



2020 - 2021
NOVA SCOTIA APPRENTICESHIP AGENCY
STATISTICS REPORT

Introduction

The Nova Scotia Apprenticeship Agency (the Agency or NSAA) Statistics Report is published annually and provides key system performance data for the fiscal period and a comparison to previous years.

The impact of COVID-19 on the apprenticeship system has been significant. For the first time since the creation of the Agency, the number of apprentices in the system has decreased; since 2019-2020 the decrease is 2.7%. However as the labour force in Nova Scotia shrunk by over 6% during 2020-2021, the apprenticeship system performed better than the economy in general.

The Construction (-0.74%) and Motive Power Sectors (+0.34%) experienced negligible changes in the number of apprentices. The Industrial/Manufacturing Sector experienced a decline of 10.1% led by a reduction of Power Engineers (-58%) in the system. The Agency and the Technical Safety Division reviewed the Power Engineers in the system and found that many of the existing apprentices had completed their examinations from Technical Safety and have since been issued their Certificates of Qualification from NSAA. Not surprisingly, the Service Sector was impacted by the closure of restaurants and bars during province-wide lockdowns. At the end of 2021, the Service Sector had not rebounded, and the number of apprentices declined by almost 16%.

Although research indicates that women were disproportionately impacted by the COVID-19 pandemic, the percentage of women registered as apprentices in Nova Scotia increased to 7.8%. Despite overall decreases in apprentices, the number of diverse apprentices increased to 15.8%, which is a 0.5% increase from 2020.

Apprentices

Figure 1 highlights the total number of apprentices from 2011-2012 to 2020-2021. Table 1 outlines the number of apprentices by trade and organized by sector.

Figure 1: Active apprentices by fiscal year

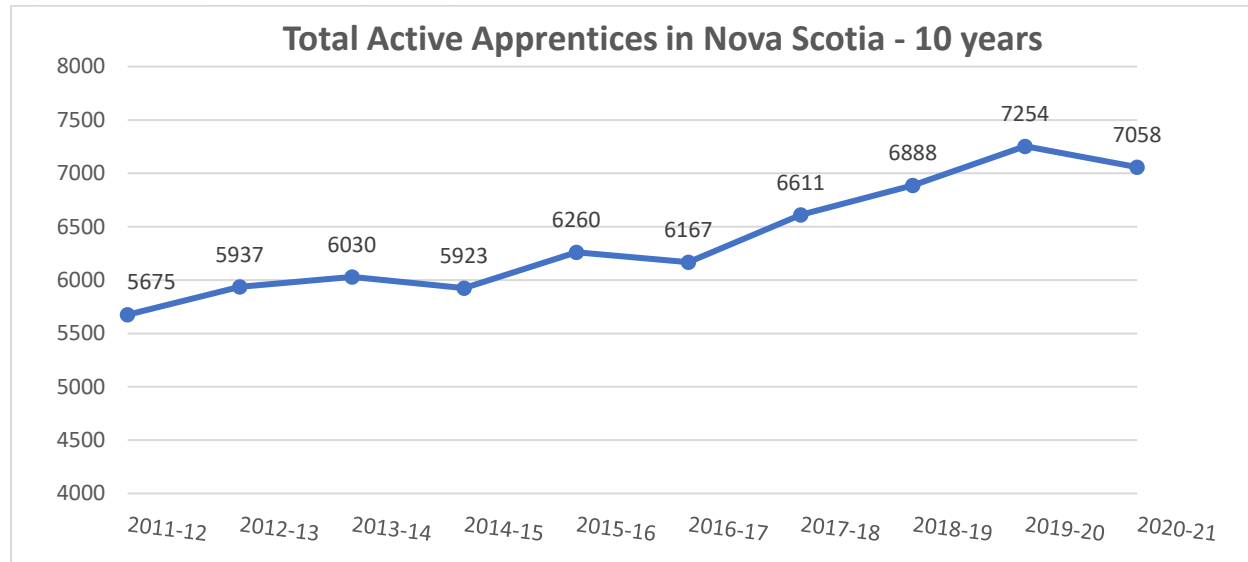


Table 1: Number of apprentices by trade over 5 years (2016-2017 to 2020-2021)

Trade	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	One Year Change 2019-2020 to 2020-2021	Female 2020-2021	Male 2020-2021
Construction Sector								
Boilermaker	31	25	25	28	32	14.30%	2	30
Bricklayer	74	76	87	92	84	-8.70%	4	80
Carpenter	621	641	697	758	775	2.24%	59	716
Construction Electrician	1199	1276	1271	1296	1309	1.00%	78	1231
Elevating Devices Mechanic - Class A ⁽¹⁾					2			2
Elevating Devices Mechanic - Class B ⁽¹⁾					1			1
Gasfitter ⁽²⁾	62	14	12	10	8	-20.00%	1	7
Gasfitter A	2	20	20	23	28	21.74%		28
Gasfitter B	42	80	103	118	135	14.41%	7	128
Glazier		1	1	2	3	50.00%		3
Insulator (Heat & Frost)	58	55	55	87	70	-19.54%	3	67
Ironworker (Generalist)	3	1	1	1	1	0%		1
Ironworker (Reinforcing)	47	23	20	23	31	34.78%	1	30
Ironworker (Structural Ornamental)	46	31	27	23	25	8.70%		25
Mobile Crane Operator	140	146	147	150	88	-41.33%	2	86
Oil Heat System Technician	79	95	97	101	91	-9.90%	6	85
Plumber	412	451	499	545	589	8.07%	25	564
Powerline Technician	75	94	101	86	83	-3.49%	4	79
Refrigeration and Air Conditioning Mechanic	193	202	242	292	311	6.51%	12	299
Roofer	27	42	41	38	38	0%	1	37
Sheet Metal Worker	154	169	191	205	182	-11.22%	5	177
Sprinkler Fitter ⁽³⁾	64	58	66	75	72	-4.00%	3	69
Steamfitter/Pipefitter	550	536	437	350	313	-10.57%	19	294
TOTAL	3879	4036	4140	4303	4271	-0.74%	232	4039
Motive Power Sector								
Agricultural Equipment Technician	1	5	5	4	6	50.00%		6
Auto Body and Collision Technician ⁽⁴⁾	101	120	140	164	162	-1.22%	23	139
Automotive Service Technician	645	714	759	822	811	-1.34%	48	763
Heavy Duty Equipment Technician	48	56	64	83	88	6.02%	2	86
Marine Service Technician	2	4	8	12	11	-8.33%	3	8
Truck and Transport Mechanic	294	343	361	383	395	3.13%	5	390
TOTAL	1091	1242	1337	1468	1473	0.34%	81	1392

Trade	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	One Year Change 2019-2020 to 2020-2021	Female 2020-2021	Male 2020-2021
Industrial/Manufacturing Sector								
Boat Builder	15	19	23	27	17	-37.04%	3	14
Industrial Electrician	151	157	176	188	188	0%	17	171
Industrial Mechanic (Millwright)	152	185	189	204	209	2.45%	14	195
Instrumentation and Control Technician	75	76	70	59	57	-3.39%	5	52
Machinist	62	73	66	73	73	0%	6	67
Metal Fabricator (Fitter)	139	148	147	136	136	0%	21	115
Power Engineer	169	178	194	191	91	-52.36%	8	83
Power Engineer (Plant Operator)	16	22	33	49	44	-10.20%	1	43
Welder	193	206	218	237	231	-2.53%	41	190
TOTAL	972	1064	1116	1164	1046	-10.14%	116	930
Service Sector								
Baker			2	2	2	0%	2	
Cook	215	257	270	294	246	-16.33%	113	133
Hairstylist		6	9	8	10	25.00%	8	2
Landscape Horticulturalist	12	12	14	15	10	-33.33%	2	8
TOTAL	227	275	295	319	268	-15.99%	125	143

(1) Elevating Devices Mechanic trade was added in 2020

(2) Gasfitter trade was divided into **Gasfitter A** and **Gasfitter B** in 2017

(3) Sprinkler System Installer trade name was changed to **Sprinkler Fitter** in 2019

(4) Motor Vehicle Body Repairer (Metal and Paint) trade name was changed to **Auto Body and Collision Technician** in 2019.

Increasing the participation, retention, and completion of women in the trades remains a top priority of the Nova Scotia Apprenticeship Agency. (Table 2).

Table 2: Total apprentices by sector and 2020-2021 gender representation

Total Apprentices by Sector	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	One Year Change	Female 2020-2021	Male 2020-2021
Construction Sector	3875	4036	4140	4303	4271	-0.74%	232	4039
Motive Power Sector	1089	1238	1337	1468	1473	0.34%	81	1392
Industrial/ Manufacturing Sector	972	1064	1116	1164	1046	-10.14%	116	930
Service Sector	227	206	295	319	268	-15.99%	125	143
TOTAL	6163	6544	6888	7254	7058	-2.70%	554	6504

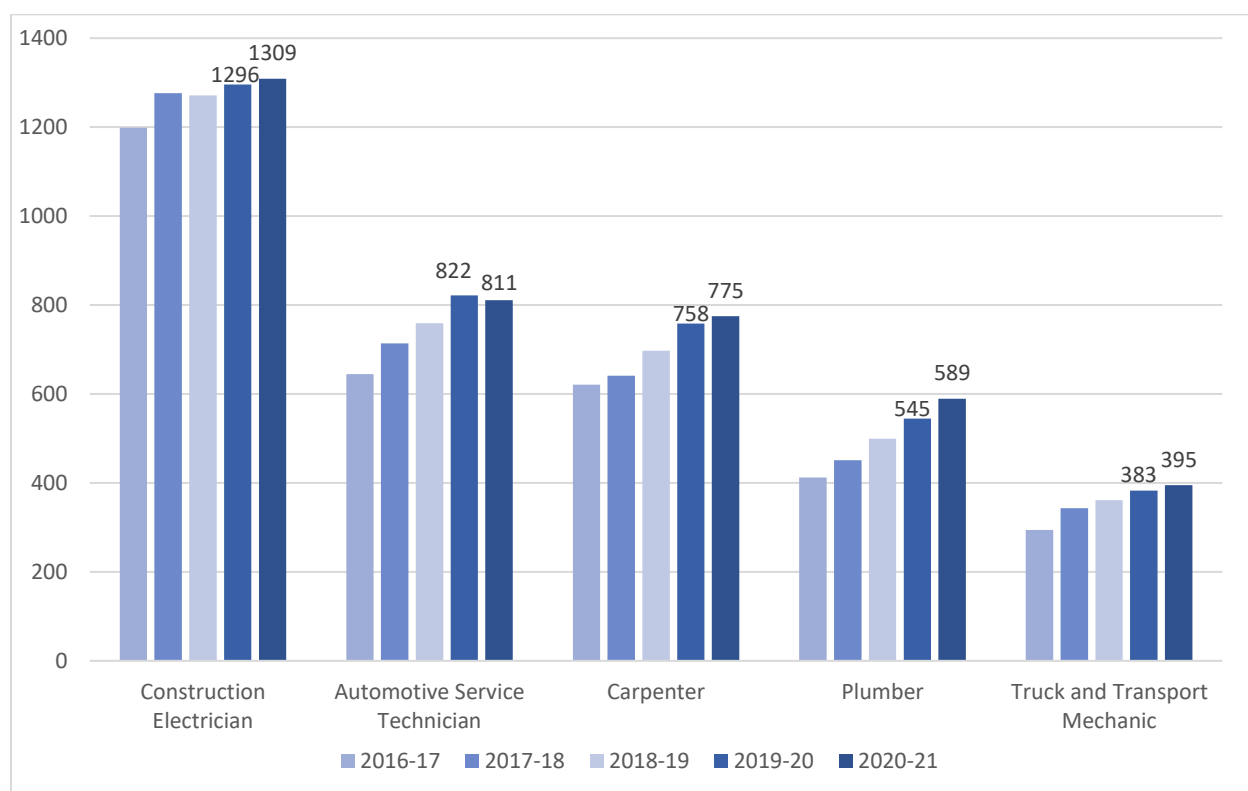
The Construction Sector experienced the highest increase in the number of female apprentices likely due to the efforts of the Women in Construction trades pilot and government social procurement efforts. Due to the impact of the pandemic, the Service Sector experienced a decrease in the number of female apprentices however, due to the overall decrease of apprentices in the sector, the percentage of women actually increased. Women in trades now represent 7.8%, an increase of 15 women. (Table 3).

Table 3: Changes in gender representation in each of the Sectors

Sectors	Female 2018-2019	Male 2018-2019	% Female of Total 2018-2019	Female 2019-2020	Male 2019-2020	% Female of Total 2019-2020	TOTAL 2020-2021	Female 2020-2021	Male 2020-2021	% Female of Total 2020-2021
Construction Sector	174	4027	4.2%	211	4092	4.9%	4271	232	4039	5.4%
Motive Power Sector	65	1209	4.9%	77	1391	5.2%	1473	81	1392	5.5%
Industrial/ Manufacturing Sector	95	1021	8.5%	115	1049	9.8%	1046	116	930	11.1%
Service Sector	127	168	43.0%	136	183	42.6%	268	125	143	46.6%
TOTAL	461	6425	6.7%	539	6715	7.4%	7058	554	6504	7.8%

The top 5 trades have remained consistent since 2016-2017. Figure 2 represents the top five trades based on the number of registered apprentices.

Figure 2: Five trades with the most apprentices (2016-2017 to 2020-2021)



The number of new apprentices decreased in 2020-2021 due to the COVID-19 pandemic. A total of 1023 new apprentices registered in 2020-2021, down from 1480 in 2019-2020. (Table 4).

Table 4: Newly registered apprentices in Nova Scotia by fiscal year

Year	Total New Apprentices	Total Active Apprentices (at end of period)	Percentage of Total Apprentices
2016-2017	1416	6167	22.9%
2017-2018	1522	6611	23%
2018-2019	1490	6888	21.6%
2019-2020	1480	7254	20.4%
2020-2021	1023	7058	14.5%

Youth Engagement and Program Innovations during COVID-19

The Nova Scotia Apprenticeship Agency (NSAA) encourages youth to explore career opportunities in the skilled trades through a variety of interactive hands-on engagement activities and lively information sessions. Most years, this has been accomplished through in-person school and community presentations, often in collaboration with one or more of the Youth Programs partners reaching out to students in the classroom and providing experiential learning opportunities in the skilled trades. The 2020-2021 year, however, was not typical due to COVID-19. As result of COVID-19, with cooperative education programs and experiential learning being suspended, students learned remotely. NSAA funded Youth Program partners transitioned from in-person presentations to virtual formats, providing students with activities, opportunities, and information through innovative approaches. During this time employers were also not hiring and registering new apprentices.

Table 5 shows the effect of COVID-19 on youth apprenticeship registrations.

Table 5: Youth apprentice registrations by fiscal year and region

Youth Registrations by Region	2016-2017		2017-2018		2018-2019		2019-2020		2020-2021	
	F	M	F	M	F	M	F	M	F	M
Cape Breton	0	20	3	42	1	30	4	27	2	15
Central	3	53	1	38	5	46	6	51	0	38
Northeastern	0	7	0	4	0	3	0	4	1	0
Northern	0	14	0	13	0	18	2	17	0	8
Southwestern	0	18	2	29	2	24	4	33	0	34
TOTAL	3	112	6	126	8	121	16	132	3	95
GRAND TOTAL	115		132		129		148		98	

Youth Program Delivery

The NSAA provides funding to a number of Youth Program delivery partners including Skills Canada Nova Scotia, Techsploration, and the Nova Scotia Construction Sector Council. These partners provide experiential opportunities in the skilled trades.

Beginning in April 2020, Youth Program partners were prohibited from in-person visits to schools and community centres due to COVID-19 restrictions. Consequently, delivery partners invested time, energy and creativity in finding ways to inspire youth and focus attention on skilled trades career opportunities.

The Nova Scotia Construction Sector Council (NSCSC), in response to the impacts of COVID-19, created a one-of-a-kind Construction Kit for teachers and students throughout the province to use in lieu of visits to the Trades Exhibition Hall. The kit included mini building materials, educational puzzles, student and teacher evaluation forms, certificates of participation and bonus video content. The videos featured Trades Professionals from the Trades Exhibition Hall, providing guidance on the skilled use of tools to correctly lay brick, install windows, connect tubing, and more. Additionally, the NSCSC created a video web-series covering all aspects of construction skilled trades careers in Nova Scotia. The videos in the “Have You Thought of Construction?” web series span such topics as defining construction and personal protective equipment to jobsite safety and apprenticeship. The bite-sized videos were created specifically with accessibility in mind, allowing students at home and in the classroom to expand their knowledge of the construction industry as a whole and potentially discover lifelong career opportunities.

Skills Canada Nova Scotia (SCNS) created a 10-part pre-recorded video series on the Essential Skills Program, available on the SCNS website, to all those interested in learning what SCNS has to offer. SCNS also ran a SCNS Virtual Showcase. Table 6 shows the online visits to the NSAA Booth at the Showcase.

Table 6: Skills Canada Nova Scotia Virtual Showcase

NSAA Booth	Numbers
Total Visits	4014
Unique Visits	620
Video Views	1795

Techsploration in a newly created Techsploration Goes Live initiative, hosted six, 30-minute YouTube live sessions with inspiring role models. The recorded videos from these sessions also comprised a revisioning of Techsploration Goes to School. Students were challenged to develop a virtual presentation about their respective role models. The winning virtual presentations will receive a prize.

Summer Youth Apprenticeship Programs

Since 2008, the NSAA has supported summer youth apprenticeship programs for students in Grades 10 and 11. These programs are delivered in partnership with the Construction Association of Nova Scotia administering Building Futures for Youth (construction trades), the Automotive Sector Council of Nova Scotia administering TestDrive (motive power trades), and the Nova Scotia Tourism Human Resources Sector Council administering Serve It Up! (Cook trade). Participants explore the skilled trades through a paid summer work placement combined with some in-class training.

In 2020-2021, the three summer youth program partners were unable to offer the in-person workplace program experiences. The partners pivoted to provide youth and their influencers with innovative online formats that promote and inform regarding careers in the skilled trades.

Building Futures for Youth provided a series of promotional videos on their recently updated website. The videos, made specifically to be used in the classroom as well as at home, include French language subtitles, taking into consideration that Conseil Scolaire Acadien Provincial students participate in the summer program opportunities. Table 7 shows the website analytics.

Table 7: Building Futures for Youth Promotional Videos

Videos	Numbers
Plays	301
Loads	5344
Finishes	97

TestDrive revised their website to promote skilled trades careers in the motive power sector, as well as created a video. Table 8 shows the website analytics.

Table 8: TestDrive Website and Video Promotion

Website		Numbers	Videos		Numbers
Page Views		1,139	Views		135
Unique Page Views		855	Student Reach		1,520

Serve It Up! transitioned to online engagement. Videos were prepared for the 2021-2022 summer program year. There are no analytics available; however, virtual presentations are anticipated for several schools in each Regional Centre of Education and Conseil Scholaire Acadien Provincial.

Joint Registration Agreements

Table 9 shows the current Joint Registration Agreements (JRAs) with unions and industry organizations, the trades that are represented under these agreements, and the number of apprentices represented under each JRA. The number of apprentices registered to JRAs has decreased since 2019-2020 by 7.8%. Of note, the number of carpenters registered under JRAs has increased to its highest level in the last 5 years due to the efforts around the requirements for construction tenders issued by the province. In May 2020, a new JRA was signed with the International Union of Elevator Constructors, Local 125.

Table 9: Number of apprentices in Joint Registration Agreements by JRA holder and trade

JRA Holder	Trade	2017	2018	2019	2020	2021
International Association of Heat and Frost Insulators and Asbestos Workers, Local 116	Insulator (Heat & Frost)	58	55	54	88	71
International Brotherhood of Boilermakers, Local 73	Boilermaker	35	30	30	29	33
International Brotherhood of Electrical Workers, Local Union 625	Construction Electrician	165	176	171	177	168
International Brotherhood of Electrical Workers, Local Union 1852	Construction Electrician, Industrial Electrician, Instrumentation and Control Technician	115	148	120	117	108
International Brotherhood of Electrical Workers, Local Union 1928	Industrial Electrician, Industrial Mechanic (Millwright)	14	16	16	13	11
International Union of Bricklayers and Allied Crafts Workers Local 1	Bricklayer	19	17	18	15	11
International Union of Elevator Constructors Local 125	Elevating Device Mechanic					6
International Union of Operating Engineers Local 721 and Construction Management Bureau Limited	Mobile Crane Operators	132	134	135	138	81
Joint Apprenticeship Training Committee of Ironworkers, Local 752	Ironworker (Generalist, Reinforcing, Structural/Ornamental)	93	52	47	45	51
Mainland Nova Scotia J.T.C., Local 83	Carpenter	80	60	74	77	69
Millwright and Machine Erectors, Local Union 1178	Millwright	28	31	33	25	26
Nova Scotia Boat Builders Association	Boat Builder	17	20	24	27	17
Recreation Facility Association of Nova Scotia	Refrigeration Plant	10	17	23	36	30
Sheet Metal Workers' International Association Joint Apprenticeship Training Committee, Local 56 and Construction Management Bureau Ltd. of Nova Scotia	Sheet Metal Worker, Roofer	18	21	27	23	25
United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of United States and Canada, Locals 244,682,56	Gasfitter, Instrumentation Control Technician, Metal Fabricators, Oil Heat System Technicians, Plumber, Refrigeration and A/C Mechanic, Sprinkler System Installer,	525	493	466	425	409

JRA Holder	Trade	2017	2018	2019	2020	2021
	Steamfitter/Pipefitter, Welder					
United Brotherhood of Carpenters and Joiners of America Joint Apprenticeship Training Committee, Local Union 1588	Carpenter	70	80	52	58	82
TOTAL		1379	1350	1290	1293	1116

JRAs with First Nations and equity organizations are shown in Table 10.

The number of apprentices associated with JRAs signed with First Nations and equity organizations decreased by 12% since 2019-2020. Of note, Millbrook First Nation registered its first apprentices in 2020-2021.

Table 10: Number of apprentices in Joint Registration Agreements with First Nations and Equity Organizations

Registered apprentices	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Aboriginal Peoples Training & Employment Commission (APTEC), 2016	1	7	12	19	24
East Preston Empowerment Academy Society, 2018				3	12
Eskasoni First Nation, 2017	16	26	29	40	33
Immigrant Services Association of Nova Scotia (ISANS), 2020					
Membertou First Nation, 2002	31	34	31	27	16
Mi'kmaw Native Friendship Centre, 2016					
Millbrook First Nation, 2018					3
Paqtnek Mi'kmaw Nation, 2014					
Pictou Landing First Nation, 2011	8	9	9	9	9
Potlotek First Nation, 2013	10	13	9	30	24
Wagmatcook First Nation, 2013	1	10	10	11	7
Waycobah First Nation, 2013		19	21	19	11
TOTAL	67	118	121	158	139

Demographics

Figure 3 shows the age distribution of registered apprentices in Nova Scotia in 2020-2021.

Apprentices aged 23-31 represent the largest age group of all apprentices. Apprentices aged 25 have the single largest number at 434. The median age has remained the same at 29.5.

Figure 3: Age Distribution of Active Apprentices in 2020-2021



Women and Underrepresented Groups

Figures 4 and 5 show a steady increase in the number of female apprentices in the apprenticeship system. Overall, the percentage of women registered as apprentices has increased to 7.8%. As the number of female apprentices in the traditional trades decreased, the total increase can be attributed to participation in the non-traditional trades. The Agency recognizes the success of the Women in Trades unit and the Women in Construction Trades pilot in contributing to the large increase of female apprentices in the Construction Sector.

Figure 4: Female apprentices in Nova Scotia – 10 Years

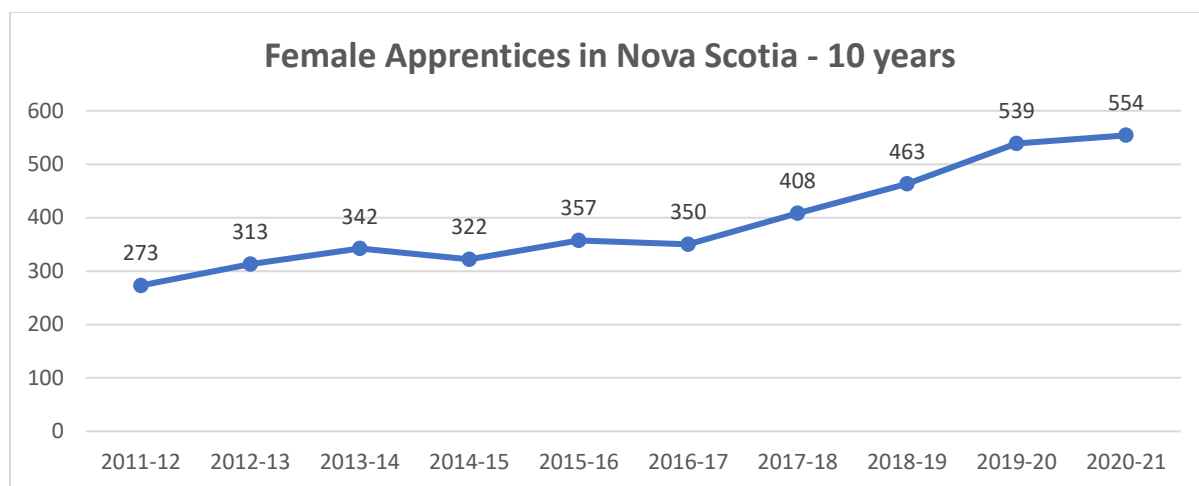


Figure 5: Percentage breakdown of female apprentices registered in traditional and non-traditional trades

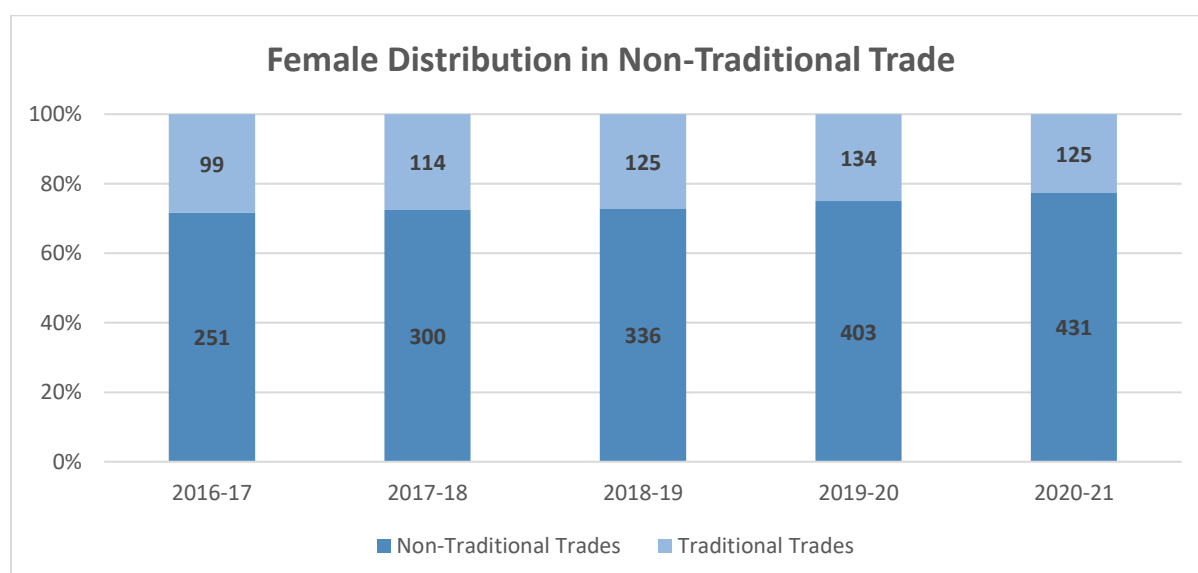


Table 11 and Figure 6 reflect representation of underrepresented groups throughout the Nova Scotia apprenticeship system. Despite reductions in the number of new apprentices, the overall participation of underrepresented groups has increased in all categories. 15.8% of apprentices identify as diverse.

Table 11: Total number of underrepresented groups and percentage of total apprentices

YEAR	Aboriginal Peoples	% of Total	African Nova Scotians	% of Total	New-comers	% of Total	Other Diverse Persons	% of Total	Persons with Disabilities	% of Total
2016-2017	223	3.6%	28	0.45%	55	0.9%	242	3.9%	122	1.9%
2017-2018	314	4.7%	71	1.1%	79	1.2%	264	3.9%	180	2.7%
2018-2019	342	4.9%	105	1.5%	112	1.6%	305	4.4%	234	3.4%
2019-2020	404	5.5%	138	1.9%	138	1.9%	351	4.8%	369	5.0%
2020-2021	416	5.9%	174	2.5%	178	2.5%	376	5.3%	416	5.9%

Note: All diversity information is based on self-identification and some individuals select more than one category.

Figure 6: Underrepresented populations in apprenticeship – 5 years

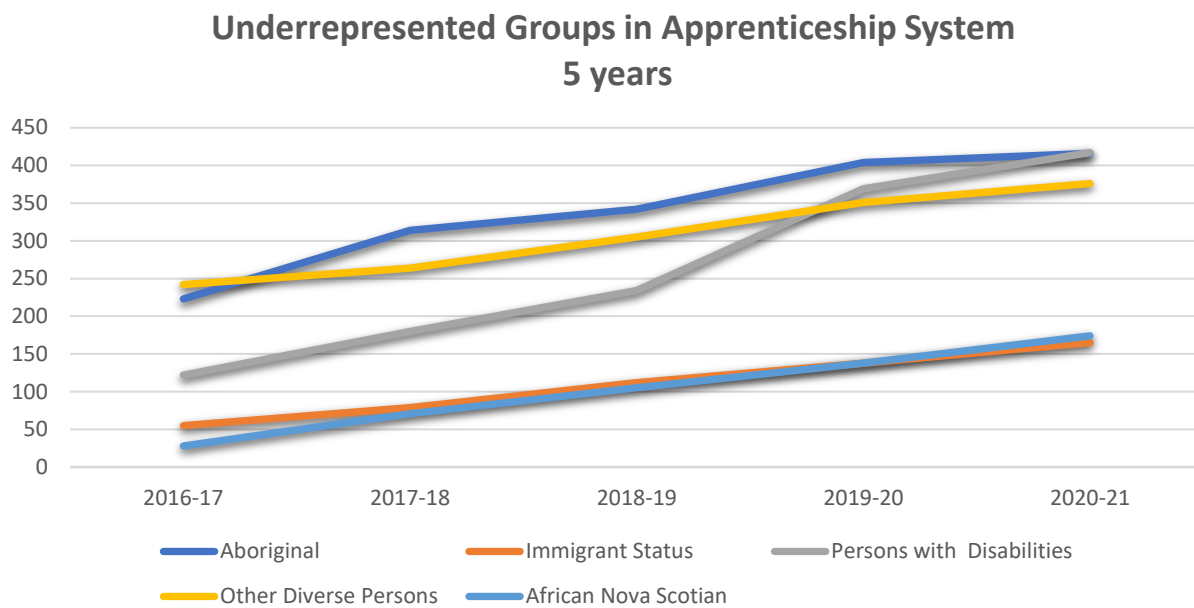
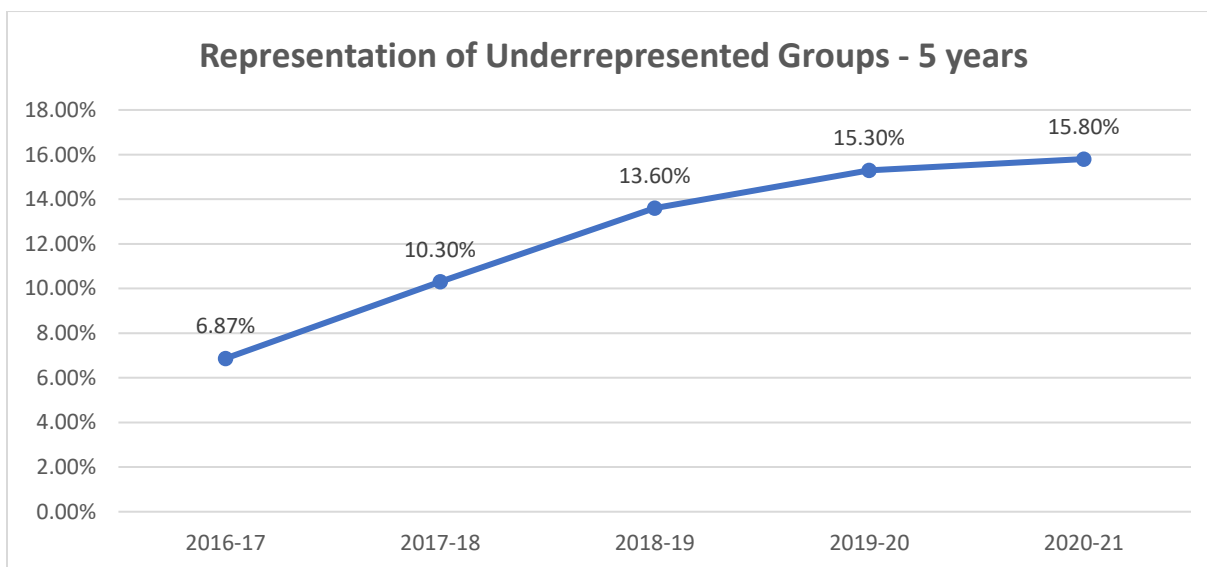


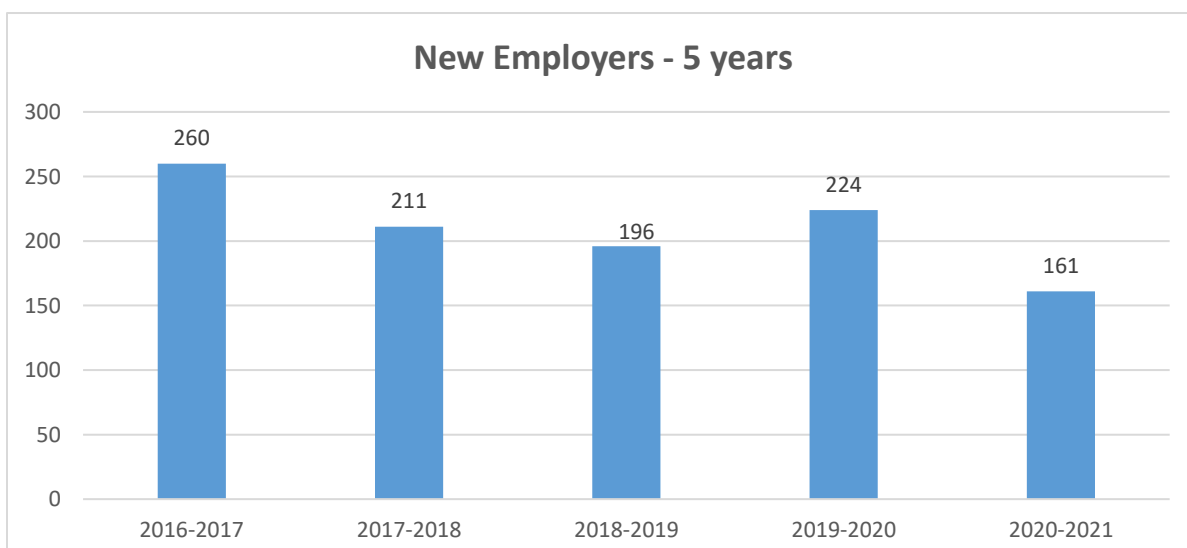
Figure 7: Underrepresented populations as a percentage of total apprentices – 5 years



Employers

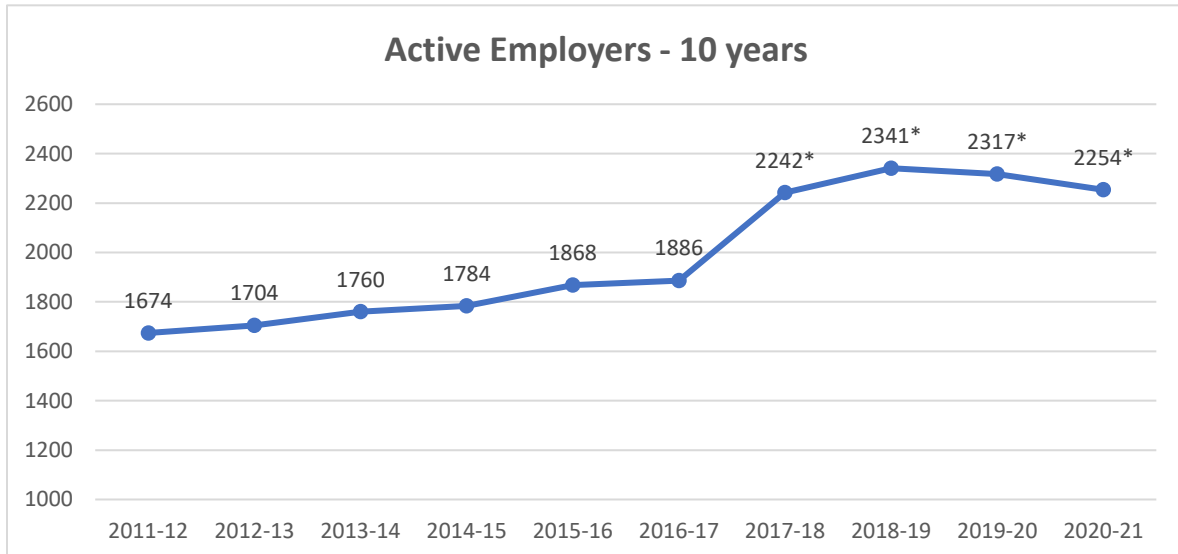
Employers were not hiring at the same level as the previous year due to the pandemic and therefore, the number of new employers dipped significantly in 2020-2021. However, the total number of employers in the system decreased by only 2.7%.

Figure 8: New employers participating in the apprenticeship system



The trend for the number of employers participating in the apprenticeship system is shown in Figure 9.

Figure 9: Number of active employers by fiscal year



*2017-2018 to 2020-2021 counts include JRA employers. The total without JRA employers in 2018-2019 is 2096; in 2019-2020 is 2149; and in 2020-2021 is 2127.

Table 12: Number of employers with number-range of apprentices, March 31, 2021

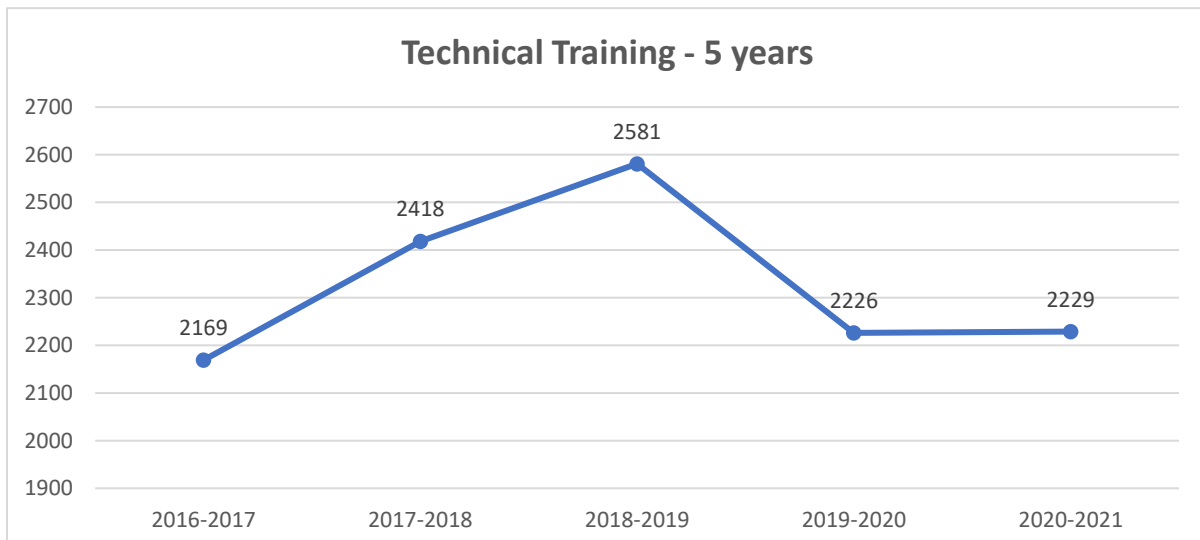
Apprentices	Employers* March 31, 2020	Employers* March 31, 2021
1-5	1971	1975
5-10	170	164
10-15	37	33
15-20	12	10
20-100	23	26
100-500	5	4

*Total includes JRA employers

Technical Training

The number of apprentices who completed technical training remained stable during 2020-2021 as the Agency worked with training providers to provide remote delivery during the continued pandemic.

Figure 10: Trends for apprentices scheduled for technical training



Note: Numbers include those who have completed online training

Table 13: Technical training offered by trade and academic year, September 2020-August 2021

Trade Name	Number Clients Scheduled	Number Clients Attended	Classroom Training Total Weeks	Refresher Training Total Weeks
Auto Body and Collision Technician ⁽¹⁾	33	33	22	0
Automotive Service Technician (includes ASEP)	240	211	127	0
Boilermaker	32	21	26	0
Bricklayer	25	23	22	0
Carpenter	146	119	92	0
Cook	54	43	39	0
Electrician - Construction and Industrial	432	378	234	12
Electrician- Industrial	27	22	18	3
Gasfitter A/B	26	24	13	0
Hairstylist	6	6	5	0
Heavy Duty Equipment Technician/ Truck and Transport - Levels 1 & 2 ⁽²⁾	81	75	48	0
Heavy Duty Equipment Technician Levels 3 & 4	38	35	16	0
Industrial Mechanic Millwright	118	98	72	0
Insulator (Heat & Frost) ⁽³⁾	29	28	19	3
Ironworker Reinforcing	48	32	14	3
Ironworker Structural/Ornamental	34	33	15	3
Machinist	21	20	10	3
Metal Fabricator (Fitter)	28	25	14	3
Oil Heat System Technician	22	21	11	0
Plumber	151	141	70	3
Power Engineer	60	41	15	0
Powerline Technician	48	48	19	0
Refrigeration and Air Conditioning Mechanic	135	113	54	3
Refrigeration Plant Operator Review	26	7	2	0
Roofer	19	14	18	0
Sheet Metal Worker	76	64	49	0
Sprinkler Fitter ⁽¹⁾	35	35	24	0
Steamfitter/Pipefitter	91	79	45	3
Truck and Transport Mechanic Levels 3 & 4 ⁽²⁾	90	88	37	0
Welder	68	49	36	0
TOTAL⁽⁴⁾	2239	1926	1186	39

(1) Motor Vehicle Body Repairer renamed **Auto Body and Collision Technician** and Sprinkler System Installer renamed **Sprinkler Fitter** in 2019;

(2) Levels 1 and 2 of **Heavy Duty Equipment Technician** and **Truck and Transport Mechanic** are the same. Levels 3 and 4 of both trades require specialized training and appear as separate entries in Table 11

(3) Training provided by Private Career Colleges

(4) Includes multiple NSCC locations and concurrent classroom sessions.

Table 14: Online self-directed technical training – 5 years

Online Training Programs	2016-2017	2017-2018	2018-2019	2019-2020*	2020-2021*
Automotive Service Technician	89	74	63	78	67
Carpenter	45	34	60	52	37
Construction Electrician	100	94	129	138	133
Gasfitter	64	61	53	64	43
Industrial Electrician	13	18	10	18	18
Machinist	5	6	6	6	6
Oil Heat Systems Technician	15	16	13	8	14
Power Engineer	27	10	17**	28**	10**
Plumber	38	45	38	31	42
Steamfitter/Pipefitter	1	1	1		2
TOTAL	397	359	390	423	372

*Full academic year not included in 2019-2020 dates. Dates shown above are September 8, 2020 to June 21, 2021

**includes Refrigeration Plant Operator 2nd Class

The Agency participates in the Atlantic Apprenticeship Harmonization Project (AAHP). Under AAHP, NSAA is aligning apprenticeship standards in the Atlantic Provinces, including introducing harmonized apprenticeship level exams in a phased-in approach, level-by-level, year-by-year.

NSAA implemented the inaugural Phase 1 harmonized exams in the 2015-2016 training year, continues to implement for all of the Phase 2 trades and have started development of Phase 3 trades. Some of these trades, such as Boilermaker, Sprinkler Fitter and Steamfitter/Pipefitter, already had level exams embedded into their apprenticeship programs (pre-harmonization). Others, like Construction Electrician, Cook, and Metal Fabricator, had not; level exams for these trades are a new experience and represent a ‘culture shift’, which is reflected in the average exam results being lower.

For trades with multi-year data, if the average pass rate for a level 1 exam is below 70%, the pass rate has increased for the subsequent levels, except for Cook and Metal Fabricator. For Cook, the low level 3 exam results could be due to clients who have come into apprenticeship after having completed a pre-apprenticeship program for which they have been granted credit for levels 1 and 2. Over the coming years, we anticipate an improvement in pass rates for these trades.

For most of 2020-2021, apprentices were exempt from level exams because the Agency was not permitted to invigilate exams due to Public Health restrictions.

Some trades in Table 15 have mandatory level exams but are not harmonized. Please refer to this document for a list of the Phase 1, 2 and 3 harmonized trades:

<https://www.nsapprenticeship.ca/sites/default/files/files/NSAA-FactSheet-AAHP.pdf>

Table 15: Level Exam Performance 2016-2017 to 2020-2021*

Trade Name	Level	2016-2017	Pass Rate	2017-2018	Pass Rate	2018-2019	Pass Rate	2019-2020	Pass Rate	2020-2021	Pass Rate
Automotive Service Technician	Level 1	-	-	-	-	-	-	46	35%	8	24%
Boilermaker	Level 1	7	100%	11	91%	5	80%	n/a	50%	8	100%
	Level 2	10	100%	8	100%	10	90%	5	100%	-	-
Bricklayer	Level 1	-	-	5	100%	4	50%	9	67%	-	-
	Level 2	-	-	7	0%	13	77%	15	60%	7	58%
	Level 3	-	-	-	-	8	100%	5	100%	6	100%
Carpenter	Level 1	20	45%	35	69%	45	47%	64	34%	12	32%
	Level 2	-	-	-	-	28	89%	23	91%	4	67%
	Level 3	-	-	-	-	34	79%	54	67%	22	76%
	Level 4	-	-	-	-	-	-	18	89%	21	95%
Construction Electrician	Level 1	41	32%	37	43%	44	55%	39	51%	12	46%
	Level 2	n/a	0%	-	-	135	59%	140	54%	45	53%
	Level 3	-	-	-	-	-	-	26	73%	31	67%
	Level 4	-	-	-	-	-	-	-	-	11	69%
Cook	Level 1	15	60%	9	78%	23	70%	16	44%	11	61%
	Level 2	4	75%	16	69%	13	69%	24	71%	5	83%
	Level 3	3	33%	4	75%	24	67%	43	49%	8	44%
Heavy Duty Equipment Technician	Level 1	-	-	-	-	-	-	-	-	n/a	100%
Industrial Electrician	Level 1	-	-	n/a	100%	4	75%	n/a	100%	n/a	67%
	Level 2	-	-	-	-	8	75%	9	89%	n/a	50%
	Level 3	-	-	-	-	-	-	n/a	100%	5	100%
Industrial Mechanic (Millwright)	Level 1	-	-	-	-	-	-	4	75%	10	100%
	Level 2	-	-	-	-	-	-	-	-	12	80%
Instrumentation and Control Technician	Level 1	3	33%	-	-	n/a	100%	-	-	n/a	100%
	Level 2	n/a	100%	n/a	100%	-	-	n/a	50%	-	-
	Level 3	22	100%	4	100%	5	100%	-	-	-	-
	Level 4	10	70%	14	64%	5	100%	4	75%	n/a	100%
Insulator (Heat & Frost)	Level 1	9	100%	7	100%	14	86%	20	95%	18	90%
	Level 2	-	-	14	100%	-	-	9	100%	10	83%
	Level 3	-	-	n/a	0%	18	100%	-	-	8	100%
Metal Fabricator (Fitter)	Level 1	21	95%	6	17%	n/a	50%	3	67%	-	-
	Level 2	-	-	14	57%	6	33%	7	14%	n/a	33%
	Level 3	-	-	-	-	29	38%	37	41%	n/a	17%
Plumber	Level 1	n/a	100%	53	96%	86	97%	92	93%	63	91%
	Level 2	n/a	100%	-	-	31	65%	91	68%	32	58%
	Level 3	-	-	-	-	5	60%	30	87%	24	96%
	Level 4	-	-	-	-	-	-	-	-	12	86%
Roofer	Level 1	-	-	-	-	-	-	-	-	-	-
	Level 2	n/a	100%	5	80%	-	-	7	86%	n/a	50%
	Level 3	8	88%	n/a	0%	-	-	6	83%	-	-

Trade Name	Level	2016- 2017	Pass Rate	2017- 2018	Pass Rate	2018- 2019	Pass Rate	2019- 2020	Pass Rate	2020- 2021	Pass Rate
Sheet Metal Worker	Level 1	15	73%	6	67%	27	96%	31	84%	6	75%
	Level 2	-	-	17	82%	19	68%	15	100%	13	76%
	Level 3	16	69%	14	57%	18	61%	21	67%	-	-
	Level 4	11	82%	11	91%	27	81%	23	61%	7	58%
Sprinkler Fitter	Level 1	10	100%	9	78%	8	100%	14	86%	13	77%
	Level 2	-	-	-	-	10	90%	9	89%	10	100%
Steamfitter/ Pipefitter	Level 1	36	89%	12	67%	3	67%	n/a	100%	5	83%
	Level 2	48	88%	50	78%	33	55%	29	66%	6	55%
	Level 3	63	86%	41	85%	35	100%	15	100%	6	50%
	Level 4	16	100%	76	64%	83	84%	53	79%	5	63%
Truck and Transport Mechanic	Level 1	-	-	-	-	-	-	-	-	9	43%
Welder	Level 1	6	33%	10	40%	11	45%	9	33%	-	-
	Level 2	-	-	-	-	21	86%	4	75%	n/a	33%
	Level 3	-	-	-	-	37	73%	34	74%	20	80%

*n/a (not available) indicates the results with less than 3 exam candidates have been suppressed for privacy reasons.

Apprenticeship START Program

The Apprenticeship START program was temporarily expanded to include employers in Sydney, Truro, and Halifax and now enables employers who re-hire apprentices who were laid off during the pandemic to continue to receive START funding. It is anticipated that up to 400 new apprentices and 200 laid off apprentices could be hired through the expanded program. As of March 2021, the employers of 84 apprentices benefited from the expansion.

Through the Apprenticeship START incentive, \$3,287,500 was distributed in 2020-2021 to employers who hired, progressed and completed their apprentices. As of March 31, 2021, there are 1335 active apprentices and 952 employers participating in the Apprenticeship START Program as indicated in Table 16. Twenty-seven per cent (27%) of apprentices are underrepresented and nine per cent (9%) of these are women.

Table 16: Employers and Apprentices in START Program 2020-2021

Employers and Apprentices in START Program 2020-2021	
Active Employers	952
Active Employers Hiring Diverse Apprentices	229
Active Apprentices	1335
Active Apprentices – Diverse	362
Active Female Apprentices	116

Since the investment of an additional \$2,000,000 in the program in 2017, 165 apprentices have completed their program of which 16% were diverse. The percentage of diverse apprentices completing their programs is significantly higher if the employer receives the START incentive.

Table 17: Apprentice completion of START Program

Level of Apprenticeship	Number of Apprentices	Percentage of Diverse Apprentices
Level 1	730	29%
Level 2	203	29%
Level 3	173	28%
Level 4/IP Exam	85	20%
Completions	165	16%

Apprentice Progression and Completion Awards

To respond to financial needs of apprentices during the pandemic, the Agency began a monthly disbursement of the Apprentice Progression and Completion Awards on behalf of the Apprentice Award Trust. The awards are distributed upon successful completion of an eligible level of apprenticeship or of all apprenticeship requirements and help defray the costs of participating in apprenticeship training. In 2020-2021, awards totaling \$255,750 were issued to 325 apprentices.

Table 18: Apprentice progression/completion awards by trade

Trade Name	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Auto Body and Collision Technician ⁽¹⁾	5	4	13	2	9
Automotive Service Technician	63	82	68	61	68
Boat Builder	3		2	1	
Bricklayer	1	1			
Boilermaker				2	
Carpenter	33	42	46	33	23
Construction Electrician	145	111	101	94	69
Cook	1			1	1
Gasfitter	16	22			
Glazier	1				
Heavy Duty Equipment Technician	8	6	1	8	4
Industrial Electrician	44	38	24	12	13
Industrial Mechanic (Millwright)	12	19	14	11	8
Instrumentation and Control Technician	6	8	1		13
Machinist	7	7	11	4	
Metal Fabricator (Fitter)	12	13	4	1	
Oil Heat Systems Technician		1			
Plumber	28	22	40	42	23
Power Engineer	17	13	13	10	8
Powerline Technician		15	3	15	11
Refrigeration and Air Conditioning Mechanic	24	24	26	17	14
Sheet Metal Worker	11	9	5	7	6
Sprinkler Fitter ⁽²⁾		1			
Steamfitter/Pipefitter	34	28	9	18	11
Truck and Transport Mechanic	24	26	27	45	43
Welder		2			1
TOTAL	495	494	408	384	325

(1) Motor Vehicle Body Repairer (Metal and Paint) trade name was changed to **Auto Body and Collision Technician** in 2019

(2) Sprinkler System Installer trade name was changed to **Sprinkler Fitter** in 2019.

Figure 11 shows those who have completed apprenticeship training and attained a Certificate of Qualification over the past ten years. The Agency was not able to invigilate examinations through most of 2020-2021 due to public health restrictions and many apprentices were laid off for significant periods of time which made it difficult for them to achieve the hours required for certification; therefore, the number of individuals who received a Certificate of Qualification was significantly reduced.

Figure 11: Nova Scotia apprenticeship completions from 2011-2012 to 2020-2021

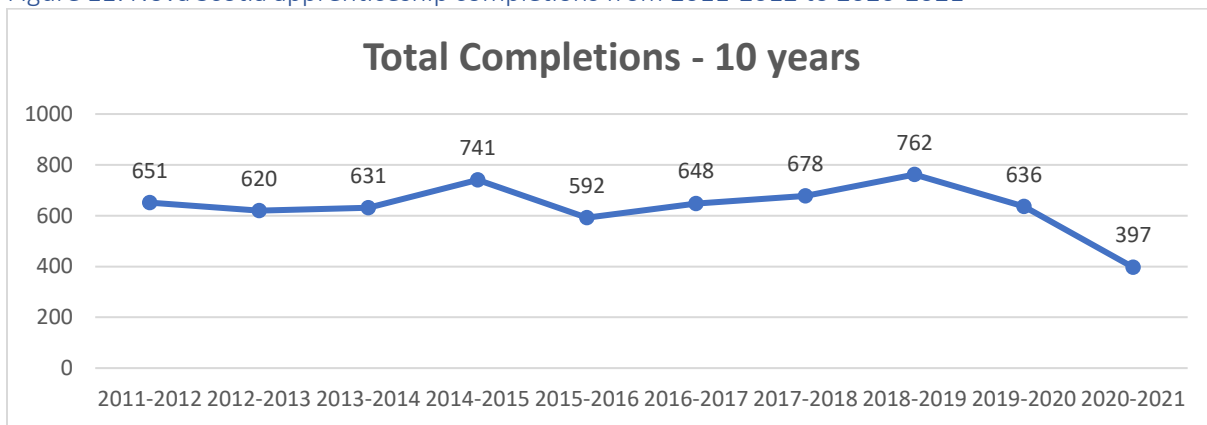


Figure 12: Examination pass rates for Red Seal trades from 2016-2017 to 2020-2021

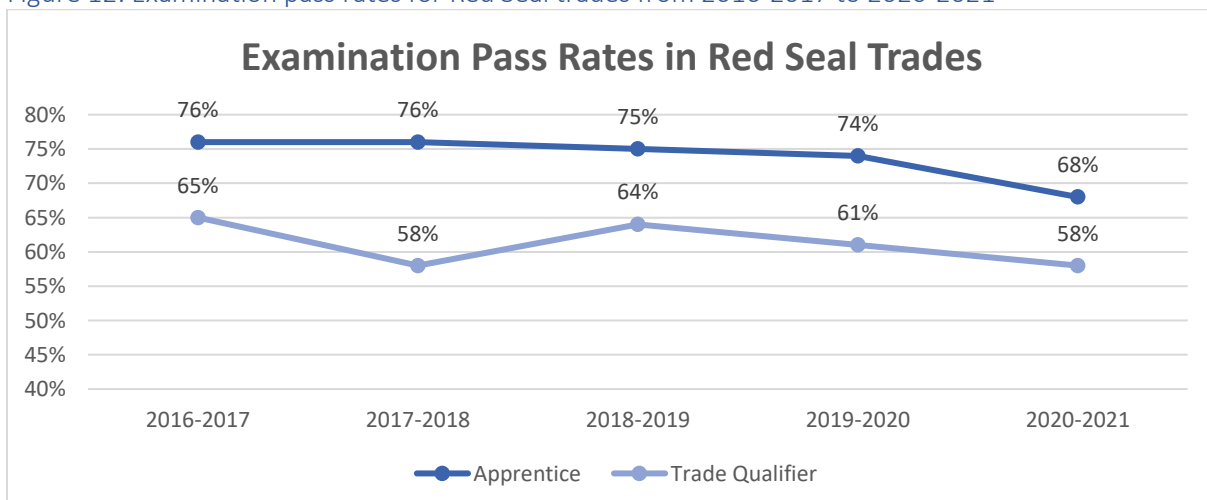


Table 19: All Certificates of Qualification issued by trade and year in Nova Scotia – Apprentices and Trade Qualifiers

Construction Sector	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Blaster	5	3	5	6	16
Boilermaker	10	11	8	7	5
Bricklayer	3	6	10	5	2
Carpenter	47	40	33	52	39
Concrete Finisher				1	
Construction Electrician	134	151	170	165	98
Elevating Device Mechanic ⁽¹⁾				2	1
Gasfitter A ⁽²⁾		1	5	4	2
Gasfitter B ⁽²⁾		15	17	15	10
Glazier				13	1
Insulator (Heat and Frost)	3	5	22		20
Ironworker (Reinforcing)	18	1	12	4	
Ironworker (Structural/Ornamental)	10	19	1	7	5
Mobile Crane Operator	10	5	9	2	2
Oil Heat System Technician	14	10	7	6	7
Painter and Decorator				2	1
Plumber	48	46	36	37	38
Powerline Technician	5	16	15	31	22
Refrigeration and A/C Mechanic	27	24	31	34	14
Restoration Stone Mason				1	
Roofer	10	7		5	
Sheet Metal Worker	21	18	15	19	7
Sprinkler Fitter ⁽³⁾	4	8	7	5	6
Steamfitter/Pipefitter	50	57	60	40	13
Tower Crane Operator	2		1	1	
Welder	38	44	46	28	17
TOTAL	459	487	510	492	326

Industrial/Manufacturing Sector	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Boat Builder	1	2	2	1	1
Cabinetmaker			1		1
Industrial Electrician	33	30	17	13	16
Industrial Mechanic (Millwright)	34	16	35	29	21
Instrumentation and Control Technician	2	11	7	7	4
Machinist	11	4	10	7	2
Metal Fabricator (Fitter)	1	12	16	19	6
Welder	38	44	46	28	17
TOTAL	120	119	134	104	68

Motive Power Sector	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Agricultural Equipment Technician		5		1	
Auto Body and Collision Technician ⁽⁴⁾	16	13	14	10	5
Automotive Service Technician	63	160	181	128	92
Elevating Device Mechanic				2	1
Heavy Duty Equipment Technician	19	5	14	10	10
Marine Service Technician	1	11		4	
Motorcycle Mechanic	3	5	8	6	4
Parts Technician ⁽⁵⁾		1			
Recreation Vehicle Service Technician		2			
Transport Trailer Technician				1	
Truck and Transport Mechanic	64	44	69	60	33
TOTAL	166	246	286	222	145

Service Sector	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Alarm and Security Technician				1	
Appliance Service Technician				1	
Baker	1	3	7	3	1
Cook	17	24	21	23	12
Hairstylist	2	20	2	2	8
Landscape Horticulturalist	2		3	2	
TOTAL	22	47	33	32	21

(1) Elevating Devices Mechanic trade was added in 2020; (2) Gasfitter trade was divided into Gasfitter A and Gasfitter B in 2017; (3) Sprinkler System Installer trade name was changed to Sprinkler Fitter in 2019; (4) Motor Vehicle Body Repairer (Metal and Paint) trade name was changed to Auto Body and Collision Technician in 2019; (5) Partsperson trade name was changed to Parts Technician in 2020.

As the number of Certificates of Qualification issued this year has decreased, the number of women and diverse apprentices receiving a Certificate of Qualification has also decreased.

Table 20: Certificates of Qualification issued to **Apprentices** who self-identify as female or diverse*

C of Qs Apprentices	TOTAL ALL		Women		Aboriginal		African NS		Persons with Disabilities		Newcomers		Other Diverse Persons		Pass Rate	
	IP	Prov	IP	Prov	IP	Prov	IP	Prov	IP	Prov	IP	Prov	IP	Prov	IP	Prov
2020-2021	382	14	23	15	10	-	7	-			6	-	13	-	59%	50%
2019-2020	601	38	28	2	12	0	4	0	21	0	7	1	11	1	62%	58%
2018-2019	642	58	36	1	24	1	1	2	16	3	2	1	16	3	63%	77%
2017-2018	625	49	21	2	8	0	1	0	13	2	4	0	20	0	68%	73%
2016-2017	579	54	31	2	15	1	1	0	10	0	5	1	17	2	67%	69%

*'Diverse' refers to individuals who identify as a member of a community underrepresented in the Apprenticeship and Trades Qualification System

Table 21: Certificates of Qualification issued to **Trade Qualifiers** who identify as female or diverse*

C of Qs Trade Qualifiers	TOTAL ALL		Women		Aboriginal		African NS		Persons with Disabilities		Newcomers		Other Diverse Persons		Pass Rate	
	IP	Prov	IP	Prov	IP	Prov	IP	Prov	IP	Prov	IP	Prov	IP	Prov	IP	Prov
2020-2021	79	13	3	1	1	0	0	0	1	0	1	0	1	0	58%	93%
2019-2020	93	13	6	1	1	0	2	0	1	0	3	0	0	0	49%	46%
2018-2019	101	8	7	0	0	1	0	0	5	0	0	0	0	0	51%	62%
2017-2018	112	22	11	0	1	0	2	0	1	0	8	0	4	0	52%	44%
2016-2017	113	16	7	0	2	0	0	0	2	0	2	0	3	2	50%	33%

*'Diverse' refers to individuals who identify as a member of a community underrepresented in the Apprenticeship and Trades Qualification System