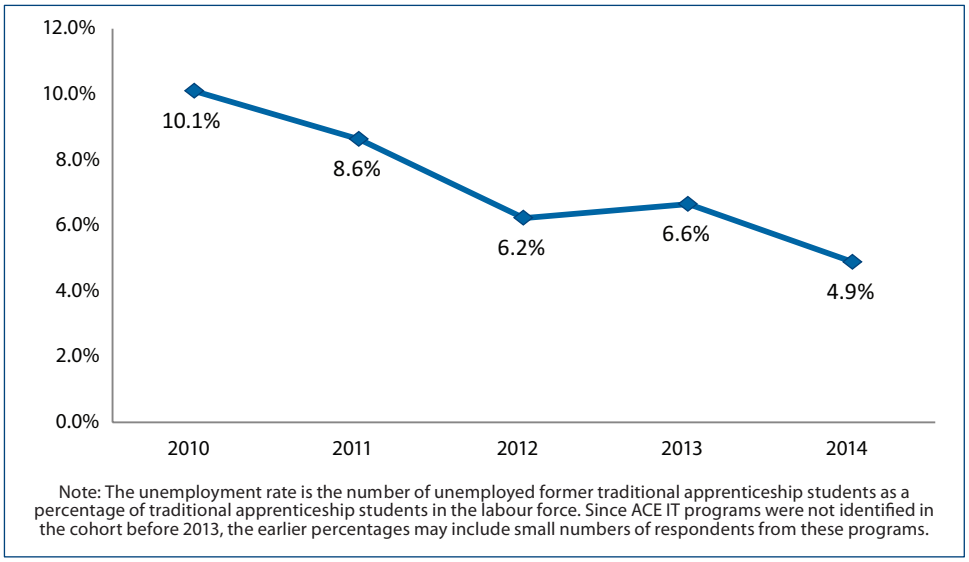
Note: Labour force participation rate refers to those who are employed or looking for work as a percentage of all former traditional apprenticeship respondents.

Labour force participation was high.

8 Source: Statistics Canada, Labour Force Survey, 2014.

9 The rates were compared by the B.C. Development Regions, which are described here: http://www.bcstats.gov.bc.ca/StatisticsBySubject/Geography/ReferenceMaps/DRs.aspx. Coding into regions was based on respondents' postal codes at the time of the survey. The location of 6 percent of respondents was unknown, and 2 percent of respondents were located outside of British Columbia. As such, these respondents were not included in the calculation of percentages for region of residence.

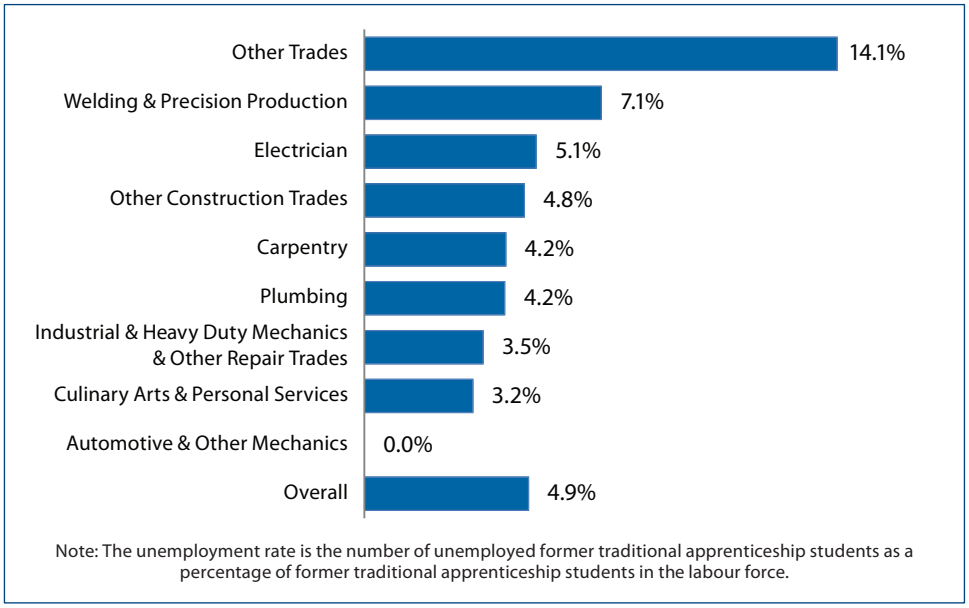
The unemployment rate—the number unemployed as a percentage of former traditional apprentice respondents in the labour force—was 4.9 percent. This rate has changed over time, decreasing just over 5 percentage points since 2010.



Note: The unemployment rate is the number of unemployed former traditional apprenticeship students as a percentage of traditional apprenticeship students in the labour force. Since ACE IT programs were not identified in the cohort before 2013, the earlier percentages may include small numbers of respondents from these programs.

Unemployment rates have dropped over time.

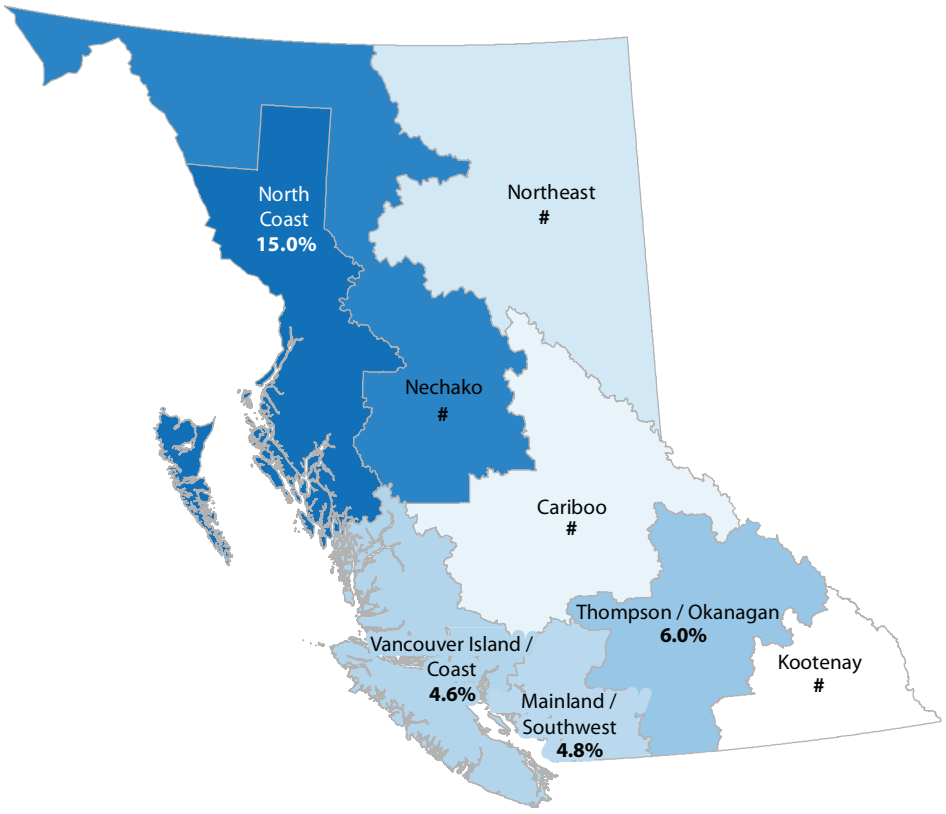
The unemployment rate varied significantly by program group, with the rate for Other Trades being the highest and the rate for Automotive & Other Mechanics being the lowest at 0.0%.



Note: The unemployment rate is the number of unemployed former traditional apprenticeship students as a percentage of former traditional apprenticeship students in the labour force.

Unemployment rates varied widely across program groups.

The unemployment rate also varied by respondents' current region, with the highest rate being in the North Coast and the lowest in the Vancouver Island/Coast region.[10,11] Regional unemployment rates changed between 2013 and 2014, particularly in the North Coast (2013: 27.8 percent; 2014: 15.0 percent) and Vancouver Island/Coast (2013: 8.7 percent; 2014: 4.6 percent) regions.



Note: Percentages are 2014 unemployment rates for each B.C. Development Region. Coding into regions was based on respondents' postal codes at the time of the survey. Respondents whose location was unknown or outside of B.C. at the time of the survey were not included in the analysis. The unemployment rate is the number of unemployed former traditional apprenticeship students as a percentage of traditional apprenticeship students in the labour force. Percentages based on low numbers have been masked to preserve confidentiality.

Unemployment among former traditional apprentices was highest in the North Coast region.

What were former students' employment outcomes?

At the time of the survey, 93 percent of former traditional apprentices were employed. In approximately the same time period, March 2014, the employment rate (unadjusted) for the B.C. population aged 20 to 54 was 78 percent.[12]

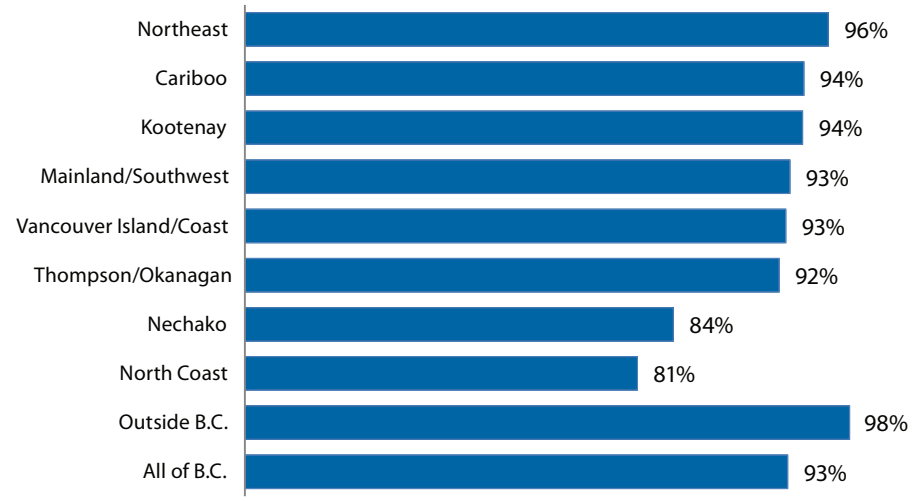
10 The regions are the B.C. Development Regions, described here: http://www.bcstats.gov.bc.ca/StatisticsBySubject/Geography/ReferenceMaps/DRs.aspx. Coding into regions was based on respondents' postal codes at the time of the survey. The location of 6 percent of respondents was unknown, and 2 percent of respondents were located outside of British Columbia. As such, these respondents were not included in the calculation of percentages for region of residence.

11 Cariboo: n = 114; Kootenay: n = 79; Mainland/Southwest: n = 1,013; Nechako: n = 35; North Coast: n = 60; Northeast: n = 74; Thompson/Okanagan: n = 199; Vancouver Island/Coast: n = 238. Percentages based on small n's should be interpreted with caution.

12 Source: Statistics Canada, Labour Force Survey, 2014.

The employment rate—the number of employed individuals expressed as a percentage of all traditional apprenticeship respondents—varied somewhat by region.[13] The greatest variability was seen in the northern regions—the highest employment rate was in the Northeast and the lowest was in the North Coast.[14]

Employment rates varied somewhat across regions.



Note: The employment rate is the number of employed individuals expressed as a percentage of all traditional apprenticeship respondents. The regions shown are the B.C. Development Regions. Coding into regions was based on respondents' postal code at the time of the survey. The location of 6% of respondents was unknown and, as such, these respondents were not included. Only 2% of traditional apprenticeship respondents were in other Canadian provinces or the U.S.A. at the time of the survey.

Most employed respondents held just one job, and this job tended to be a permanent position, as opposed to a temporary one. Further, almost all respondents were employed full-time, and most were employed by someone else rather than being self-employed.

Employment was typically full-time, in a permanent position, and at a single job.

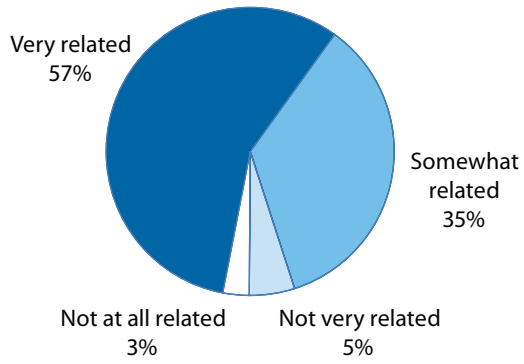
Note: Based on employed traditional apprenticeship respondents.

13 The regions are the B.C. Development Regions, described here: http://www.bcstats.gov.bc.ca/StatisticsBySubject/Geography/ReferenceMaps/DRs.aspx. The location of 6 percent of respondents was unknown and, as such, these respondents were not included in the calculation of percentages for region of residence.

14 Cariboo: n = 118; Kootenay: n = 83; Mainland/Southwest: n = 1,037; Nechako: n = 37; North Coast: n = 63; Northeast: n = 75; Thompson/Okanagan: n = 203; Vancouver Island/Coast: n = 245. Percentages based on small n's should be interpreted with caution.

How related were former apprentices' jobs to their in-school training?

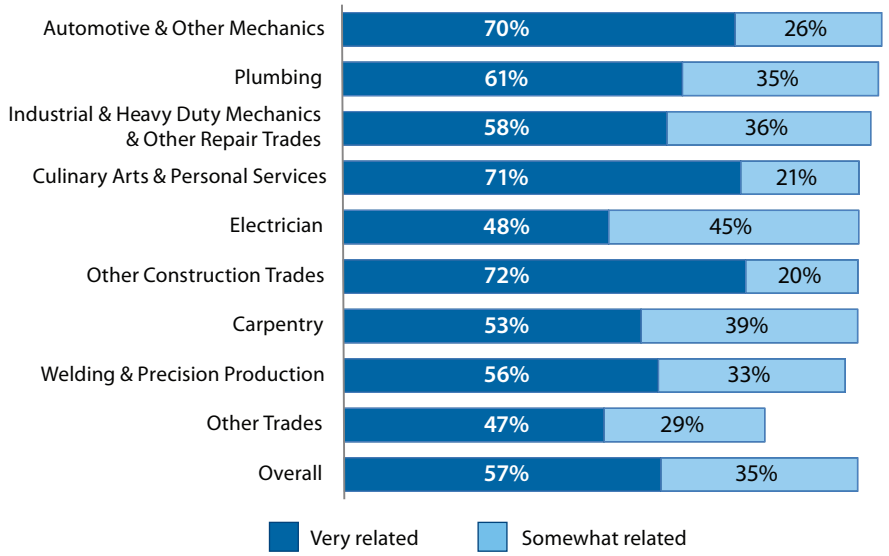
Employed respondents were asked to judge the extent to which their job was related to their in-school training. If they had more than one job,[15] they were asked to think about their main job—that is, the one at which they worked the most hours. Respondents' training was highly related to their employment—more than nine out of ten employed respondents said their job was *very related* or *somewhat related* to their in-school training.



Note: Based on employed former traditional apprenticeship students.

Jobs were seen as related to in-school training.

In most program areas, former traditional apprenticeship students typically said that their jobs were related to their training. However, the proportion who said their job was *very related* to their training varied across program groups. While almost three-quarters of apprentices from Other Construction Trades programs reported their jobs were *very related* to their training, fewer than half of those from Other Trades reported this degree of relationship.



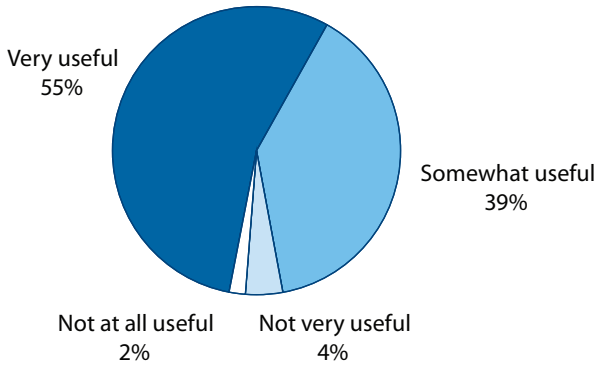
Note: Based on employed former traditional apprenticeship students.

Almost three-quarters of respondents from Other Construction Trades and Automotive & Other Mechanics programs said their job was very related to their training.

15 Approximately 4 percent of employed respondents had two jobs, and only 1 percent had three or more jobs.

How useful were the knowledge and skills gained by former students?

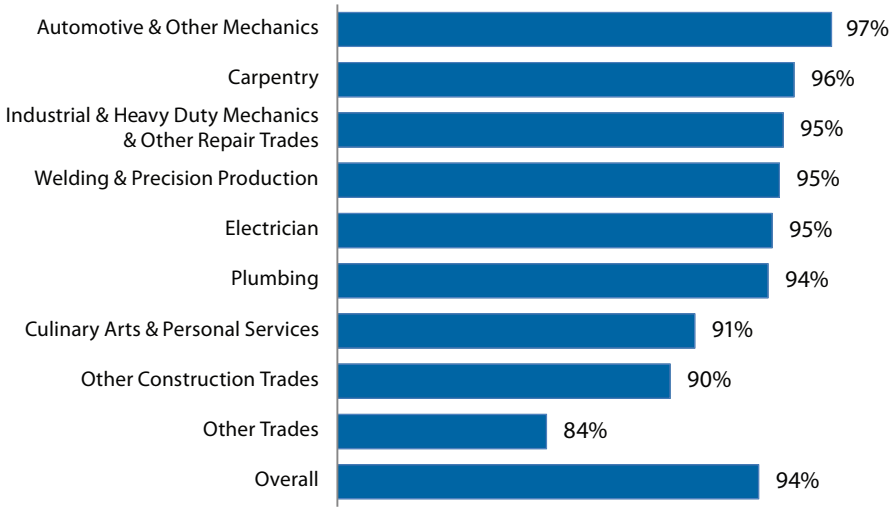
Former traditional apprentices were also asked how useful the knowledge and skills they gained through their studies had been in performing their job. A very large majority said their studies had been *very* or *somewhat useful.*



Note: Based on employed former traditional apprenticeship students.

Knowledge and skills gained in training were seen as useful when performing their job.

Across program groups, the proportion of former traditional apprentices who said the knowledge and skills they gained were useful in the performance of their job varied. Almost all former apprentices from Automotive & Other Mechanics programs said the knowledge and skills were useful, while just eight out of ten from Other Trades said this was the case.



Note: Percentages are for those who indicated the knowledge and skills they gained through their studies was *very useful* or *somewhat useful* in the performance of their job. Based on employed former traditional apprenticeship students.

Almost all Automotive & Other Mechanics believed that the knowledge and skills they gained were useful in their job performance.

What occupations did former apprenticeship students have?

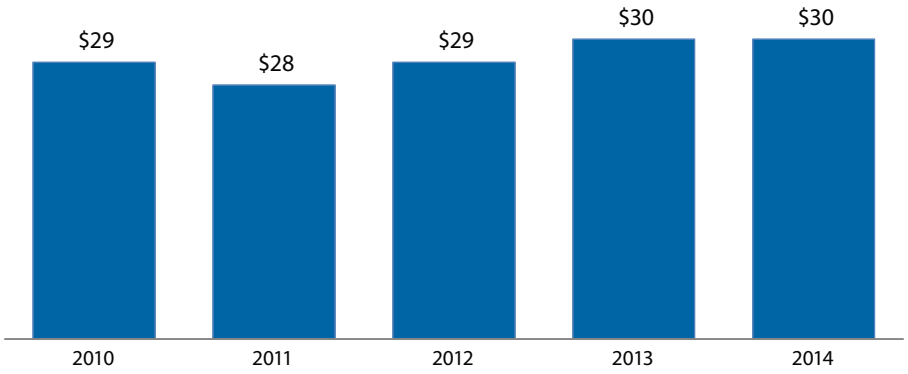
A substantial majority (86 percent) of the employed respondents were working in Trades, Transport, and Equipment Operators and Related Occupations.[16] The remainder of the respondents were spread across the other occupational categories, with 6 percent in Sales and Service Occupations.[17]

There was a strong relationship between former students' apprenticeship programs and their occupations at the time of the survey. For example, almost eight out of ten of those who apprenticed in Automotive & Other Mechanics programs were employed as Motor Vehicle Mechanics.[18] (For detailed results see Appendix E: Occupations by Program Group.)

What was the wage of employed respondents?

Employed former apprentices were asked to report their gross salary or wage before deductions. If they had more than one job, they were asked to report the wage from their main job (the one at which they worked the most hours). Respondents could report their wages by whatever time period they wished (hour, day, week, and so on); an *hourly* wage was derived from the information provided and confirmed by the respondent during the interview.

At the time of the survey, former traditional apprentices were earning a median hourly wage of $30. This is consistent with this group's median hourly wage in 2013.[19]



Note: Median wage amounts are for employed former traditional apprentices, over time. Since ACE IT programs were not identified in the cohort before 2013, the earlier calculations may include small numbers of respondents from these programs.

Median hourly wage for former traditional apprentices was $30 in 2014.

16 The 2011 National Occupational Classification (NOC) system, which is a taxonomy of occupations in the Canadian labour market, was used to assign codes (4-digit codes) to the occupations former students had at the time of the survey. The codes and their associated names are used to describe occupations and to aggregate them into occupational categories. The grouping of occupations called "Trades, Transport, and Equipment Operators and Related Occupations" is at the highest or most aggregated level (1-digit). The respondents who had more than one job were asked to describe their main job.

17 The majority of respondents who were employed in Sales and Service Occupations were from Culinary Arts & Personal Services programs.

18 This grouping of occupations is at the 2011 3-digit NOC level.

19 Median wage amounts have not been adjusted for inflation.

Among the 10 most common occupations for former traditional apprenticeship students,[20] the median hourly wage ranged from $37 for Technical Occupations in Electronics & Electrical Engineering to $17 for Chefs & Cooks.

Median hourly wage for the ten most common occupations ranged from $17 to $37.

Occupation	Respondents	Median Wage
Technical Occupations in Electronics & Electrical Engineering	20	$37
Machinery & Transportation Equipment Mechanics (Exc. MV)	154	$36
Electrical Trades & Telecommunication Occupations	304	$35
Metal Forming, Shaping & Erecting Occupations	91	$34
Contractors & Supervisors, Trades & Related Workers	132	$33
Plumbers, Pipefitters & Gas Fitters	141	$30
Carpenters & Cabinetmakers	181	$28
Other Construction Trades	52	$28
Motor Vehicle Mechanics	124	$28
Chefs & Cooks	40	$17

Note: Wages shown are medians; the occupation groups are at the NOC 3-digit level. The occupations shown are the top ten, accounting for 80 % of the employed traditional apprenticeship respondents who supplied occupation and income information.

20 Of those who provided occupation and income information.

Conclusion

Traditional apprenticeship training has long been a staple of post-secondary education in British Columbia. This training is a key emphasis in B.C.'s Skills for Jobs Blueprint, as an estimated 43 percent of the one million job openings expected in the province by 2022 will require a trades or technical background. The Apprenticeship Student Outcomes (APPSO) Survey provides much-needed program evaluations and labour market outcomes, which are used for policy and program development and to ensure accountability.

The 2014 APPSO Survey collected information from former apprenticeship students who completed the final level of technical training courses offered by public or private institutions. This included those in traditional apprenticeship programs, progressive credential programs, and ACE IT programs. This report focusses on former traditional apprenticeship students.[21]

Slightly more than three-quarters of the former traditional apprentices studied in public post-secondary institutions; less than one-quarter were from private training institutions.

Former traditional apprentices were predominantly men, and men made up the largest proportion of each program group. Women who completed traditional apprenticeships were typically in Culinary Arts & Personal Services programs.

Almost half of the former traditional apprentices surveyed had some previous post-secondary education, and many already had a trades credential.

As in previous years, former traditional apprentices reported high levels of overall satisfaction with their in-school training. They also gave positive ratings to many aspects of their in-school training. In particular, they said their program helped them develop valuable professional skills, such as the abilities to use mathematics appropriate to their field, analyse and think critically, work effectively with others, and read and comprehend relevant materials.

Former traditional apprentices gave high ratings to the quality of instruction. They also gave positive ratings to the quality of tools and equipment and the organization of the program. Former apprentices were also likely to say the content of their training—especially covering the standards being used in their fields and covering the topics most relevant to their fields—was *very good* or *good*.

Almost two-thirds of former traditional apprenticeship students said the length of their in-school program was about right, while almost one-third said it was too short. The percentage who said their program was too short varied by program group, with former Carpentry students being the most likely to say their in-school training was not long enough.

21 Key results for former students of progressive credential and ACE IT programs are reported in the Appendices.

A majority of former traditional apprentices offered suggestions to improve in-school training. Many comments focussed on the need for more time to cover the material presented, supporting the finding that a significant number of respondents thought the program was too short.

When specifically asked to rate the content of their program with regard to being up-to-date, seven out of ten former traditional apprentices gave positive ratings. Despite this, a number of the suggestions for improvement indicated that the in-school training needed updating.

By the time of the survey, almost nine out of ten former traditional apprentices had received their Certificate of Qualification. Whether they had their certificate or not, the majority said that what they gained from their training was *very useful* or *somewhat useful* to them in preparing to write the certification exam.

Most of the former traditional apprentices said they had been an apprentice or had an outside work placement. The respondents who had taken Other Trades programs were the most likely to say they did not work outside their institution for their workplace training. Nine out of ten had a job in their trade to go back to right after their training, and almost seven out of ten of these former traditional apprentices were still working for the same employer at the time of the survey.

Most of the former apprenticeship students surveyed were satisfied with their workplace training experience and a very large majority said their in-school technical training was *very related* or *somewhat related* to their workplace experience.

At the time of the survey, almost all of the former traditional apprentices were in the labour force. The unemployment rate was 4.9 percent and has decreased by just over 5 percentage points since 2010. There was a great deal of regional variation in unemployment rates.

For respondents who were working at the time of the survey, their employment conditions were good—most were employed full-time and had a single, permanent job, earning a median hourly income of $30.

Most said their job was related to their apprenticeship training, and they reported that the knowledge and skills they gained through their training were useful to them in the performance of their jobs. There was a strong relationship between respondents' apprenticeship training and the occupation they held at the time of the survey.

Former traditional apprenticeship students who were surveyed in 2014 had a positive outlook on the education and training they received. Relative to the average labour force participation and employment rates for a similarly aged B.C. population, their employment outcomes were excellent. These results—both for the evaluation of the programs and for the former students' employment outcomes—suggest that this much-needed training is successfully preparing a new generation of skilled workers.

Appendices

Appendix A: Apprenticeship Student Outcomes Survey Methodology

Cohort

The following criteria were used to define the survey cohort: all apprenticeship students who completed the final year of their apprenticeship programs between July 1, 2012 and June 30, 2013 at a B.C. public post-secondary institution or at a B.C. private training institution. This included traditional apprentices and former students from progressive credential and ACE IT programs.

Since students may take different parts of their apprenticeship programs at different institutions, the *last* institution that the student attended was considered the institution of record, and that institution was asked to submit the name in their cohort file. The cohort extract included demographic and program-related elements.

There were 36 B.C. post-secondary institutions that participated in this project—14 of them were public. These public institutions provided 76 percent of the cohort. The cohort of students from private institutions was provided by the Industry Training Authority. The full list of institutions (both public and private) can be found in the *Data Collection* section of this appendix.

The cohort extracts were assembled and reviewed for completeness and then passed to the survey contractor for data collection.

Data Collection

Field testing of the survey instrument was done January 6 to January 10, 2014, using a subsample of the available cohort—151 former students were surveyed.

The data collection contractor undertook a number of steps to contact former students, including:

- Sending personalized messages to all email addresses and re-emailing periodically to non-respondents
- For records with multiple phone numbers, calling all of them to determine the correct one
- Leaving a voice mail and toll-free number for former students to call at their convenience
- Using a number of directories to trace former students whose phone numbers were missing or incorrect
- Asking for a forwarding number, where possible
- Sending emails with the toll-free number, where possible

The survey was conducted from January 23 to May 12, 2014. The average administration time of the survey was 14 minutes. Of the 3,046 survey completions, 896 were done online. The online response rate was 16 percent; the telephone rate was 38 percent—the overall response rate (for traditional, progressive credential, and ACE IT programs) was 53 percent.

The following table shows the disposition of the survey cohort that was submitted for data collection.

Call Result	n	% of Cohort
Completion	3,046	53%
Refusal	832	15%
Ineligible (did not attend during time frame, still in same program)	109	2%
Wrong or unknown number (not in service, wrong, incomplete, or no phone number)	773	14%
No response (no answer, left message, busy signal, fax/modem line)	321	6%
Other dispositions (moved, travelling, problem communicating, incomplete survey)	617	11%
Total	**5,698**	**100%**

Note: The call results noted are for the entire cohort of former apprenticeship students, of which 3,743 were traditional apprentices.

The following tables list the participating institutions, the number of former traditional apprentices from each who were eligible for the survey, the number who responded to the survey, and the response rates.

Public Institutions	Traditional Apprentices Eligible for Survey	Traditional Apprentice Respondents	Response Rate
British Columbia Institute of Technology	1,218	693	57%
Okanagan College	306	116	38%
Thompson Rivers University	193	115	60%
Vancouver Community College	185	88	48%
College of New Caledonia	174	98	56%
Camosun College	163	86	53%
Vancouver Island University	157	82	52%
Kwantlen Polytechnic University	115	54	47%
Northwest Community College	92	50	54%
University of the Fraser Valley	87	51	59%
Northern Lights College	70	48	69%
North Island College	45	21	47%
College of the Rockies	44	23	52%
Selkirk College	24	16	67%
Public Institutions Total	**2,873**	**1,541**	**54%**

Private Institutions	Traditional Apprentices Eligible for Survey	Traditional Apprentice Respondents	Response Rate
Pacific Vocational College	184	98	53%
R.C.A.B.C. Roofing Institute	108	52	48%
Joint Apprentice Refrigeration Trade School	77	45	58%
UA Piping Industry College of B.C.	63	32	51%
IUOE Local 115 Training Association	56	39	70%
Sheet Metal Workers Training Centre	52	32	62%
The Finishing Trades Institute of B.C.	42	30	71%
BC Hydro	41	23	56%
Taylor Pro Training	37	18	49%
VanAsep Training Society	35	14	40%
Electrical Industry Training Institute	33	14	42%
Enform Canada	21	9	43%
Funeral Service Association of BC	21	18	86%
Glazing Contractors Association of B.C.	15	9	60%
Greenbelt Veterinary Services	15	12	80%
Trowel Trades Training Association	15	8	53%
BC Wall & Ceiling Association	14	7	50%
Christian Labour Association of Canada	14	5	36%
Broadband Institute	9	9	100%
Piledrivers, Divers, Bridge, Dock, Loc. 2404	8	#	#
BC Floor Covering Joint Conference Society	6	#	#
Pacific Horticulture College	#	#	#
Private Institutions Total	**870**	**486**	**56%**

Note: Low numbers have been masked to preserve confidentiality.

Apprenticeship Program Group	Traditional Apprentices Eligible for Survey	Traditional Apprentice Respondents	Response Rate
Automotive & Other Mechanics	361	186	52%
Carpentry	550	294	53%
Culinary Arts & Personal Services	174	96	55%
Electrician	885	477	54%
Industrial & Heavy Duty Mechanics & Other Repair Trades	438	260	59%
Plumbing	518	273	53%
Welding & Precision Production	340	175	51%
Other Construction Trades	204	110	54%
Other Trades	273	156	57%
Overall	**3,743**	**2,027**	**54%**

Analysis and Reporting

BC Stats was responsible for cleaning and validating the data received from the data collection contractor. Based on these data—the responses to the survey questionnaire—the necessary variables were derived for analysis and reporting. Data from the 2014 survey were first released to the institutions in Excel pivot tables and flat files on June 24, 2014. Then, on November 21, 2014, the data were released to a wider audience through the BC Student Outcomes Executive Dashboard. The Dashboard provides an at-a-glance graphical snapshot of high-level results. Information from the past five years is available by survey, by institution, by program group, and by individual program.

Analysis for this report included frequencies, crosstabs, and comparison of means; in addition, statistical tests were used to determine if the observed differences between groups were statistically significant. A statistically significant result is one that cannot reasonably be explained by chance alone.

Limitations

The former traditional apprenticeship, progressive credential, and ACE IT students who were interviewed—in total, 53 percent of those eligible for surveying—were those from the cohort who could be located and who agreed to be surveyed. They may not be representative of all former students.

Percentages

For consistency and ease of presentation, most percentages in the report text, tables, and charts have been rounded and may not always add to 100.

Unless otherwise noted, each percentage is based on the number of students who gave a valid response to the question—those who refused the question, or said *don't know*, were not included in the calculations.

Appendix B: Progressive Credential Programs

Progressive credential programs provide both on-the-job and in-school technical training. These programs have multiple stages called progressions, at which students are eligible to write the Certificate of Qualification (C of Q) exam. Examples of these programs include: Welding, Professional Cook, and Parts and Warehousing/Partsperson (see Appendix D for a full program list).

Although these programs may not be delivered like typical apprenticeship programs, they are now designated as apprenticeable by the Industry Training Authority (ITA) and are included in the APPSO cohort. Starting in 2010, the cohort selection criteria for the APPSO Survey were changed to include former students from these progressive credential programs. At the time, many of these programs were being submitted in the DACSO cohort, so the change involved moving them to the APPSO cohort.

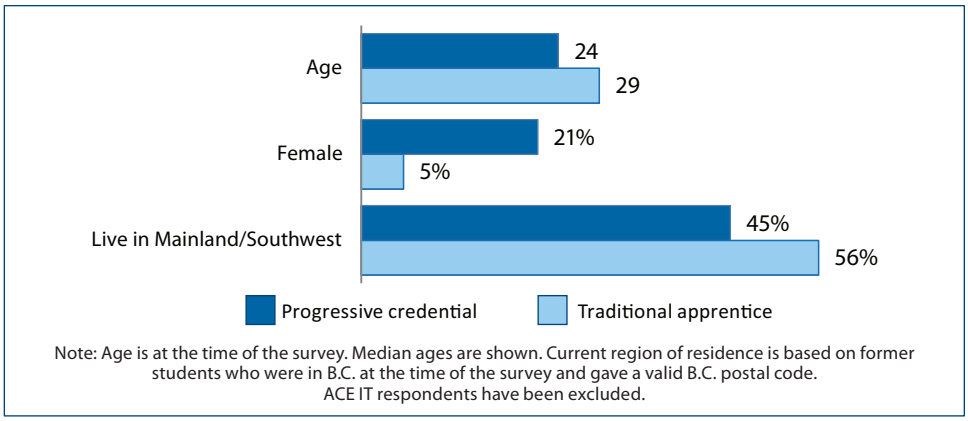
The 2014 APPSO Survey included 914 respondents from progressive credential programs (excluding ACE IT). These respondents were in the apprenticeship program groups of Carpentry, Culinary Arts & Personal Services, Industrial & Heavy Duty Mechanics & Other Repair Trades, and Welding & Precision Production. Almost half of the Culinary Arts & Personal Services respondents and two-thirds of the Welding & Precision Production respondents were from programs previously seen in DACSO.

Apprenticeship Program Group	Eligible for Survey	Progressive Credential Respondents	Response Rate
Carpentry	20	#	#
Culinary Arts & Personal Services	591	294	50%
Industrial & Heavy Duty Mechanics & Other Repair Trades	6	#	#
Welding & Precision Production	1,128	607	54%
Overall	**1,745**	**914**	**52%**

Note: Low numbers have been masked to preserve confidentiality. ACE IT respondents have been excluded.

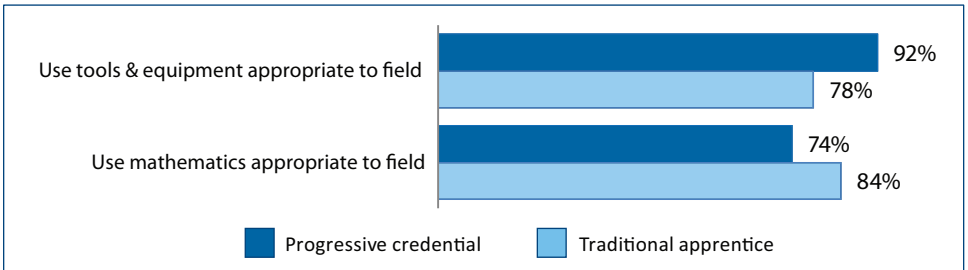
The characteristics of progressive credential respondents were somewhat different than those of traditional apprenticeship students: these respondents were younger on average, more likely to be female and more likely to live outside the Mainland/Southwest region.[22]

22 The location of 5 percent of progressive credential respondents was unknown, and 3 percent of respondents were located outside of British Columbia. As such, these respondents were not included in the calculation of percentages for region of residence.



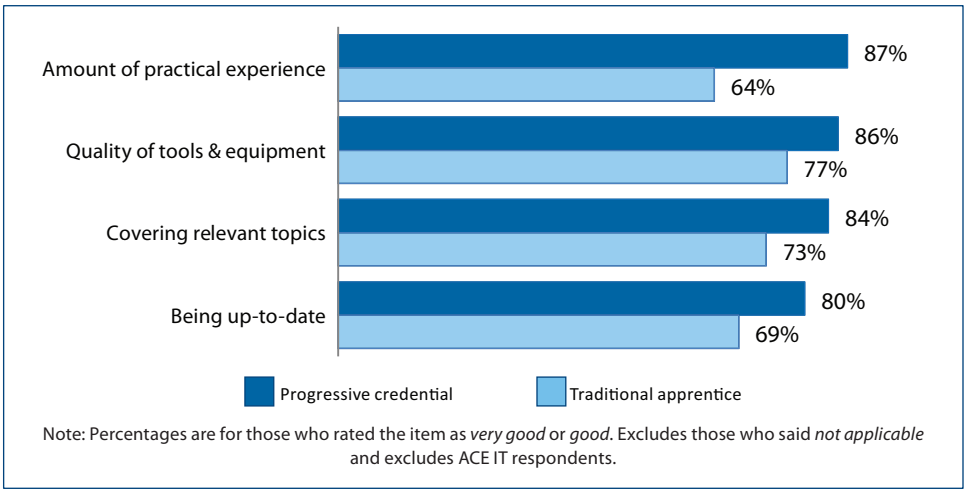
Note: Age is at the time of the survey. Median ages are shown. Current region of residence is based on former students who were in B.C. at the time of the survey and gave a valid B.C. postal code. ACE IT respondents have been excluded.

They were less likely than traditional apprenticeship respondents to give high ratings when asked if their training helped them to develop mathematics skills and more likely to say they were helped to develop skills related to the use of field-appropriate tools and equipment.



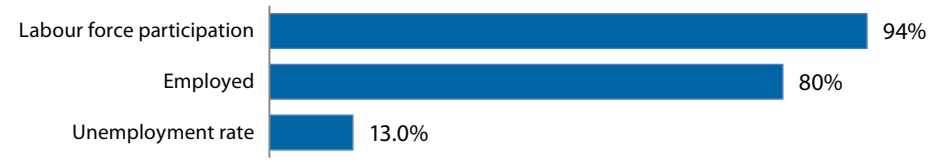
Note: Percentages are for those who said their training helped them (*very well* or *well*) develop skills. Excludes those who said *not applicable* and excludes ACE IT respondents.

When asked about the quality and content of their in-school training, they were more likely to give high ratings to some aspects of their programs, such as the amount of practical experience, the quality of tools and equipment, covering relevant topics, and being up-to-date.



Note: Percentages are for those who rated the item as *very good* or *good*. Excludes those who said *not applicable* and excludes ACE IT respondents.

The majority of respondents from progressive credential programs were in the labour force and were employed. Employed respondents from progressive credential programs reported a median hourly wage of $20. The unemployment rate for former students from these programs was relatively high.



Note: Labour force participation refers to the number of progressive credential respondents who are employed or looking for work as a percentage of all progressive credential respondents. The unemployment rate is the number of unemployed progressive credential respondents as a percentage of all progressive credential respondents in the labour force. Percentages exclude ACE IT respondents.

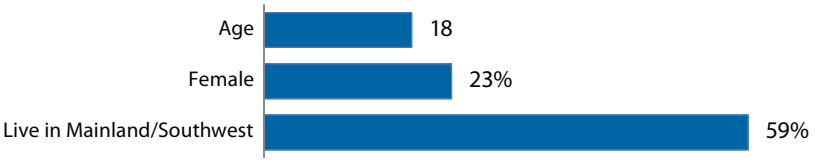
Almost nine out of ten (87 percent) former progressive credential apprentices got their Certificate of Qualification by the time they were surveyed.

Appendix C: ACE IT Programs

The ACE IT program allows high school students to take first level technical training, giving them credit for both high school courses and apprenticeship or industry training programs. This program is a partnership between the ITA and the BC Ministry of Education. See Appendix D for a full program list.

There were 105 respondents from ACE IT programs; they were in the apprenticeship program groups of Carpentry, Culinary Arts & Personal Services, and Welding & Precision Production. The largest program group was Culinary Arts & Personal Services, with 65 respondents (62%).

Almost one-quarter of ACE IT respondents were female. The median age of respondents was 18, and more than half lived in the Mainland/Southwest region at the time of the survey.[23]



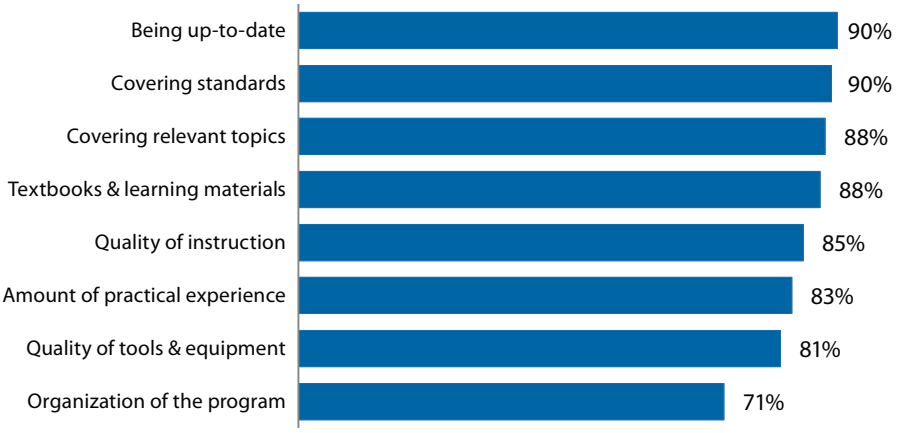
Note: Age is at the time of the survey. Median age is shown. Current region of residence is based on former ACE IT students who were in B.C. at the time of the survey and gave a valid B.C. postal code.

Almost all ACE IT respondents gave high ratings to their training for the development of tool- and equipment-related skills. About nine out of ten said that teamwork and reading comprehension were *very well* or *well* developed during their training.

Note: Excludes those who said *not applicable*.

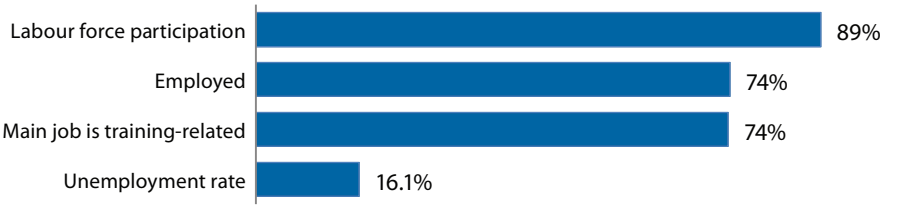
23 The location of 5 percent of ACE IT respondents was unknown, and as such, these respondents were not included in the calculations for region of residence.

When asked about the quality and content of their in-school training, ACE IT respondents were most likely to give high ratings when asked about the program being up-to-date, coverage of standards in their field, coverage relevant topics, and textbooks and learning materials.



Note: Percentages are for those who rated the item as *very good* or *good*, excluding those who said *not applicable*.

The majority of respondents from ACE IT programs were in the labour force and were employed, earning a median hourly wage of $12. Almost three-quarters of employed ACE IT respondents said their main job was training-related. The unemployment rate for former students from these programs was 16.1%.



Note: Labour force participation refers to the number of ACE IT respondents who are employed or looking for work as a percentage of all ACE IT respondents. The unemployment rate is the number of unemployed ACE IT respondents as a percentage of all ACE IT respondents in the labour force.

Appendix D: Apprenticeship Program Groups and Institutions' Programs

Appendix E: Occupations by Program Group

See Excel file: 2014 APPSO Report of Findings Appendices D & E (attached)