



Discussion Paper:

APPRENTICESHIP TRAINING

for Residential Construction Trades

in Nova Scotia

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Introduction

1.0 Introduction

This discussion paper is intended to provide an overview of the main elements of the apprenticeship training system in Nova Scotia and highlight the key issues facing the home building and renovation industry. The paper will assist industry stakeholders to gain a better understanding of apprenticeship in Nova Scotia and stimulate dialogue on how to build an apprenticeship system that will address the specific needs of the home building and renovation sector.

For the purposes of this discussion paper, apprenticeship is defined as the "method of learning in which practicing experts (journeypersons) pass on knowledge and skills to learners (apprentices) in a workplace setting." This transfer of knowledge involves a combination of on-the-job skills training (practical) and technical training (theory).

Overview of Apprenticeship Training in Nova Scotia

2.0 Overview of Apprenticeship Training in Nova Scotia

In Canada, apprenticeship programs are an area of provincial and territorial government responsibility. The provincial and territorial departments responsible for education, labour and training administer apprenticeship programs. The Apprenticeship Training Division of the provincial Department of Education administers apprenticeship training in Nova Scotia. In this role, they are responsible for¹:

- ▲ providing leadership to ensure that the training offered in training institutions and in industry is of the highest quality and is current and relevant to the needs of employers and apprentices in the Province of Nova Scotia; and
- ▲ developing and maintaining apprenticeship and certification examinations.

Overall responsibility for the program lies with the Provincial Apprenticeship Board (PAB). Operating under the auspices of the Apprenticeship and Trades Qualifications Act and General Regulations, the PAB provides advice to the Minister of Education on issues related to apprenticeship training. Under this mandate, the PAB is specifically responsible for recommending the designation of new trades and occupations for apprenticeship.

The PAB plays a key role in promoting and educating the public about apprenticeship and accordingly is considered to be a fundamental link between government, business, and industry. In fulfilling its mandate, the PAB strives to²:

- ▲ Work in concert with industry, training providers, and the Apprenticeship Training Division for the purpose of:
 - ▲ increasing the number of persons entering and completing apprenticeship training;
 - ▲ ensuring the apprenticeship model is meeting or exceeding industry and labour market demands; and
 - ▲ ensuring the legislative framework remains relevant to the needs of stakeholders.

1 <http://apprenticeship.ednet.ns.ca>

2 <http://apprenticeshipboard.ednet.ns.ca>



- ▲ Develop and implement strategies designed to increase industry participation in the apprenticeship model;
- ▲ Ensure apprenticeship training disputes are handled in a fair and objective manner;
- ▲ Engage in strategies designed to promote and encourage our youth and life-long learners to participate in the apprenticeship model of training; and
- ▲ Improve participation rates of under-represented groups.

The Apprenticeship Training Division and the PAB have two main partners in the delivery of technical training, namely the Nova Scotia Community College (NSCC) and the University College of Cape Breton (UCCB). Technical training is also available over the Internet through the Virtual Campus of the Nova Scotia Community College.

In many provinces, each trade has a provincial apprenticeship committee. Like the training boards, members of the committee represent both employers and employees. The provincial committees work closely with local apprenticeship committees to identify training needs. Apprenticeship committees set standards for apprenticeship training and certification for their trade. They make recommendations to provincial training boards about designation of trades and trades regulation. While the Apprenticeship and Trades Qualifications Act in Nova Scotia provides for trade advisory committees, they were disbanded in 1994 and replaced with a model of ad hoc issue-based committees that has been infrequently used to date.

Input on training at the program and course level is facilitated by program advisory committees at the Nova Scotia Community College. Under a Memorandum of Understanding, the Nova Scotia Community College is obligated to confer with the Atlantic Home Building and Renovation Sector Council and the Nova Scotia Construction Human Resources Sector Council (NSCHR SC) on issues related to the training needs of the construction industry and involve the sector councils in the program advisory committees.

Apprenticeship Training for Residential Construction in Nova Scotia

3.0 Apprenticeship Training for Residential Construction in Nova Scotia

Apprenticeship training is distinct from certification and licensing processes. Occupations are classified as either compulsory or voluntary. Compulsory occupations require workers to be licensed or registered as apprentices to work in the occupation. In voluntary occupations, licensing is not mandatory for workers to practice in the occupation, although they may have a certification process to indicate their qualifications. All apprentices must be indentured to an employer to be registered.

The term of apprenticeship is usually three to four years. Upon successful completion of the program, the apprentice earns a Certificate of Qualifications (CQ) recognizing the tradesperson as a skilled journeyman. Other ways of acquiring a Certificate of Qualification includes meeting mandatory times in practical work in the occupation and successfully challenging the certifying exam; or holding a Certification of Qualification from one province that is recognized by another province.

3.1 Designated Trades and Terms

There are 53 officially designated trades in Nova Scotia. Of these, at least 16 can be argued to have some level of involvement in the residential construction and renovation industry although no data exists to identify apprenticeships by construction sector (see the following table). Only seven of the 16 trades have active apprenticeship training programs in place in this province, the most recent addition being training for gas fitters in 1999.³

Each designated trade has a specific number of hours that must be completed in order to qualify for a Certificate of Completion. One year of training is recognized as 2,000 hours. The requirements to qualify for a Certificate range from 4,000 to 8,000 hours, depending on the regulations governing that particular trade.

3 Note that although apprenticeship training is not available for these other trades, certificates can still be issued to individuals in this province based on work or other training experience.



Exhibit 1: Apprenticeship (Available and Not Available in NS)

TRADE NAME	YEARS
Apprenticeship Training Available:	
* Bricklayer ✓	4
* Construction Electrician ✓	4
* Oil Burner Mechanic ✓	3
* Plumber ✓	4
* Refrigeration & Air Conditioning Mechanic ✓	4
* Carpenter	4
Gas Fitter	2
Apprenticeship Training currently Not Available:	
* Cabinet Maker	4
* Cement Finisher	3
* Floorcovering Installer	2.5
* Glazier (works with glass)	4
* Insulator (heat & frost)	4
* Lather (drywall, vapour barriers, etc.)	3
* Painter and Decorator	3
Restoration Stone Mason	4
* Roofer	3

* *Indicates a Red Seal Occupation.*

✓ *Indicates that certification is compulsory. This means that any person working in this trade must hold a current Certificate of Qualification, be a registered apprentice or an improver, have a current temporary permit, or have a current Certificate of Qualification bearing the Red Seal. Trades are specified on the request of industry and this request is generally based on reasons of public and worker safety.*

Individuals must first be employed in the trade before they can register as an apprentice. To register an individual needs to have successfully completed Grade XII, or an acceptable equivalent of education and experience.

3.2 Program Participants

Registrations have increased considerably over time, up 47% over the four-year period shown in the following table. The construction electrician trade has consistently attracted more new apprentices than most of the other trades.

Exhibit 2: New Registration Statistics for all 53 Trades

YEAR	# NEW APPRENTICES	CANCELLATIONS & REINSTATEMENTS	% CHANGE FROM PREVIOUS YEAR	% BY TRADE
97/98	824	514 cancelled for various reasons ⁴ 25 reinstatements	13% higher than 1996/97	Construction Electricians (14%) Carpenters (10%) All others at 6% or less
98/99	932	470 cancelled 34 reinstatements	13% higher than the previous year	Construction Electricians (12%) Carpenters (7%) Plumbers (7%) All others at 6% or less
99/00	1,212	312 cancelled, 18 reinstatements	30% higher than the previous year	Construction Electricians (14%) Carpenters (9%) Plumbers (8%)
00/01	1,216	438 cancelled, 18 reinstatements	same as previous year	Construction Electricians (14%) Carpenters (6%) Plumbers (6%)

Source: Annual Reports for 1997/98, 1998/99, 1999/00, and 2000/01. New Registrations by each trade were not provided in the Annual Reports.

Apprentices associated with residential construction account for two-fifths of total active apprentices. As of January 30, 2001 there were 4,082 apprentices considered active in the province.⁵ Nearly 44% (1,621) were involved in trades related to residential construction. Note that this data includes apprentices potentially attached to residential construction as well as to other sectors such as ICI and/or manufacturing. The following table presents the number of apprenticeship completions over the last four years and the most recent data on active apprentices in Nova Scotia.

⁴ Examples include 'leaving the province', 'at own request', 'to write the Certificate' and 'not trade employed'.

⁵ These data do not include improvers (these are individuals who have some training or experience and therefore do not require the full scope of apprenticeship training) and Section 19 applicants (non-apprentices approved to write certification examinations).



Exhibit 3: Apprenticeship Completions and Active, Nova Scotia

TRADE NAME	1997/98	1998/99	1999/00	2000/01	# ACTIVE*
Bricklayer	-	5	1	1	37
Carpenter	19	28	17	32	429
Construction Electrician	25	41	71	62	642
Gas Fitter	-	-	-	5	10
Oil Burner Mechanic	23	26	18	20	133
Plumber	19	42	27	21	282
Refrigeration and Air Conditioning Mechanic	16	13	21	1	88
SUB-TOTAL	102	155	155	142	1,621
Other Non-Residential Construction-Related	164	189	261	261	2,461
TOTAL	266	344	416	403	4,082

* *Indicative of all individuals who have registered in the Program, regardless of whether they accessed training.*

4.0 Key Issues

Over the past few years, studies and industry consultations carried out on both a national and provincial level have consistently confirmed that the home building and renovation industry is a distinct industry sector and the industry requires human resources policy and program approaches and action strategies that address the specific needs and conditions of the sector. For example, a report completed by Sparks Consulting⁶ noted that:

“There are some striking differences between the ways residential construction and ICI (Industrial, Commercial and Institutional Construction) operate that impact on the labour market” (p. ES i)

Key differences between the home building and renovation industry and other sectors of the construction industry include:

- ▲ Different skill sets and approaches to on-site work organization, including the widespread reliance on workers with skills and qualifications in different areas of activity within the building process;
- ▲ Different approaches to recruiting, training and managing the labour force;
- ▲ A smaller proportion of certified workers;
- ▲ A smaller proportion of workers who are unionized;
- ▲ Generally smaller firms;
- ▲ More sub-contracting and a relatively large number of self-employed individuals in the workforce;
- ▲ Closer relations between employees and customers;
- ▲ A distinct regulatory environment;
- ▲ A relatively large informal economy sector and more seasonal employment;
- ▲ Unique sub-sectors such as renovation, new home building, cottages and mobile homes, semi-prefab construction, etc.; and

⁶ RJ Sparks Consulting Incorporated and WGW Services Ltd, Residential Construction Labour Market Issues Study, January 2000.



- ▲ Unique economic performance and cyclical trends as demonstrated by the recent strong performance of the industry despite the recent downturn in overall economic activity.

Changes in the apprenticeship system in Nova Scotia could improve its contribution to the provision of skilled, productive workers to the residential construction industry. The Atlantic Home Building and Renovation Sector Council is aware of the critical importance of the apprenticeship system in providing skilled trades people to industry and has prepared this discussion paper to stimulate discussion on ways to change this system to meet the needs of the home building and renovation industry more effectively.

Over the past few years, the AHB&R SC has consulted with industry stakeholders and partners on the need for an apprenticeship program to reflect the specific knowledge and skill requirements of the home building and renovation industry in Nova Scotia. Based on these consultations, the following highlights the key issues that require attention and concerted action.

4.1 Limited number of designated occupations and training

The Statistics Canada National Occupational Classification (NOC) system has thirty classifications for occupations within the home building and renovation sector. Only sixteen of the thirty occupations are currently officially designated as trades in Nova Scotia. Of these 16, only seven have apprenticeship training. To ensure the apprenticeship system is providing highly skilled trade's people to the home building and renovation industry, there is a need for additional designated occupations and expanded apprenticeship training opportunities.

4.2 Improving the program structure

The existing apprenticeship program does not recognize separate components in some occupations. There is a need for a more modularized approach reflecting the realities of the how the industry operates, and credit for completion of individual modules. This is particularly true for carpentry.

A new residential carpentry occupation should be designated that recognizes and includes the sub-



occupation specializations. This is an extension of the modular training components now in place, but requires a new model of indentureship that will accommodate the residential construction and renovation industry needs of carpenters.

4.3 Curricula development process

Instructor skill and curriculum are not always up to date with how things currently work in the industry. To address this issue, there needs to be closer links between classroom and indentureship components. The information and skills taught in the classroom must be relevant to the experiences the individual will face on the job site, and the apprentice must be prepared for the assignments in the work place. Increasing on-site training during the classroom module would improve this, as would increasing professional development activities for instructors to ensure that they are keeping pace with industry practices.

4.4 Insufficient promotion

There is strong evidence that shortages of skilled labour will become an increasing problem for the residential construction industry. Demographic realities, technological change and low recruitment levels of young people are but a few of the documented factors that restrict, and will increasingly limit, the supply of skilled trades people. A recent youth decision survey indicates, however, that students have low awareness about apprenticeship programs, the skilled trades or the construction industry. In this context, it is critical that the Provincial Apprenticeship Board fulfill its mandate to promote apprentice training as an attractive career option for potential recruits.

4.5 Low enrolment of particular target groups

Participation in apprenticeship is low among particular target groups such as Aboriginal people, older workers, trades workers who have had disabling injuries on the job, and women. To alleviate projected shortages of skilled labour, there is a need to improve participation levels by targeted groups. This plan will not only benefit the industry but also will create productive and rewarding career



opportunities for individuals and groups that may experience difficulties in the labour market.

4.6 Barriers to labour mobility continue

The Interprovincial Standards Program (ISP) or Red Seal Program is the main apprenticeship initiative to provide greater mobility across Canada for skilled workers. The Red Seal allows qualified trades persons to practice the trade in any province or territory where the trade is designated without having to write further examinations. Despite the successes of the Red Seal program, it is limited in its ability to improve labour mobility. For example, although it encourages standardization of provincial training and certification programs, none of the 23 construction-related Red Seal trades are based on a trade that is common to all provinces (e.g. trade names, training and certification processes differ between provinces). In other words, there are regional disparities in access to apprenticeship programs because these programs have developed unevenly in different provinces and territories. Regional disparities in apprenticeship programs contribute to skill shortages in some regions and limited employment and career opportunities in others.

4.7 Low completion rates

In Canada, completion rates for apprenticeship are much lower than for other types of education. In fact, only 10% of apprenticeship registrants complete their training and achieve certification. In Nova Scotia, the completion rate is also quite low. As illustrated in Exhibit 3, approximately 9% of active residential construction registrants completed their apprenticeship in 2000/01.

Interprovincial Initiatives

5.0 Interprovincial Initiatives

The apprenticeship system in Nova Scotia does not operate in isolation and, in fact, is influenced by a number of inter-provincial initiatives. The following provides an overview of inter-provincial initiatives in the area of apprenticeship training.

Interprovincial Standards Program (Red Seal) – Apprentices who complete their training and are certified journeypersons are able to obtain a Red Seal endorsement on their Certificates of Qualification and Apprenticeship by successfully completing an Interprovincial Standards Examination. The CCDA coordinates development of the Red Seal Program, which is jointly funded by HRDC and the provinces. Until recently, individual provinces developed different exams (at their cost) for apprentice certification. The results were circulated to other provinces for approval and, once agreement was reached, HRDC would pay for the translation. Most exams are now based on the Interprovincial Computerized Examination Management System (ICEMS). This system includes sets of questions for the items that must be tested. Questions can be selected randomly to create many different computerized versions of the same exam. HRDC funded development of the questions (item banks) and the translation. Provinces are responsible for the ongoing costs of ICEMS administration.

To date a total of 44 apprenticeable trades have been designated as Red Seal trades. Standards for these 44 trades are based on a National Occupational Analyses. For voluntary trades, qualified workers who achieve a Red Seal certification in a designated trade can practice the trade in any province that has recognized the designation. For mandatory trades that have licensing requirements, other provinces recognize the certification and workers can apply for a licence. Over half (23) of the Red Seal trades are related to construction. Statistics from the Canadian Council of Directors of Apprenticeship indicate that the number of Red Seals issued to skilled workers in all trades increased between 1995 and 1999 from 9,769 to 12,868.

Canadian Council of Directors of Apprenticeship – The CCDA provides guidance to provinces and territories that are responsible for administering the Red Seal program. The federal government, provinces and territories have delegated the authority to CCDA to work with industry to establish certification standards for the ISP trades.



- ▲ CCDA Products Committee – The Products Standing Committee of the CCDA works to ensure that the National Occupational Analyses for Red Seal trades, and the Tables of Specifications derived from these analyses, are consistent with industry standards. The Tables of Specifications are used to create the interprovincial examinations by the Interprovincial Standards Examination Committee, which is responsible to the Products Committee.
- ▲ Industry Relations Committee – The purpose of the Industry Relations Committee is to work with national industry groups; its mandate is “to provide a focus and point of contact for industry on a national basis with the CCDA.” The IR Committee has worked on important but limited issues such as Red Seal trade names and National Occupational Analyses. A total of 21 industry meetings were held over the first 3 ½ years of the IR Committee. A consultant represents the CCDA at the meetings. HRDC is also represented on the Industry Relations Committee. According to the November 2000 CCDA newsletter: “When a national industry group decides to proceed in areas of interest to CCDA, i.e. task analyses, training materials, etc., the HRDC representative on the IR Committee provides the link between the two organizations to avoid duplication of efforts and to ensure that the CCDA approved processes and protocols are adhered to.” HRDC provides funding support to the IR Committee.

Canadian Apprenticeship Forum – The CAF was established in 2000 as a non-profit organization with \$1.59M in funding from HRDC for basic operations over three years. The Canadian Apprenticeship Forum consists of representatives from labour, business, equity groups, education, provincial apprenticeship board chairs (representing industry associations), the CCDA, and HRDC. The CAF, scheduled to meet three times a year, will run national projects that promote apprenticeship and interprovincial mobility of workers. The current focus of the CAF is on information and communications (e.g. distributing the “Making it Work” booklet originally developed by the Canadian Labour Force Development Board). CAF has identified two other priorities including an apprenticeship information base and Internet portal and an initiative to promote apprenticeship training.

Forum of Labour Market Ministers – The FLMM was established in 1983 to promote co-operation on labour market issues and to develop and expand interprovincial standards for highly skilled occupations. The FLMM is co-chaired by the Federal Government and the Lead Province, which is assigned on a rotating basis. The Forum of Labour Market Ministers is responsible for implementing



the labour mobility provisions of the *Agreement on Internal Trade* (AIT) signed in July 1994 and has established a Labour Mobility Coordinating Group for this work. The Labour Mobility chapter of the AIT endorses the Red Seal program as the primary method of provincial/territorial qualifications recognition.

- ▲ Under the 1999 *Framework to Improve the Social Union for Canadians*, all governments except Quebec further committed to ensure full compliance with the labour mobility provisions of the AIT by July 1, 2001. Quebec agreed to have its regulatory bodies work towards compliance on a voluntary basis.
- ▲ By the July 1, 2001 deadline, regulatory bodies representing 42 of the 51 regulated occupations had reached or were close to reaching agreement on conditions under which mobility would be the facilitated, usually documented in Mutual Recognition Agreements (MRAs).
- ▲ HRDC will continue to provide funding for provincial and territorial regulators (responsible to the FLMM) to meet to work on labour mobility agreements.

National Occupational Analyses – The National Occupational Analyses (NOA) is a program to identify common tasks performed across the country by workers in particular occupations. Individual analyses are developed by industry with coordination by the CCDA and assistance from HRDC. HRDC provides financial support for the costs associated with the NOA process. The work conducted for the NOA is used to develop interprovincial standards, training curricula and examinations that lead to Red Seal certification.

Inter-Provincial Alliance of Apprenticeship Board Chairs – This alliance (IPA) provides representation to the Canadian Apprenticeship Forum for provincial industry associations, through the chairs of provincial apprenticeship boards. It is self-funded (i.e. by the provincial and territorial training boards which the chairs represent).

Conclusion

6.0 Conclusion

This review of apprenticeship from the perspective of the home building and renovations industry in Nova Scotia leads to 3 general conclusions:

1. The apprenticeship model is appropriate and effective as a basic system for recruiting and training new entrants for the home building and renovations labour force. It fits with the traditions of the industry and provides flexibility for people who enter the industry through different paths.
2. The apprenticeship system as it currently operates and is structured in Nova Scotia does not meet the needs of the home building and renovations industry:
 - ▲ Not enough apprentices are being recruited to the industry through the system; and
 - ▲ There is insufficient accommodation of the specific knowledge and skills required for both residential construction and renovation as distinct from commercial, industrial and institutional construction.
3. Given the strategic place of the industry in the Nova Scotia economy and the looming problems of skilled labour shortages, special efforts are needed by all the partners – employer organizations, the Atlantic Home Building and Renovation Sector Council, the Nova Scotia Apprenticeship Board, the Nova Scotia Community College and the Nova Scotia Department of Education – to expand and modify the apprenticeship system to address more effectively the specific needs of the home building and renovations industry.

The areas of change to be explored and developed by the partnership include the following:

- ▲ More effective involvement by leaders from the residential construction and renovation industry in policy and decision-making within the apprenticeship system, possibly through the use of apprenticeship committees for particular trades as referred to in the Apprenticeship Act.
- ▲ Development of curricular models, resources and teaching processes to cover more effectively the knowledge and skills specific to residential construction and renovation activities;
- ▲ Introduction of greater flexibility and modularization within curricular and certification systems to allow apprentices to acquire certifiable job-ready skills for “sub-trades” such as framing, finish carpentry, foundations or truss work.
- ▲ Concerted efforts to recruit and train more employers to become apprenticeship providers.



- ▲ Development of a strategy to use the apprenticeship system to facilitate and support life long learning in the home building and renovation industry with particular emphasis on workers already in the industry who, for a variety of reasons including essential skills deficits, have never participated in or had access to training and certification.
- ▲ Development and marketing of a comprehensive and directly relevant prior learning and recognition system as a key component of the life long learning strategy.



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