



Saskatchewan Plumbing & Pipefitting Sector

Human Resource Strategy Phase III

2005 Piping Sector Report

TRADES PROFILE & APPRENTICESHIP TRENDS
TRADES ENTRY
ABORIGINAL EMPLOYMENT STRATEGY
MENTORSHIP FRAMEWORK
COMMUNICATIONS STRATEGY

Prepared by



2005 Piping Sector Report

Executive Summary

The Saskatchewan Plumbing & Pipefitting Sector Partnership has completed Phase III of its Sector Human Resource Strategy and executed the 2005 plan of action dealing with strategies for trades entry, communications, mentorship needs and Aboriginal employment initiatives. The Mechanical Contractors Association of Saskatchewan and the Saskatchewan Provincial Pipe Trades Association, together with industry stakeholders, have built on their achievements since the Partnership was established in 2000, with assistance provided by the Job Start/Future Skills Sector Partnerships Program of Saskatchewan Learning.

The ten years to June 2005, have seen solid growth for the plumbing and piping trades based on a strong economy. Plumbing apprenticeship registrations have increased 166 percent compared to 51 percent for apprenticeship registrations as a whole. In the past five years, plumber and steamfitter-pipefitter trades together have risen 24 percent, while total apprenticeship registrations are up 1.3%. The need in upcoming years will be to replace retiring workers, since almost 40 percent of the piping workforce is over the age of 45.

The pipetrades workforce consisted of 2,420 people as of the 2001 Census, 30 percent higher than it was in 1996, with over 70 percent working in the construction sector. As a sector, our priority is to meet the needs of Saskatchewan's growing economy, even as other provinces seek tradespeople from throughout North America.

Apprenticeships in Canada and Saskatchewan as a whole are not growing as fast as might be expected. In response to skills shortages and to promote the low cost, high value nature of apprenticeship training, promotion and awareness activity has increased significantly:

- Federal Government campaign to double the number of certifications in apprenticeship over the next ten years.
- New campaigns and websites for parents, educators, employers and job seekers - www.careersintrades.ca; www.apprenticetrades.ca; www.careersinconstruction.ca.
- Saskatchewan Apprenticeship Commission introduced a new CD and DVD made for high school students and is offering an apprenticeship education initiative in Saskatchewan high schools in 2006.

Other recent developments focus on business issues relating to employer needs and apprenticeship training:

- A detailed labour market forecast is being prepared for the Construction Sector.
- Saskatchewan Apprenticeship Commission is conducting comprehensive compliance reviews of all contracts in support of the enhancement of industry's training culture.
- Research and discussion is taking place about apprenticeship costs and a tax credit system to stimulate apprenticeship registrations and completions.
- Strategies to increase the number of upper level apprentices and journeypersons are being explored.
- Strategies to meet the needs of rural contractors and employees are being explored.

Employer Survey Highlights

A Saskatchewan employer consultation in February 2005, found that over half of employers expected to need more personnel within the year. Recruiting difficulties and shortages are a concern for 80 percent of companies surveyed. Findings are based on a 50 company telephone survey which compares some results with the original Sector Human Resource survey conducted five years ago.

Several themes emerged from the survey. Employers want to see a more effective system of getting suitable people into the trade or into the trade that is right for them. Other challenges include the lack of consistent work and finding people suitable for work in the trade, only to lose them to other provinces or companies. Rural companies face more extensive workforce aging issues and recruiting and retention difficulties. We also found that journeyman wages range from \$15/hour to over \$32/hour, with lower wages on average in rural Saskatchewan. And forty four percent raised issues regarding the Apprenticeship Training System as a whole, including difficulties maintaining the ratio, and need to upgrade technologies.

Trade Entry Strategies

A recent national survey says that the future supply of skilled tradespeople is at risk since **University is the first choice postsecondary education option among Canadian youth and their influencers**. Our report looks at two broad paths to entry – high school to apprenticeship, and the pre-trades system, to see what needs were being met and how training could be strengthened.

Plumbing is the only one of the compulsory trades not available to high school students. While industry is concerned that an opportunity to introduce youth to our trades is being missed, indications are that a barrier to introduction of a provincial curriculum is the availability of qualified instructors and the cost of facilities and materials needed. More exploration is needed to determine direction on this concept. In the meantime, the Saskatchewan Apprenticeship Commission is introducing a Youth Apprenticeship Initiative at the high school level starting in 2006/07. This is an important step in the education of youth that is likely to lead to an increase in interest in all trades and help lift the perception of the trades.

Employers traditionally indenture candidates following a period of work experience, and subsequently a candidate moves through Level 1 training and beyond. The piping industry has long supported changes to the costly pre-employment system, which in 2003 resulted in a 17 week pre-trades program intended to be more closely aligned to employer needs. Regional College delivery supports rural Saskatchewan's skill needs, however, the value added by pre-trades must be strengthened by:

1. Increasing industry involvement and coordination.

Industry, at the level of the provincial industry associations, has not been involved in the planning and delivery of pre-trades programs. While local employers support local programs, this lacks the more coordinated approach and consistent, enhanced industry presence that are vital to meeting industry's human resource needs and keeping people in the industry. Increasing industry involvement will produce partnership-based training that is more effective and accountable.

2. Increase information and tracking of results.

Lacking from the system is information about demographics, employment and ultimate indenturing and certification results. The 2004 SIAST Graduate Report now summarizes results, however a greater understanding of long term impact on indenturing and certification is needed.

3. Improve selection of candidates.

Selection is based on a first qualified, first admitted process. Industry needs assurance that candidates meet industry standards and understand the requirements and demands of the industry as well as the apprenticeship system. There is some perception that many candidates are not suitable. Greater industry involvement may alleviate this concern.

In 2005/06 there will be an increase in the number of pre-trade programs throughout Saskatchewan, an opportunity to step up industry involvement. At the same time, we understand the capacity of SIAST/Regional College training system is at its limit in terms of facilities and resources.

New Channel to Work

SIAST pre-trades training is designed to provide the technical skill and theory so that apprentices can learn and apply new skills on the job. Industry sees the need for a coordinated entry route that establishes and builds relationships with trainees, and supports them throughout their apprenticeship journey. Potentially strong candidates are now lost to the industry or the Province through lack of available information, or difficulty connecting with employers. Industry can strengthen entry into the trade, along with retention, with an **industry-led training service/career centre**.

A pilot program with a Service Canada funding partnership can be explored to establish a turn key solution to meeting selection, education and work experience needs. An approach, including partnerships and roles will be developed pending further discussion.

Aboriginal Employment Strategies

The Sector is proud to support a pre-trades training program in conjunction with Saskatchewan Indian Institute of Technologies to be held in Prince Albert for members of the Prince Albert Grand Council in early 2006. The program development process presented an opportunity to understand apprenticeship issues in Northern Saskatchewan. The difficulty of maintaining a one to one journeyperson ratio in isolated communities and the limited range of exposure to a variety of plumbing tasks are balanced by the benefits of promoting the trades and increasing education levels. A planned 2005 project start was delayed to enable academic upgrading of potential candidates.

The Sector plans to continue to encourage employers to utilize the services of the Construction Careers Project in Saskatoon in bidding on casino-related and any other work. Training needs linked to construction of the Dakota Dunes Casino near Saskatoon are being explored.

Strengthening Mentorship

The apprenticeship system is based on the strength and tradition of the one to one mentorship relationship for on-the-job apprenticeship skills development. However, according to the current research, the typical journey person is not well prepared to be a mentor. There are many barriers to effective mentorship. Mentorship in the piping sector is an essential tool for training and retention of workers, to assist industry to retain the knowledge and experience of seasoned professionals before they retire.

The Sector recognizes that mentorship is fundamental to the apprenticeship culture and its priority is to promote awareness of the benefits and business impact of mentorship programs, identify and promote training opportunities and support the incorporation of mentorship skills development as part of the training curriculum. Any additional actions will be determined as the result of further consultation.

Communications Strategy for *Plumbing & Pipefitting Trades*

With increasing promotion of the trades by Sector and Apprenticeship organizations, the Piping Sector still needs to compete for its share of workers and provide an attractive career environment for job seekers. During Phase III we outlined and began to execute our communications strategy, including:

- Placing plumbers in the Skills Canada Competition for the first time – raising our trade profile.
- Attending the major school career fairs with the “Get a Grip” campaign.
- Preparing volunteers from industry for classroom visits.
- Building strong relationships with the Aboriginal community to encourage qualified new job candidates and apprentices.
- Connecting with women interested in trades careers.
- Reinforcing the message that piping careers lead to career satisfaction and respect through an annual direct mail campaign to high schools, Canada Saskatchewan Career and Employment Centres, First Nations and Métis Employment Centres and other partners. This year 500+ brochures will be distributed, in addition to those given to students at Career Fairs.
- Establishing a Ride-a Long Program with SaskPower Gas Inspections Branch.
- Upgrading the MCAS website, to include a careers section with a brochure and a powerpoint presentation.
- Identifying success stories that we can promote to the public.

Communications Strategy for *Industry Employers*

During 2005, the Sector has been able to increase the information exchange with employers and plans to streamline information flow through an emailed “Sector Bulletin” and new web site. The communications plan is to promote good industry human resource practices and strengthen apprenticeship culture by reinforcing messages including, but not limited to:

- Clarifying the roles of all in the apprenticeship system,
- Reinforcing the importance of industry leadership and involvement for the future,
- Sharing upcoming pre-trades programs and results,
- Increasing awareness of human resource trends and developments such as succession planning.

The communications will increase the value perception that employers have of their sector and also encourage additional dialogue, feedback and ideas from employers. The industry website will include a careers section, reports, research results, publications, photos, new initiatives, etc. The Piping Sector Bulletin will have a distribution in excess of 300 contractors.

Conclusions and Recommendations

In the Saskatchewan Piping Sector, both the owners (MCAS) and the UA have organizational legacies going back 80 and 100 years respectively. Many companies are second or third generation contractors. There is a strong sense of the traditional apprenticeship culture amongst many workers and owners. With a new generation of workers and owners introducing present day work values to the mix, employers must adapt human resource practices and become more innovative to compete in the workplace environment.

Apprenticeship and provincial government recognition of the costs that employers bear before receiving a return on investment through the introduction of a proposed Apprenticeship Training Tax Credit is an important direction that is supported by the Piping Sector Industry. Industry looks forward to continuing discussions on the impact and implementation of such a training incentive.

Industry leadership is a fundamental principle of the apprenticeship system. The Apprenticeship Commission's 2005 Annual Report states: *"Apprenticeship employers and employees are the principal providers, clients and partners in apprenticeship, and as such have a leading role in the direction and governance of the apprenticeship system."*

Industry's leadership in the next five to ten years is especially critical. It takes at least five years to produce a certified journeyman, and many sectors and companies are courting the best of today's youth.

Consultation with the Sector Committee has defined and validated 12 recommendations for action.

NEXT STEPS: FOR DISCUSSION

1. Enhance resources and communications within the Saskatchewan Apprenticeship and training system.

The Trade Board process is considered the front line of industry's voice in the apprenticeship system. Information on apprenticeship developments also flows through the Trade Boards to industry. Presently the frequency of trade board activity is inadequate to address issues. Lead time before meetings should increase to ensure the trade representatives have time for adequate preparation and consultation on issues. An annual face to face meeting of industry and Apprenticeship would also be mutually beneficial.

In our view, the apprenticeship training system is under resourced in personnel and financing, considering its strategic impact on Saskatchewan's economic productivity. Industry has observed:

- Lengthening response times to inquiries.
- Unavailable data or inability due to cost and/or lack of time to provide data specific to the trade.
- An increase in new trades designations and sub-trades which may impact the ability of the apprenticeship system to proactively respond to needs and provide accountable, timely service to the compulsory trades, which are already participating in apprenticeship near the capacity of the economy.
- Lack of availability of trade specific brochures and promotional material based on cost of materials.
- The capacity of SIAST to meet needs is restricted by lack of office and shop space, and it has been acknowledged that pipefitters have needed a new training facility for many years. The recently announced SIAST training expansion is expected to alleviate some of these concerns.

2. Increase industry leadership with respect to Pre-trades system.

Stronger, more clearly defined, industry coordination and partnership with SIAST, Colleges and Apprenticeship from program planning, to evaluation and sharing of results will benefit job seekers, employers and all stakeholders. More information on short and long term outcomes and pre-trades impact on indenturing and journeyperson certification is needed to improve program effectiveness and lead to increasing numbers of completions.

3. Improve Exam Pass Rates

In 2004/05 the exam pass rate for plumbers was at a low of 48%, and has not exceeded 60% in the past four years, following years of 80% plus success rates. The Sector needs to work together to identify reasons for lack of success, and determine an appropriate response, including introducing study tools and guides to assist journeyperson to prepare for interprovincial exams.

4. Identify and Examine Standardized Entry Criteria

Given wide variation in academic standards and abilities of potential apprentices, the Sector should identify and examine standardized, competency based entry testing systems that will better prepare candidates to meet workplace requirements. The Sector would benefit from reviewing selection processes in use by other jurisdictions and options for reading, mathematical and essential workplace skills testing.

5. Address rural Saskatchewan training needs.

Fifty percent of Saskatchewan plumbers live in rural Saskatchewan, where they are more likely to own businesses and provide essential services to their communities. Rural business owners struggle with taking time away for training. They are more likely to lose

people to other industries and locations, and are facing more dramatic declines in workforce numbers. Training linked with economic development is needed in rural areas.

6. Explore portable, mobile training system for apprenticeship training delivery.

The ability of SIAST and Regional Colleges to provide training to meet employer and employee needs on a timely basis throughout Saskatchewan is reaching capacity limitations. Presently one mobile trailer equipped with training materials circulates in the south and one in the North to deliver pre-trades training. Industry ownership of a training system should be explored. Such a service would better meet needs of rural and Aboriginal communities and reduce barriers to training, not only for pre-trades, but for all levels of apprenticeship training.

Employers also indicated support for technology and computer training options.

7. Improve training coordination.

The Training System should work with employers and apprentices to find ways to balance uneven or seasonal demand for training for the piping trades.

8. Enhance Aboriginal partnerships and employment strategies.

In 2006, a Pre-trade program is planned for Prince Albert. Starting immediately, we will determine the pre-trades training needs of contractors and training needs of Aboriginal workers hired for Casino construction which is anticipated in Saskatoon in 2006. The Sector continues to support and promote the services of our sector partner, the Construction Careers program.

While some sectors have identified immigration as a source of future skilled labour, the Piping Sector is committed to working with First Nations and Métis organizations and individuals to fill available jobs with qualified workers.

9. Explore business impact of proposed retention solutions and steps to accelerate journeyman status. Possible approaches are:

- a. The proposed Apprenticeship Tax Training Credit for employers. Industry is supportive of this development, and moving to assess impact in the Piping Sector. The Sector is interested in applying the Apprenticeship Training Tax Credit in a manner that reinforces responsible employer training practices.
- b. Changes to the journeyman – apprentice ratio. The Trade Board has been asked to consider whether changes could potentially alleviate ratio concerns. Indications are that this approach is not a priority at this time, due to training pressures already facing journeymen.

The next steps of assessment in these areas, involve gathering more information on:

- hiring needs at each level of certification, in order to assess the extent to which lack of journeymen are restricting hiring.
- Impact of an apprentice training tax credit on the sector.

10. Promote mentorship and post journeyperson training.

The Sector will use a communications approach to raise awareness of the benefits of mentorship, promote the development of mentorship programs within companies and share the Saskatchewan Piping Association program mentorship model. The Sector also is committed to working with the Apprenticeship Commission to increase mentorship skills directly through apprenticeship training.

11. Implement and evaluate communications strategies.

Employers: Through a quarterly Piping Sector Bulletin, the Sector will reinforce the key message that apprenticeship is industry led, and clarify industry's responsibilities in a system where 80 percent of training is work based. Each Bulletin will focus on two or three important issues designed to increase industry engagement, and increase discussion and generate ideas and solutions. Increasing industry input and dialogue will be easier with a new industry website that has a forum feature and the ability to poll industry on issues.

Awareness Strategies: The Sector will work with partners to deliver joint promotional activities and support and adapt the "Get a Grip campaign", Careers powerpoint and brochure following website launch. The feasibility of developing a video or multimedia career resource useful for awareness campaigns should be explored.

12. Establish approach for, and secure funding for an industry-led training service for launch in 2006.

A pilot program to connect youth with the workforce will raise the profile of apprenticeship at the community level and meet employment needs of youth and industry.

TABLE OF CONTENTS

ACKNOWLEDGMENTS.....	
1.0 INTRODUCTION.....	1
2.0 LITERATURE REVIEW.....	4
2.1 SASKATCHEWAN PIPING TRADES PROFILE & APPRENTICESHIP OVERVIEW.....	6
2.1.1 Profile of Plumbing & Pipefitting Occupations, 2001 Census.....	7
2.1.2 Piping Sector Apprenticeship Activity.....	13
2.1.2.1 Saskatchewan Plumber Apprentices.....	13
2.1.2.2 Saskatchewan Steamfitter-Pipefitter Apprentices.....	17
2.1.2.3 Comparison of Piping Trades with All Trades.....	19
2.2 PIPING SECTOR INDUSTRY DEVELOPMENTS, ISSUES & NEEDS.....	22
3.0 TRADES ENTRY.....	30
3.1 HIGH SCHOOL LINKS TO APPRENTICESHIP.....	31
3.2 SIAST PRE-TRADE PLUMBING AND PIPEFITTING PROGRAM.....	32
3.3 BEYOND PRE-TRADES: EMPLOYMENT ENGAGEMENT.....	39
4.0 ABORIGINAL EMPLOYMENT STRATEGIES.....	41
5.0 A MENTORSHIP FRAMEWORK.....	44
6.0 COMMUNICATIONS STRATEGY.....	48
6.1 COMMUNICATIONS PLAN FOR CAREER AWARENESS.....	48
6.2 COMMUNICATIONS PLAN FOR EMPLOYERS.....	49
7.0 CONCLUSIONS AND RECOMMENDATIONS.....	51

Appendix

A: References

B: Pre-Trades Plumbing & Pipefitting Program Description

C: 2004 Regina Pre-trades Photo and Partners

D: Plumbing & Piping Pre-Trades Follow up Survey, Regina Pre-trades 2004

E: 2004 SIAST Graduate Report:

F: "Get a Grip" Career Brochure

2005 Piping Sector Employer Survey Report

Acknowledgments

Saskatchewan Plumbing & Pipefitting Industry Sector Partnership

The following are the industry and stakeholder representatives of the Sector Partnership. We acknowledge and appreciate their contribution and insights throughout the development and implementation of all phases of Piping Sector's Human Resources Strategy.

- Randy Nichols
Business Manager
Saskatchewan Provincial Pipe Trades Association
- Judy Nagus
Executive Director
Mechanical Contractors Association of Saskatchewan
- Ken Busch
Provincial Training Coordinator
Saskatchewan Provincial Pipe Trades Association
- Blair Carlson
Worker Representative
- Dean Johnson
Wyatt Plumbing & Heating (1973) Ltd.
- Darryl Schwartz
M.D. Mechanical Ltd.
- John Baker
LUK Plumbing & Heating
- Doug Christie
Christie Mechanical Ltd.
Board Member,
Saskatchewan Apprenticeship and Trade Certification Commission (SATCC)
- Jake Miller
Sask Power
- Brent Pederson
Director, Employee Organization and Effectiveness
Sask Energy
- Tim Wall
SIAS
- Al Douglas
Saskatchewan Apprenticeship and Trade Certification Commission (SATCC)
- Betty Fisowich
Saskatchewan Learning
- Guy Poncelet
Saskatchewan Indian Institute of Technologies (SIIT)
- Jacquie Hunchuk, Tony Blacklock
Dumont Technical Institute
- Warren White
Métis Employment and Training,
Saskatchewan

1.0 Introduction

The Saskatchewan Plumbing and Pipefitting Industry Sector Partnership was formed in 1999 as a strategic response to evolving demographic, labour market and economic circumstances. A Sector Committee, led by the Mechanical Contractors Association of Saskatchewan (MCAS) and the Saskatchewan Provincial Pipe Trades Association (SPPTA), was established to work in partnership with key stakeholders, to address the human resource needs of the industry. The Piping Sector Partnership has the following main objectives:

To foster and strengthen industry apprenticeship training culture:

- reinforce and enhance industry's role in the Saskatchewan apprenticeship training and certification system;
- strengthen the employer's role and commitment to workplace skills development;
- strengthen the journeyperson's role and commitment to workplace skills development.

Promote access to training and employment in the piping sector:

- assist industry to attract and retain capable young people into piping trades;
- facilitate the transition from school to work;
- increase access for Aboriginal persons and women in the piping trades.

The Piping Sector initiated a comprehensive Needs Analysis and Human Resource Strategy which generated fourteen recommendations for growth and development in six strategic areas including Sector Development, the Apprenticeship System, Partnerships, Entry Strategies, Human Resource Development Issues and Post Journeyperson Training. These recommendations guide the ongoing work of the Committee and are found on the MCAS website at www.mca-sask.com.

Sector development activity since, has progressed to a third phase of Human Resources Development in 2005 with assistance from the Saskatchewan Learning Job Start/Future Skills Sector Partnerships Program. The mandate has built on the recommendation of Phase II, and advanced into 2005 with the following planned outcomes:

- A needs assessment study identifying the current labour market and human resource issues such as rural – urban challenges, labour market updates, post journeyperson training, pre-employment status, mentorship issues, apprenticeship enforcement, recruitment, retention, succession, and other training needs.
- A Communication Strategy for career awareness.
- Strengthen Aboriginal partnerships and increase the number of Aboriginal apprentices entering the trade by supporting an industry sponsored level one plumbing trade program now in development with SIIT, Prince Albert Grand Council and other industry stakeholders, for Prince Albert and Northern communities.
- A framework for mentorship to address the need to improve retention of apprentices and journeyman.

- Strengthen employer commitment and involvement to long term industry development and human resource practices by renewing channels of entry into the trades for youth in Saskatchewan .

KEY DELIVERABLES:

This report consists of the following project deliverables:

- An employer/industry consultation in the format of a telephone survey and interviews. This consultation enabled some benchmarking of HR indicators.
- A literature review on national industry developments that increases our understanding of the Canadian apprenticeship environment and challenges faced by employers, job seekers and training institutions.
- Apprenticeship and occupational statistics, updates and trends.
- A report outlining the sector position and an action plan on Mentorship Framework.
- A communications strategy report including activities, brochure update, identification of initiatives and ongoing activities. Originally planned to be a career awareness plan, the Sector has taken this one step further and solidified a Communications plan directed to employers.
- A report on program activities and outcomes in the development of Aboriginal Employment strategies.
- An assessment of pre-employment training needs of the piping sector in Saskatchewan that identifies needs, benefits, opportunities and challenges, including an analysis of sustainability and potential funding mechanisms. In the process of exploring needs at trades entry points, we updated the status of piping education at the high school level, and identified opportunities to enhance industry – training partnerships within the pre-trades system.

Looking forward, projections for the Saskatchewan construction, resource and energy sectors are very strong. Skills shortages are a major North American issue due to unprecedented capital expenditures in Alberta, and needs in British Columbia such as the 2010 Vancouver Olympics in addition to well documented demographic pressures. Predictions are that the current workforce will peak in 2008 and then begin to decline as the baby boom moves into retirement. (Source: Action Saskatchewan Human Resources Plan).

These approaching horizons are fast increasing the urgency on the part of employers to navigate the limiting effects of skill shortages. The implications of maintaining the status quo will be reduced productivity, constricted company growth, missed opportunities, reduced provincial and federal economic growth and reduced tax revenues.

Phase III Project Methodology

This phase of the project was conducted using a variety of techniques, including telephone surveys, personal interviews, consultations with partners, and literature reviews.

For reporting purposes, the 2005 Piping Sector Employer Survey Report is a separate report independent of the other project areas. The main report, including recommendations consists of the Literature Review on issues and trends, apprenticeship trends and occupational profiles, followed by other study subject areas. The final stage of the project involved additional employer and committee consultation for validation and directions for the future.

Through the literature review and scan of provincial and national developments, the Piping Sector was able to update existing data, follow trends and broaden the context for plumbing and piping industry stakeholders. The findings have led to the identification of emerging trends and issues, opportunities for development, effective practices and exciting new directions for the future.

2.0 Literature Review

There has been a surge in national and regional industry development over the past five years in response to the needs and issues of the booming construction industry and shortages of skilled tradespeople in all sectors. Industry developers and sector councils across Canada have been forging ahead with needs analysis and examination of industry issues. Sector- led coordination is leading the movement to gather, disseminate and promote key information to stakeholders.

Collectively, national research on apprenticeship and industry issues validates, and of course draws in part upon, the experience and viewpoints of Saskatchewan piping sector employers, stakeholders and associations.

The literature we reviewed is listed in Appendix A, along with corresponding web site addresses. It provides statistical data, insights into stakeholder needs, best practices, tools and responses to needs. The primary sources of information were:

- Saskatchewan Apprenticeship and Trades Certification Commission
- Construction Sector Council
- Canadian Apprenticeship Forum
- Conference Board of Canada (literature relating to skills shortages & HR issues and trends)
- SIAST
- Human Resource and Skills Development Canada
- Canada West Foundation

In summary, we view the trends and developments as a framework for the strategies and tasks of the Saskatchewan sector.

The literature review was also supplemented by collaborative consultations with Saskatchewan Apprenticeship on developments and new initiatives. The findings deal with the following:

- Occupational profiles and apprenticeship statistics and trends.
- Identification and reduction of barriers to accessing apprenticeship,
- Strategies for accessing future labour supplies,
- The development of mentorship and supervisory capacity and overview of available training programs through the MCAS and UA,
- National, Provincial and Sector campaigns to promote trades, including new websites and portals,
- Workforce essential skills,
- Understanding the cost/benefits of apprenticeship training and training incentives.

The literature review is in two parts, first

- 2.1 the Trades Profiles and Apprenticeship Trends; followed by
- 2.2 Piping Sector issues, developments and needs.

2.1 Saskatchewan Piping Trades Profile & Apprenticeship Overview

The past ten years have seen major growth for the plumbing and piping trades in Saskatchewan based on a strong economy. During that time (to June 2005), plumbing apprenticeship registrations increased 166% compared to 51% for apprenticeship as a whole. In the past five years while total apprenticeship registrations have held stable, the piping trades together, have risen 24%. SIAST training of plumbing apprentices declined 2% to 290 seats in all levels. The need in upcoming years is to fill new jobs where almost 40% of the piping workforce is over the age of 45. The piping trades workforce in Saskatchewan as of the 2001 Census, consists of 2,420 people, 30% more than were employed in 1996.

Here are the occupational profiles and apprenticeship figures at a glance:

Plumbers (2001)	
No. of Plumbers	1,535
Increase from 1996	+46%
% in rural Sask.	49%
in construction	87%
female plumbers	1.6%
self employed	22%
(30% of rural vs. 15% of urban)	
degree or some post secondary	22%
Average age	39.7
Plumbers & Apprenticeship (June 2005)	
Indentures	121 (-13%)*
Cancellations	39 (-17%)
Completions	56
(+3.7%)	
Registrations	500 (+5.5%)
SIAST: Level 1 seats	109 (+10%)
All levels	290 (-2%)
No. passing exam	37 (-46%)
Exam success rate	48% (60%)

* increase or decrease over previous year

Steam Fitter- Pipefitter- Sprinkler fitters (2001)	
No. of tradespeople	650
Increase from 1996	+38%
% in rural Sask.	31%
in construction	43%
in mining, manufacturing, & industrial	40%
No women (1% nationally)	
Average age	40.3
SteamFitter-Pipefitters & Apprenticeship (June 2005)	
Indentures	13
(+8.3%)*	
Cancellations	9 (-31%)
Completions	8 (+14%)
Registrations	78 (-4.9%)
SIAST: Level 1 seats	13 (+8%)
All levels	59 (+23%)
No. passing exam	14 (+26%)
Exam success rate	74% (82%)

Contractors & Supervisors	
No. of Contractors & Supervisor	115
Decrease since 1996	44%
% in rural Sask.	31%
In construction	64%
Self employed	35%
Average age	40.1
Most likely to have university degree or college (31%) but also 22% have less than high school	

Gasfitters	
No. of Gasfitters	120
Decrease since 1996	-14%
% in rural Sask.	46%
In utilities	48%
Average age	44.9

2.1.1 Profile of Plumbing & Pipefitting Occupations, 2001 Census

Plumbing and pipefitting occupations account for 2,420 workers in Saskatchewan, according to the 2001 Census, in the following occupations:

- Contractors and Supervisors in Pipefitting Trades,
- Plumbers,
- Steamfitters, Pipefitters, and Sprinkler System Installers, and
- Gasfitters.

The overall piping workforce increased 30% between 1996 and 2001. Plumbers, at 1,535, make up about 63% of piping workers. Both the number of contractors and supervisors, and gasfitters declined, while the number of plumbers and steamfitter-pipefitters increased. During the same five year period, Saskatchewan Apprenticeship figures showed a 69% increase in the number of plumbers and steamfitter-pipefitters registered in the trade.

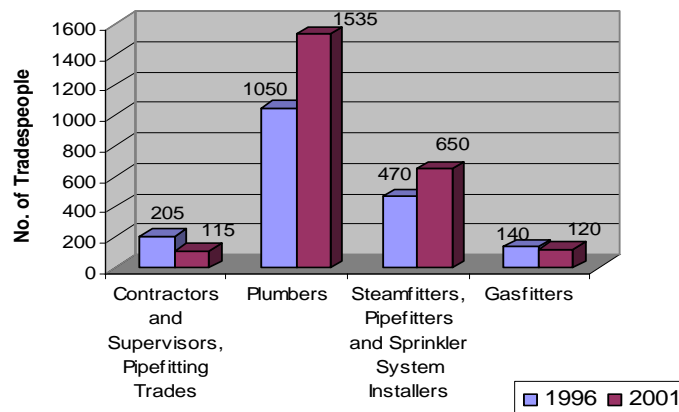
Table 1. Labour Force Activity, Plumbing and Pipefitting Occupations from , 1996 to 2001Census.

	1996	2001	% change
Contractors and Supervisors, Pipefitting Trades	205	115	-44%
Plumbers	1,050	1,535	46%
Steamfitters, Pipefitters and Sprinkler System Installers	470	650	38%
Gasfitters	140	120	-14%
Total Piping Occupations	1,865	2,420	30%

Source: Statistics Canada 2001 Census

The growth in plumbers and steamfitter pipefitters alone amounted to 665 new jobs in Saskatchewan from 1996 to 2001.

Figure 1. Change in Numbers of Saskatchewan Piping Tradespeople



Source: Statistics Canada 2001 Census

Table 2. Comparison with Canadian Piping Workforce, 2001

	Sask.	Canada	%
Contractors and Supervisors, Pipefitting Trades	115	4,595	2.5%
Plumbers	1,535	36,295	4.2%
Steamfitters, Pipefitters and Sprinkler System Installers	650	20,125	3.2%
Gasfitters	120	4,705	2.6%
Total Piping Occupations	2,420	65,720	3.7%

Source: Statistics Canada 2001 Census

Saskatchewan workers constitute 3.7% of the national piping workforce of 65,720 people.

Table 3. Selected Saskatchewan Labour Market Information, Plumbing and Pipefitting Occupations

	Contractors and supervisors Pipefitting Trades	Plumbers	Steamfitters, Pipefitters and Sprinkler System Installers	Gasfitters
In Labour Force	110	1,540	645	120
Employed	110	1,425	545	110
Unemployed	0	120	105	10
Not in Labour Force	Na	100	30	10
Average No. of Weeks Worked	45.3	45.1	38.7	41.6
Self Employed	40 (35%)	345 (22%)	30 (5%)	10 (8%)
Rural	30 (26%)	750 (49%)	200 (31%)	55 (46%)

Source: Statistics Canada 2001 Census

Saskatchewan Job Futures reports that plumbers, pipefitters and gas fitters are well paid in Saskatchewan. In 2000, the average full-time income for these occupations was \$36,517 per year. This was slightly higher than the provincial full-time average for all occupations the same year (\$35,461 per year).

There is a wide range of incomes among workers in this group. Full-time gas fitters, on average the highest paid workers in this occupational group, earned as much as \$67,993 and as little as \$33,120 in 2000. Annual incomes for full-time plumbers—on average the lowest paid workers in this group—ranged from \$14,990 to \$56,023 that same year. Plumbers, pipefitters and gas fitters in Regina and Saskatoon typically earn more than their counterparts elsewhere in the province.

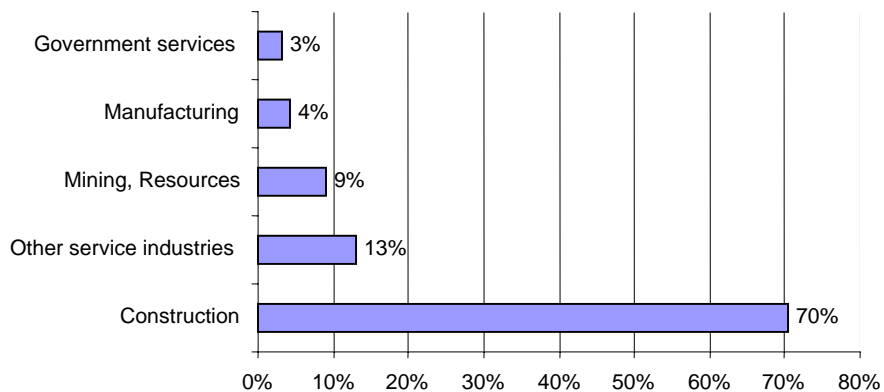
Employment is distributed evenly throughout Saskatchewan; just over 45% of all Saskatchewan workers in this group were employed in Regina or Saskatoon in 2001. There is a high incidence of part-time employment in this occupational group; just 63% of all plumbers, pipefitters and gas fitters in Saskatchewan were employed on a full-time basis in 2000. While not unheard of, self-employment is rare among pipefitters and gas fitters. Approximately 26% of all plumbers in the province were self-employed in 2000. Employment

in this occupational group is not seasonal but can be highly sensitive to overall economic conditions.

Industry of Employment

The majority of employment within the piping trades occurs within the construction industry, (70% overall) with 87% of plumbers, 43% of pipefitters, 64% of contractors and supervisors and 20% of gasfitters employed in construction.

Figure 2. Industry of Employment for Plumbing and Pipefitting Occupations



Source: Statistics Canada 2001 Census

Other service industries, includes the following industries;

- Transportation and storage,
- Communication and other utilities,
- Real estate and insurance,
- Business services,
- Educational services,
- Health and social services and
- Accommodation, food and beverage services.

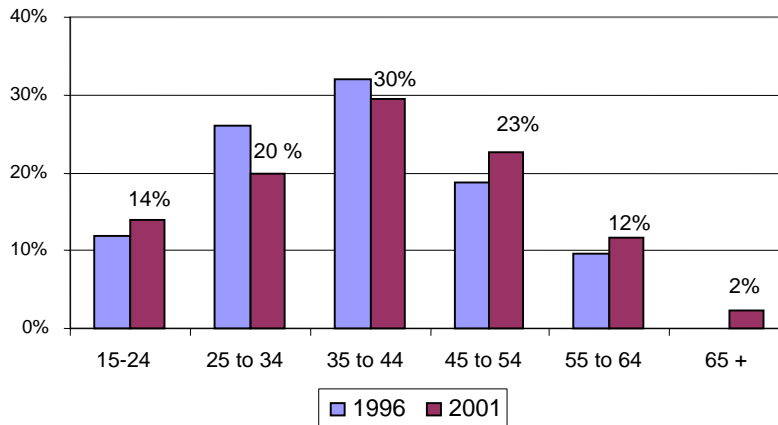
Age Distribution of Piping Trades

The piping workforce is older than the Saskatchewan workforce in general. The average age of the Saskatchewan workforce in 2001 was 39.8 years of age. Saskatchewan has the oldest workforce in Canada.

Table 4. Age Distribution of Piping Trades

	Contractors and supervisors Pipefitting Trades	Plumbers	Steamfitters, Pipefitters and Sprinkler System Installers	Gasfitters
Average age	40.1 years	39.7 years	40.3	44.9

Figure 3. Age Distribution of Piping Trades in 1996 and 2001

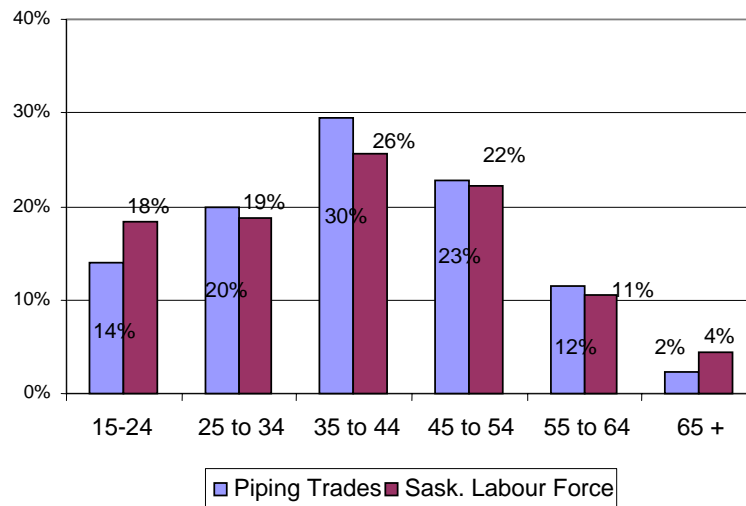


Source: Statistics Canada, 1996 and 2001 Census

Above, figure 3 illustrates the aging of the piping workforce from 1996 to 2001, especially over age 45. Figure 4, below, shows that piping tradespeople are older than the Saskatchewan workforce, in every age category except in the 15 to 19 age group, and over 65 age group. The average age of apprentices at SIAST is 28 years, possibly accounting for the lower representation of youth in the piping trades.

- Thirty seven per cent of the workforce is over the age of 45. Almost 900 people may be retiring within the next 20 years.
- Two thirds of the workforce is over the age of 35.

Figure 4. Age Distribution of Piping Trades and Saskatchewan Labour Force (2001 Census)



Source: Statistics Canada, 1996 and 2001 Census

Highest Level of Schooling of Piping Tradespeople

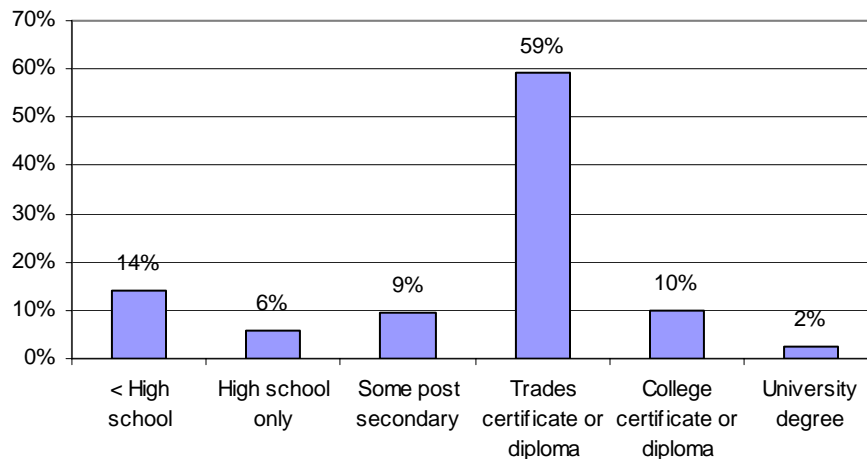
People working in the trades have a range of educational backgrounds. Fifty nine per cent of those working in the trade have a trades certificate or diploma, 14% have less than high school and 21% have at least some post secondary education. (shaded below)

Table 5. Highest Level of Schooling of Piping Trades

	In Piping Occupations	%
< High school	335	14%
High school only	135	6%
Some post secondary education	225	9%
Trades certificate or diploma	1,420	59%
College certificate or diploma	235	10%
University degree	55	2%
Total	2,405	100%

Source: Statistics Canada, 2001 Census. Statistics for education levels do not exactly match the numbers in occupations in Table 1 due to the low numbers and rules for rounding that Statistics Canada uses.

Figure 5. Highest Level of Schooling, Piping Tradespeople



Source: Statistics Canada, 2001 Census

A closer look at each occupation reveals that:

- Contractors and supervisors are most likely to have College diplomas or university degrees (22%), and are least likely of all the occupations to have trades certifications (30%).
- Contractors and supervisors are also most likely to have less than high school education. Twenty two percent have less than high school education.
- Sixty per cent of plumbers have a trade certificate, and 22% have some post secondary education.
- Thirteen per cent of plumbers have less than high school and 5% have high school only.

Educational information has implications for the training and skills development needs of each occupational group.

Table 6. Education Level of Piping Occupations

	Contractors & Supervisors		Plumbers		Steamfitters, Pipefitters		Gasfitters	
	#	%	#	%	#	%	#	%
< High school	25	22%	200	13%	110	17%	0	0%
High school only	10	9%	75	5%	35	5%	15	15%
Trades certificate or diploma	35	30%	930	60%	380	59%	75	75%
Some post secondary education	10	9%	160	10%	45	7%	10	10%
College certificate or diploma	25	22%	150	10%	60	9%	0	0%
University degree	10	9%	30	2%	15	2%	0	0%
Total	115	100%	1,545	100%	645	100%	100	100%

Source: Statistics Canada, 2001 Census. Statistics for education levels do not exactly match the numbers in occupations in Table 1 due to the low numbers and rules for rounding that Statistics Canada uses.

2.1.2 Piping Sector Apprenticeship Activity

2.1.2.1 Saskatchewan Plumber Apprentices

This section summarizes ten years of data on entries and exits in the plumbing trade in Saskatchewan.

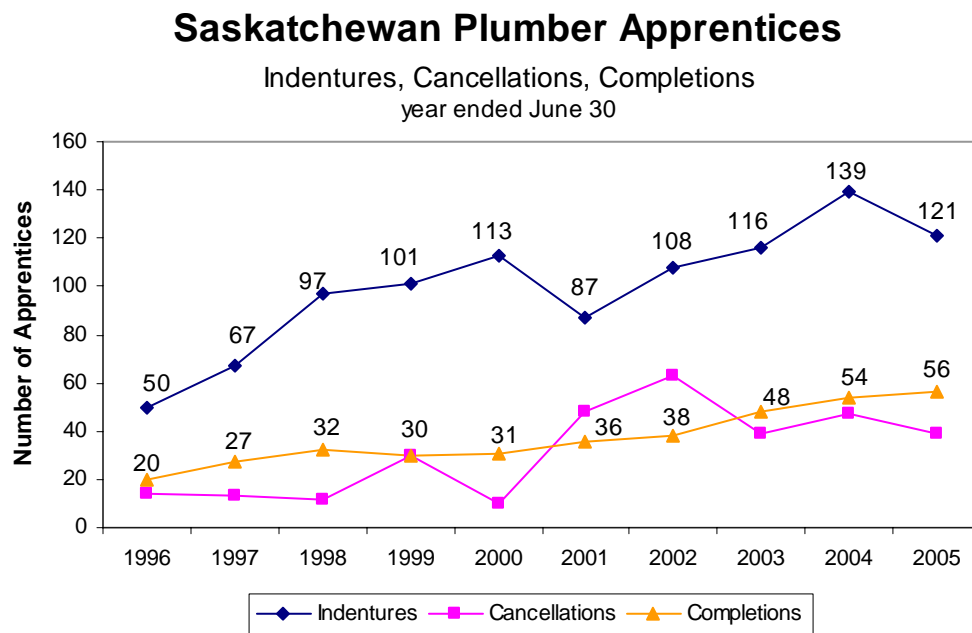
Table 7. Overview of Apprenticeship Activity for Plumbers

	Most recent 2004-2005	Previous year 2003-2004	% change
Indentures	121	139	-13%
Cancellations	39	47	-17%
Completions	56	54	+3.7%
Registered apprentices	500	474	+5.5%

Source: Saskatchewan Apprenticeship and Trade Certification Commission Annual Reports, 2003 to 2005

Figure 6 displays an overview of trends in activity, and is followed by a table showing a detailed analysis of year-to-year activity.

Figure 6. Indentures, Cancellations and Completions for Saskatchewan Plumbers, Years ended June 30 1996-2005



Source: Saskatchewan Apprenticeship and Trade Certification Commission Annual Reports, 1996 to 2006

Table 8. Indentures, Cancellations and Completions for Saskatchewan Plumbers, Years ended June 30, 1995-2005

	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Registered Start, Beginning of year	193	188	204	231	284	325	397	400	407	436	474
Indentures	44	50	67	97	101	113	87	108	116	139	121
% Change in Indentures		13.7%	34%	45%	4.1%	11.9%	-23%	24%	7.4%	20%	-13%
Cancellations	29	14	13	12	30	10	48	63	39	47	39
% change		-52%	-7.1%	-7.7%	150%	-66.7%	380%	31%	-38%	20.5%	-17%
Completions	20	20	27	32	30	31	36	38	48	54	56
% Change in Completions		0%	35%	19%	-6.3%	3.3%	16.1%	5.6%	26.3%	12.5%	3.7%
Registered End of year	188	204	231	284	325	397	400	407	436	474	500
% Change in Number of Apprentices	-2.6%	8.5%	13%	23%	14.4%	22.1%	.8%	1.8%	7.1%	8.7%	5.5%

Source: Saskatchewan Apprenticeship and Trade Certification Commission, Annual Reports, Years Ending June 30, 1995 to 2005

- The number of plumbers registered in the Apprenticeship system (500) is 166% greater than it was ten years ago.
- The five-year increase in registrations is 26%.

The exact reasons for cancellations are difficult to ascertain. There are successful exit points in apprenticeship other than journeyman certification. Possible reasons for leaving the system include:

- Individuals may be productively employed and do not need or want further training or certification;
- They may leave the system or leave the province because they are doing specialized, highly skilled work;
- Accepting employment with an employer that is not a participant in the apprenticeship system;
- Individuals who move from one related trade to another would be counted as a cancellation.

The Apprenticeship Commission has indicated that occasionally inactive registrants are removed from the system. While some of these reasons may be considered acceptable from the individual's point of view, loss of an employee is costly to the employer who has invested in training but not been able to realize a return.

"Completions" refer to completions of both apprenticeship on the job *and* technical training. These individuals still have to write the journeyman exam.

Apprenticeship activity growth closely reflects labour market demand. A comparison with overall apprenticeship growth and activity is found on page 19.

Table 9. Plumber Attendance in Apprenticeship Technical Training Course by Trade and Stage of Training

	All Levels	First	Second	Third	Fourth
June 2000	225	55	72	51	47
June 2001	266	91	76	52	47
June 2002	293	73	93	78	49
June 2003	287	66	65	85	71
June 2004	296	99	67	48	82
June 2005	290	109	74	61	46
June 2006 projection	294	84	112	42	56
Proportion of apprentices in each level (2005)	100%	37%	26%	21%	16%

Source: Saskatchewan Apprenticeship and Trade Certification Commission, Annual Reports, Years Ending June 30, 2000 to 2005

June 2006 figures are projections provided by SATCC.

- As of June 2005, 290 apprentices had attended SIAST training in levels 1 through 4. There was a 2% decline in enrollment in all levels of training from 2004 to 2005, and 29% more people were enrolled in 2005 compared to 2000.
- There were 10% more people enrolled in level one in 2005 than there were in 2004 and 98% more than in 2000.
- The proportion of registered plumbing apprentices attending technical training at SIAST (all levels) has increased from 56% in 2000 to 58% in 2005. (a high of 72% in 2002) The total number of plumbing apprentices is found in Table 8.
- In 2005, 63% of seats were in the first and second levels, with 67% projected for 2006.

The number of seats is negotiated by SIAST and the Apprenticeship Commission at the outset of each year. The number of seats at each level takes into account the numbers coming through pre-trades programs, and indications from employers as to how many require training in each level.

Apprenticeship training in the plumbing trade does not have waiting lists, other than to accommodate the reasonable logistics of matching available apprentices to seats. The main challenge is that employers often are not able to excuse employees from work to take training. Alternatively some employers feel that training is offered at peak times. The 2005/06 schedule is based on class sizes of 14 for a total of 294 seats:

Level 1: 6 classes Level 2: 8 classes Level 3: 3 classes Level 4: 4 classes

An industry concern is whether intake is limited to the number of seats available in level 1 training and pre-trades training. Apprenticeship has indicated that if industry demand warrants additional seats, they are made available. Regardless, it is understood that SIAST is operating at capacity levels for the plumbing program. Additional Plumbing & Pipefitting Pre-trades Programs planned for 2005-06 are an indication of industry's growing needs and put additional pressure on SIAST facilities and resources.

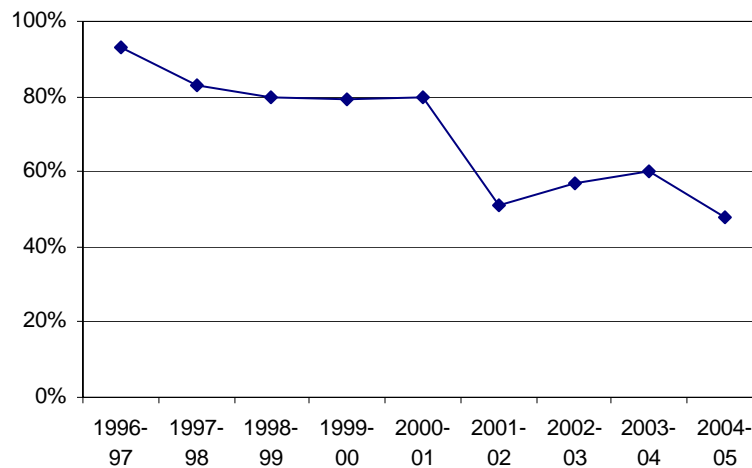
Table 10. Plumber Journeyperson Examinations 1997 to 2005

Year Ending	Total Exams written	Total Successful	% Successful	Total Unsuccessful
1996-97	29	27	93%	2
1997-98	31	26	83%	5
1998-99	40	32	80%	8
1999-00	52	41	79%	8
2000-01	51	41	80%	10
2001-02	73	37	51%	36
2002-03	105	60	57%	45
2003-04	113	68	60%	45
2004-05	77	37	48%	40

Source: Saskatchewan Apprenticeship and Trade Certification Commission, Annual Reports, Years Ending June 30, 2002 to 2005

- In the year ending 2005, 77 plumbers wrote the journeyperson exam and 37 plumbers successfully completed the exam, for a success rate of 48%, the lowest pass rate in the past nine years.
- Since 2001, success rates have dropped significantly.

Figure 7. Plumber Exam Success Rates, 1997 to 2005



Source: Saskatchewan Apprenticeship and Trade Certification Commission, Annual Reports, 1007 to 2005

Trade exams are standardized for delivery across Canada. The Apprenticeship Commission has indicated that exams are a measurement of the learning that occurs on the job. Because each journeyperson may be exposed to a different range of tasks at their workplace, performance on the exams will vary as a result. The exam can be challenged a maximum of four times.

The Sector needs to work together to identify reasons for the decline in exam success, and determine an appropriate response, including introducing study tools and guides to assist journeyperson to prepare for interprovincial exams.

2.1.2.2 Saskatchewan Steamfitter-Pipefitter Apprentices

The following figures and tables summarize ten years of data on entries and exits in the steamfitter-pipefitter trade.

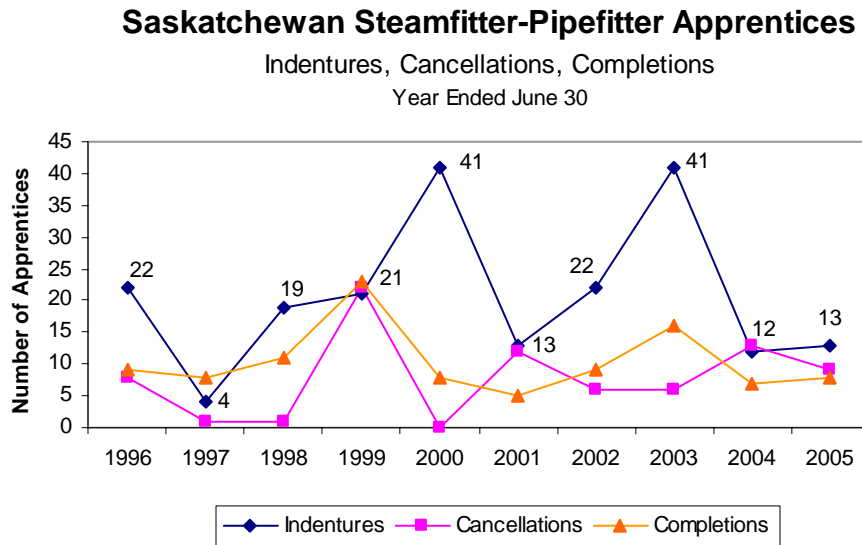
Table 11. Trends in Apprenticeship Activity for Steamfitter-Pipefitters

	Recent Year 2004-2005	Previous Year 2003-2004	% change
Indentures	13	12	+8.3%
Cancellations	9	13	-31%
Completions	8	7	+14%
Registered apprentices	78	82	-4.9%

Source: Saskatchewan Apprenticeship and Trade Certification Commission, Annual Reports, Years Ending June 30, 2003 to 2005.

The number of registered apprentices fluctuates from year to and is closely linked to workplace demand.

Figure 8. Indentures, Cancellations and Completions for Saskatchewan Steamfitter-Pipefitters, 1996-2005



Source: Saskatchewan Apprenticeship and Trade Certification Commission Annual Reports, 1996 to 2005

Table 12. Indentures, Cancellations and Completions for Saskatchewan Steamfitter-Pipefitters, 1995-2005

	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Registered Start, beginning of year	62	52	57	52	59	35	68	64	71	90	82
Indentures	5	22	4	19	21	41	13	22	41	12	13
% Change in Indentures		340%	-82%	375%	10.5%	95%	-68%	69%	86.4%	-70.7%	8.3%
Cancellations	6	8	1	1	22	0	12	6	6	13	9
% Change in cancellations		33.3%	-87.5%	0%	2100%	-100%	0%	-50%	0%	116.7%	-31%
Completions	9	9	8	11	23	8	5	9	16	7	8
% Change in Completions		0%	-11%	38%	109%	-62.2%	-37.5%	80%	77.8%	-56%	-14%
Registered End of Year	52	57	52	59	35	68	64	71	90	82	78
% Change in Number of Apprentices	-16%	14%	-8.7%	13.5%	-40.7%	94.3%	-5.9%	10.9%	26.8%	-8.9%	-4.9%

Source: Saskatchewan Apprenticeship and Trade Certification Commission Annual Reports, 1995 to 2005

- Indenturing levels have fluctuated over this period, with a high of 41 indentures in 2000 and 2003. Activity fluctuated in all areas from year to year, leaving 78 steamfitter-pipefitters registered in June of 2005.

Table 13. Steamfitter-Pipefitter Attendance in Apprenticeship Technical Training Course by Trade and Stage of Training

	All Levels	First	Second	Third	Fourth
June 2000	43	13	13	10	7
June 2001	48	11	11	14	12
June 2002	44	14	8	11	11
June 2003	55	23	12	6	14
June 2004	48	12	23	13	0
June 2005	59	13	13	21	12
Proportion of apprentices in each level (2005)	100%	22%	22%	36%	20%

Source: Saskatchewan Apprenticeship and Trade Certification Commission, Annual Reports, Years Ending June 30, 2000 to 2005

- In the year ending June 2005, 59 people were enrolled in all levels of training, an increase of 23% from the previous year and an increase of 37% from 2000.
- The proportion of registered steamfitter-pipefitters attending technical training as of June 2005, was 76%. The total number of steamfitter-pipefitter apprentices is found in Table 12.

Table 14. Steamfitter-Pipefitter Journeyman Examinations 1997 to 2005

	Total Exams written	Total Successful	% Successful	Total Unsuccessful
1996-97	21	14	67%	7
1997-98	27	25	93%	2
1998-99	33	32	97%	1
1999-00	28	26	93%	2
2000-01	27	25	93%	2
2001-02	30	17	57%	13
2002-03	26	14	54%	12
2003-04	11	9	82%	2
2004-05	19	14	74%	5

Source: Saskatchewan Apprenticeship and Trade Certification Commission, Annual Reports, Years Ending June 30, 2002 to 2005

- Nineteen steam fitter-pipefitters wrote the exam in 2005 and the success rate was 74%.
- Again, starting in 2002, pass rates began to slide from the results of the previous years.

2.1.2.3 Comparison of Piping Trades with All Trades

In the five years since 2000, the total number of apprentices registered in all trades, has increased by 1.3%, moving from 5,268 to 5,436. An analysis of annual growth rates found in Table 15 shows that the growth rate has slightly declined since 2000 and then recovered in the last two years. Registrations in 2005 grew by 3.7% over the previous year.

Some of the new registrations come from the introduction of several new apprenticeship trade designations in recent years. Given the strong performance of construction, mining and resources, apprenticeship registrations might be expected to be rising even more.

While overall apprenticeship totals have remained relatively even, the number of plumbing and steamfitter-pipefitters, which are compulsory trades, have continued to grow. During the past five years, there has been a 26% increase in the number of apprentices in the plumbing trade and a 14.7% increase in the number of steamfitter-pipefitters.

Together, plumber and steamfitter-pipefitter apprentices are slightly increasing as a proportion of registrations in all trades to a level of 10.6% of all registrations at the end of the 2004-2005 year.

The 64 completions within the piping trade during 2005, were 7.9 % of the total completions recorded by the Apprenticeship Commission.

Table 15. Comparison of Piping Trades with All Trades

REGISTRATIONS	1994 -95	1995 -96	1996 -97	1997 -98	1998 -99	1999 -00	2000- 01	2001- 02	2002- 03	2003- 04	2004- 05
Apprenticeship totals	3,589	4,044	4,418	5,003	5,268	5,367	5,306	5,205	5,108	5,258	5,436
Rate of change in total apprenticeship registrations		13%	9%	13%	5%	1.9%	-1.1%	-1.9%	-1.9%	2.9%	3.7%
Plumbers Registered End of Year	188	204	231	284	325	397	400	407	436	474	500
Steamfitter-Pipefitters Registered End of Year	52	57	52	59	35	68	64	71	90	82	78
Piping trades % of Total Apprentices	6.9%	6.5%	6.4%	6.9%	6.9%	8.7%	8.7%	9.2%	10.2%	10.6%	10.6%

COMPLETIONS	1994 -95	1995 -96	1996 -97	1997 -98	1998 -99	1999 -00	2000- 01	2001- 02	2002- 03	2003- 04	2004- 05
Apprenticeship totals	n/a	n/a	n/a	501	670	725	687	800	790	794	807
Rate of change in total apprenticeship completions					34%	8.2%	-5.2%	16.4%	1.2%	0.5%	1.6%
Plumbers completions End of Year	20	20	27	32	30	31	36	38	48	54	56
Steamfitter-Pipefitters Completions End of Year	9	9	8	11	23	8	5	9	16	7	8
Piping trades % of Total Apprentices				8.6%	7.9%	5.4%	5.9%	5.8%	8.1%	7.7%	7.9%

Source: Saskatchewan Apprenticeship and Trade Certification Commission, Annual Reports, Years Ending June 30, 1995 to 2005

Summary of five year and ten year trends:

<i>Registrations:</i>	<u>2000 to 2005</u>	<u>1995 to 2005</u>
Apprenticeship Total Change	+1.3%	+51%
Plumber Apprentice Change	+26%	+166%
Steamfitter-Pipefitter Apprentice Change	+14.7%	+50%
Piping Trades Combined Change*	+24%	+141%

<i>Completions:</i>	<u>2000 to 2005</u>	<u>1995 to 2005</u>
Apprenticeship Total Change	+11.3%	n/a
Plumber Apprentice Change	+80%	n/a
Steamfitter-Pipefitter Apprentice Change	0%	n/a
Piping Trades Combined Change*	+64%	n/a

*total of plumber & steamfitter-pipefitter apprentices

The six trades with the highest registration levels, were:

Table 16. Top 6 Trade Registrations in Saskatchewan 2002-2005

Trade	No. of Apprentices 2002	No. of Apprentices 2003	No. of Apprentices 2004	No. of Apprentices 2005
Carpenter	676	663	771	877
Electrician	678	707	739	771
Plumber	407	436	474	500
Automotive Service Technician	342	330	352	374
Cosmetologist	546	458	420	330
Welder	338	296	305	306
Total	2987	2890	3061	3158

Source: Saskatchewan Apprenticeship and Trade Certification Commission, Annual Reports, Years Ending June 30, 2002 to 2005. Order based on 2005 registrations.

These trades accounted for 58% of all registrations. There are now 50 designated trades under the jurisdiction of the Apprenticeship Commission. In the year ending in 2005, the plumbing trade accounted for the third highest number of apprentices.

Representative Participation

Saskatchewan Apprenticeship Commission employment equity statistics as of June 2005, show that 14% of all registrations are women, and that 36% of women apprentices are in predominantly male occupations. The proportion of people of Aboriginal descent in all trades is 14.5%.

Average enrollment at SIAST, from levels one to four in each of the piping trades, from the years 2000 to 2003 show the following self-identified equity group participation:

Table 17. Average Plumbing and Steamfitter Pipefitter Enrolment at SIAST by Equity Group, and Representation

	Average Enrolment Plumbing	% of Enrolment	Average Enrolment Steamfitter Pipefitter	% of Enrolment
Aboriginal	21	7.7%	2	3.7%
Disabled	4	2.2%	1	3%
Visible minority	8	1.1%	0	0%
Women	4	.7%	0	0%
Total Enrolment	277.5	100%	49	100%

Source: SIAST Education Equity Program Annual Monitoring Reports, 2000 to 2003

In Section 2.2, we review other research and developments, both in Saskatchewan and nationally.

2.2 Piping Sector Industry Developments, Issues & Needs

Many organizations and agencies bring together stakeholders at the national, regional and local levels for consultations that have produced information, resources and strategies to address labour shortages, trade awareness, and labour market information.

The National Pipe Trades Human Resource Study completed in 1997, sets out the principles of developing the industry at the national level, which are guidelines also for Saskatchewan industry development:

- Balance the benefits of providing specific skills needed by employers, with the benefits of skill breadth to workers seeking employment;
- Meet the emerging need to replace the large number of trades people who will retire between 2005 and 2030;
- Address the escalating cost of training by establishing common programs and promoting mobility as well as securing more funding for training;
- Limit the cost of business cycles and the periodic loss of skills to other industries;
- Fill vacant jobs quickly with locally qualified workers, or if none are available, with workers from other regions or provinces;
- Recognize the priority of providing long term and secure employment for Canadian workers before turning to workers from other countries;
- Offer fair and efficient prior learning assessment and recognition to promote mobility of qualified workers.

The majority of plumbing and pipefitters work in the construction industry, which can be cyclical and seasonal. The Construction Sector Council (CSC) was formed in 1999 to produce the most skilled and professional construction workforce in the world. Using a business and labour partnership model, the CSC works to meet the human resource challenges facing the industry and has produced several new reports aimed at new and longstanding issues.

Piping Trades in Tight Supply in Saskatchewan

One of the Construction Sector Council's initiatives has been the development of a Labour Market Information network to supply timely information on the construction labour market. The process in development analyzes peak needs for construction and all other industries, factors in economic conditions and labour supply issues, and forecasts industry supply/demand to 2008.

In Saskatchewan, plumbers and gasfitters are considered to have very little excess supply over peak demand periods, and are therefore considered in a **tight supply position**. The CSC's intention is to produce an annual forecast.

The Human Resource Development Canada skills shortages report for early 2005 indicated that :

- 3rd and 4th year steam fitter pipefitters were in short supply in southern Saskatchewan
- plumbers in non-campus areas with 3rd and 4th year certification were in short supply.

Overall, there is a recognition that strategies are needed to meet demand for journeypersons and ensure upper year workers complete certification. Lack of availability of journeyperson

restricts how many new apprentices can be indentured. Possible approaches that need further discussion include:

1. the proposed Apprenticeship Training Tax Credit, introduced on page 24,
2. changes to ratio requirements.

Reduce Barriers to Apprenticeship

The Government of Canada's Innovation Strategy has set an ambitious goal - to double the number of apprentices completing an apprenticeship certification program to 37,000, within the next decade. The recognition and understanding of barriers in the way of apprenticeship is evolving, as consultation at the national level has continued. The Canadian Apprenticeship Forum (CAF) has identified the issue of accessibility and barriers to apprenticeship as an area of key concern.

A 2004 CAF study, "Assessing and Completing Apprenticeship Training in Canada" looks at the perspectives of individuals, unions, employers, government representatives and education concerning the barriers to initiating, maintaining and successfully completing apprenticeships were explored. These issues are familiar to Saskatchewan employers, having been for the most part, identified in the 2000 Saskatchewan Sector Human Resource Study. The nine nationally identified barriers are:

1. Negative attitudes to apprenticeship and a poor image of the trades by young people, parents and employers,
2. A lack of information and awareness of apprenticeship often reinforced by a lack of support for trades among schoolteachers and guidance counselors
3. Some, particularly women, Aboriginal people, members of visible minority groups, recent immigrants and persons with disabilities, face a number of barriers that can create an unwelcoming workplace or training environment.
4. The high costs of apprenticeship for individuals, unions and employers including wage and supervision costs for employers and rising tuition and tool costs, and the income interruption caused.
5. Strong concerns among employers unions and individuals over the impacts of economic factors that can lead to a lack of work hours and interruptions or possibly terminations of apprenticeships.
6. Concerns regarding the lack of resources to support apprenticeship, including those of jurisdictions, schools, communities and agencies providing services to communities or groups of individuals.
7. Concerns particularly on the part of employers about apprentices' basic and essential skills.
8. Shortcomings of workplace based and technical training, inflexible scheduling, lack of mentorship programs and journeypersons unprepared for roles as trainer and mentors.
9. Issues regarding regulations concerning apprenticeship.

Through the Saskatchewan Piping Sector Partnership, industry is well positioned to identify provincial needs and work in partnership to find solutions that work on the front lines.

Develop Future Labour Supplies

Selected highlights from the 2005 Saskatchewan Urban Training Needs Assessment, prepared by SIAST, summarize some of the demographic trends that are underway in Saskatchewan.

- 88 percent of construction companies have shortages.
- After 2010, a decline of school age population is expected.
- Trend to rural depopulation.
- The size of the labour force will decline, unless ways can be found to increase participation rates.

The Aboriginal population is a significant growing force in Saskatchewan's labour force.

- the Aboriginal population in Saskatchewan is growing and projected to be 16.1 percent of the total population of Saskatchewan in 2010, and above 20 percent by 2025. (Source: SIAST Urban Training Needs Assessment, based on Labour Market Trends, Sask. Trends Monitor)
- Forty percent of all Aboriginals are under 15 years of age.
- 2001 Census data shows the Aboriginal population breakdown throughout Saskatchewan:

Saskatoon	9%
Regina	8%
Prince Albert	29%
Moose Jaw	4%
Rest of Saskatchewan	50%

The importance of facilitating entry to the workforce by First Nation and Métis youth cannot be underestimated. The Construction Sector Council's recent report on sources of labour for industry reinforces that Canada's construction industry should take additional steps to encourage Aboriginal people, women and new immigrants to join its workforce, tapping into a largely under-used source of future labour for the industry. One of its conclusions was:

"The industry needs to focus on awareness and education – by reaching out to young people with information on the industry and its trades, modifying the curriculum at the junior high and high school levels, and promoting the industry in general through ads, websites, career fairs, and so on."

The Saskatchewan piping industry has a strategy in place to partner with the Saskatchewan Indian Institute of Technology (SIIT) for training to bring new people into the industry. SIIT has been recognized nationally for its effective programming and industry partnerships.

The Sector plans an additional pre-trades program in Prince Albert for the spring of 2006. Other facets of our Aboriginal Employment Strategy, along with the two projects undertaken so far, will be discussed in further detail in Section 4. While some sectors have identified the need to source of future skilled labour through immigration, the Piping Sector is committed to working with First Nations and Métis organizations and individuals to fill available jobs with qualified workers.

Assess Cost/Benefit of Apprenticeship Training

Research has identified cost as one of several perceived barriers to accessing and completing apprenticeship training in Canada. Anecdotal evidence suggests that employers may cover a large percentage of apprenticeship training costs.

The Canadian Apprenticeship Forum (CAF) has recently focused on the cost/benefit of apprenticeship training. A new project is underway to look at the factors which influence the cost/benefit of apprenticeship training for various stakeholders such as the apprentice, the employer, unions, educators, equity seeking groups, governments and/or other stakeholders.

The Saskatchewan Piping Sector has fielded this concern from employers who experience the loss of trained or partially trained staff to other provinces or other sectors who are able to offer more consistent permanent or non-seasonal employment. Some employers who do not participate in the apprenticeship system are viewed as “poaching” trained workers. The return on investment within the apprenticeship system is not well understood. Apprenticeship costs to industry and contributions to the economy are not currently acknowledged in the Saskatchewan apprenticeship and training system, which depends on industry for the majority of training.

The Saskatchewan Apprenticeship Commission released its own research in September 2005 in a report titled “The Impact of Apprenticeship Training Tax Credits in Saskatchewan.” It found that employers reach a break even point, where they receive a net benefit from the apprentice, somewhere in the third year of Apprenticeship. In financial terms, the net after tax cost to the employer of hiring an apprentice and employing them until journey status, is well over \$40,000. This research is based on 500 surveys with employers across all apprentice-able trades, including piping sector employers.

Training Incentives

As a response to the recognized costs of apprenticeship training, and to promote skills development, Saskatchewan Apprenticeship is proposing an Apprenticeship Training Tax Credit and studying the potential impact on employers, apprentices and the taxpayer. The report can be found online at www.saskapprenticeship.ca under “Publications” and “Other Reports and Info.”

Other jurisdictions have recently initiated their own incentive programs. In 2005, the Ontario Government announced a tax credit program to encourage the hiring of new apprentices. A tax credit approach to meeting skills shortages was also among the recommendations of consultations by the Canada West Foundation, as well as the Canadian Apprenticeship Forum through its recent research on “Barriers to Accessing and Completing Apprenticeship Training in Canada.”

The Saskatchewan Apprenticeship Commission proposes a maximum training tax credit of \$5,000.00, the distribution of which is yet to be determined. One suggestion for the proposed tax credit is to encourage improvement in completion/retention rates by linking tax credits to the advancement of apprentices to level 2 and 3 and to the completion of certification credit, for employers who employ the same apprentice through to completion.

Apprenticeship believes that the tax incentive would result in a 12.5% increase in registrations to all trades, and gross cost to the Treasury of \$8.4 million. The credit would

stimulate an increase in work based learning and alleviate pressure on the post secondary system by diverting some pre-employment training and reducing pre-employment waiting lists in some trades.

In principal, the Piping Industry is pleased to see recognition of employer's costs in the training cost structure. The next phase of consultation will enable the sector to assess the impact of the proposal on hiring, training, registrations and completions.

Management & Supervisory Training

It is recognized that strong construction markets, an aging workforce and emerging technologies are increasing the demand for training in construction.

Managers, contractors and supervisors have specialized training needs. Supervisors work on the job site overseeing journeypersons and apprentices. Many new challenges have changed the role of the supervisors, including time pressures, heightened safety and regulatory requirements, a greater need for documentation, more computerization, more complex building requirements, and higher quality expectations. As a result, supervisors need a higher level of non-technical skills such as reading, communications and team building. Some Saskatchewan workers need training in technology related tools, computer skills, lap tops, cameras, and even video equipment as more work is done on the job site. Computers and communications technology are impacting the office operations and the linkages between the office and the job-site.

According to the Construction Sector Council's report "Training Canada's Construction Workforce: Meeting the Industry's Needs", most supervisors come from the trades, while managers hold the office jobs that are typically offsite. They are involved in tasks such as marketing, estimating, tendering, scheduling cost accounting and customer relations. In a highly competitive environment, strong management is important. Most managers do not come from the trades. More information about the profile of Saskatchewan managers and supervisors in the piping trade is available in the Occupational Profiles in Section 2.1.

About Industry Training Providers

The Saskatchewan Provincial Pipe Trades Association (SPPTA) and the Mechanical Contractor's Association of Saskatchewan are major suppliers of business and post journeyperson training in Saskatchewan. The SPPTA trains over 650 people annually, and the MCAS oversees training for over 200 each year.

Members of the MCAS have access to their organization's educational arm, the Canadian Mechanical Contractors Education Foundation (CMCEF). Its purpose is to "*ensure a stronger Mechanical Contracting Industry by initiating and conducting essential educational and research programs which enhance this industry's ability to operate efficiently and economically for the benefit of those served by the industry.*"

It offers one of the most advanced online programs available in the industry. Over 80 courses are available online in 30 minute or 60 minute formats on Construction Contracts, Health and Safety, ISO, Privacy, Business Management, Project Management and Self Development.

There is a wide variety of professional development opportunities available to managers, including the highly respected Gold Seal Programs of the Canadian Construction Association (CCA). Over 30 Gold Seal accredited courses make up the National Seminar series that is available to industry managers and leaders including:

- General Business Practices
- Pricing, Profits, and Cash Flow
- Project Management among many others.

According to the CSC report, other training providers generally fall into the following categories:

1. SIAST and Regional Colleges offer a full array of skills programs for business and industry, which are marketed online and through the Extension Program guides.
2. Workers Compensation Boards and associated Construction Safety Associations offer safety training.
3. Joint union – management training trusts. These centres are funded by dues collected from hourly contributions from payroll. Training is typically short term (less than one week) and oriented to skill upgrading.
4. Large contractors.
5. Industry associations and individual contracting firms - the priority tends to be management related skills like human resources, estimating, site and project management accounting and tax. Contractor associations tend to recognize the risk of skill shortages among management-related occupations and promote education.
6. Building materials and equipment suppliers and distributors.
7. Private Trainers.

More information is available about Saskatchewan employers' training practices and expenditures in the 2005 Piping Sector Employer Survey Report.

Address Essential Skills

Employers across Canada have expressed concerns about the levels of skills needed for success on the job. This concern is consistently identified by employers in the piping consultation, as well as in SIAST's Saskatchewan Urban Training Needs Assessment 2005. Increased Essential Skills levels have been shown to increase productivity, and have a positive influence on the 'bottom line'. The Construction Sector Council has implemented a strategy to raise awareness among employers and the workforce of the importance of essential skills. The essential skills are also important for career awareness information purposes.

Essential Skills are the skills needed for work, learning and life. They provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change. A recent headline in the HR Reporter states the business issue: *“Poor reading, and math skills a drag on productivity and performance.”*

Through extensive research, the Government of Canada and other national and international agencies have identified and validated nine Essential Skills. These skills are used in nearly every occupation and throughout daily life in different ways and at different times:

- Reading Text
- Document Use
- Numeracy
- Writing
- Oral Communication
- Working with Others
- Continuous Learning
- Thinking Skills
- Computer Use

Skills Profiles are available on a variety of occupations. Employers can use these profiles for a variety of tasks including:

- Developing job descriptions
- Identifying staff training needs
- Uncovering what qualities to look for in job candidates

The Piping Sector will take an approach that raises the awareness of the importance of essential skills, as they relate to workforce development and as part of a career awareness campaign.

Capitalize on increase in Apprenticeship Awareness and Information Campaigns

The number of apprenticeships across Canada have not changed much over the past ten years. To increase the number of apprentices, the Canadian Apprenticeship Forum (CAF) launched a broad-based media campaign in the fall of 2004, among other initiatives. The media campaign has two main objectives: to reach youth with high impact messages to change attitudes towards apprenticeships and skilled trades, and also to reach parents, educators and employers in order to provide them with compelling and factual information showing skilled trades in a new and positive way. The cornerstone message is: “Skilled Trades – A Career You Can Build On”. The campaign aimed at youth focuses on selected television programs, radio, internet and cinema ads. Parents, educators and employers are reached with magazine advertising, television and cinema. The ads run during the spring and fall to capture the audience when career decisions are being made.

Another project of the CAF is a new website, which contains comprehensive links to all Apprenticeship sites and information targeted to employers, youth, teachers, parents etc.

www.careersintrades.ca

www.apprenticetrades.ca

During this time frame, the Saskatchewan Apprenticeship and Trade Certification Commission has also increased its promotional activities, culminating in a new CD/DVD presentation being distributed to Saskatchewan Practical and Applied Arts teachers at a conference in April 2005. This information tool will reach directly into Saskatchewan high schools with up to date, accurate information on apprenticeship realities and benefits. All trades will benefit from the awareness campaigns, and the piping industry’s strategy must attract and foster the growth of those best suited for piping sector careers.

The Construction Sector Council has introduced an informative new website at:

www.careersinconstruction.ca

The prospect of increasing inquiries into the plumbing trade raises a question of how inquiries are handled. Inquiries are now made to SIAST, Apprenticeship personnel, or direct to employers or the union. The Sector strategy should ensure that there is a coordinated

entry point and so that suitable people are not lost to other industries if they are not able to access employment or training immediately.

Summary

It is important for the Saskatchewan sector to be informed about the trends and developments in the broad community of apprenticeship, national and regional skills shortages research and human resources development. Organizations and institutions are adapting rapidly and services and needs are evolving.

The research will ensure that Sector strategies employ best practices, and strengthen the performance and efficiency of each element of the training system. Keys areas of development include:

- Establishing and improving training initiatives for Aboriginal workers. Retention can be increased by ensuring workplaces understand the significance of being inclusive of the Aboriginal workforce.
- Work with stakeholders to assess the costs of apprenticeship and participate in discussions to develop incentives for training.
- Encourage the training system at all levels to improve the essential skills levels of candidates and ensure that job seekers understand employment requirements.
- Promote management, supervisory and mentorship training. Work with partners to incorporate mentorship training into the training system.
- Complement high level awareness campaigns and websites, ensure employers are aware of activities and do their part to ensure a professional entry experience.

Participate in discussions regarding regulatory issues such as journey-person-apprenticeship ratios, and methods of enforcement.

3.0 Trades Entry

In Saskatchewan, as of 2001, 37 percent of plumbers are over the age of 45 and two thirds are over the age of 35. Even as the industry increasingly faces retirements, the labour force is expected to shrink. Competition for employees is going to be fierce. Industry now finds that many apprentices find their way into the trade by accident, without any real career planning process or research. Because they rarely make a deliberate choice for the skilled trades, new workers are often unaware of opportunities for advancement and are not making a commitment to the trades. Employers are very concerned about the implications to the industry and the career. In 2005, the Sector Committee set out to explore the issues regarding entry into the trade from both the employers and the job seekers point of view. The preparation, education and employment experience of candidates surrounding the entry point sets the tone for future career engagement and ultimately success in the trade.

Those who promote trades careers to youth face several challenges.

1. Misconceptions: Many traditional trades such as carpentry, welding and plumbing have a social perception (mostly incorrect) as being low skill and low paying. The new career realities requiring technology and other demanding skills are not commonly known. Youth lack information regarding work conditions, career paths, employer expectations, and opportunities. Some may see the trades as a higher risk educational option because they perceive that it may limit their future options. (Source: Solving the Skilled Trades Shortages, Conference Board of Canada, p. 14)
2. Changing work values: In the 2005 Piping Sector Employer Survey, plumbing and piping employers conveyed a perception of a lack of interest in the trades. In fact this observation is part of a shift in work place values that is key to understanding the future labour force. The new generation of workers brings a different perspective on fairness, respect, challenge, trust and balance with outside life. *“This perspective is said to be so common and widespread that it is not going to be possible for employers who are not supportive of these perspectives to simply look for other workers who do.”* These workers want acknowledgement that they have something important to offer, and want to be trusted to take responsibility at work. They expect to work reasonable hours and face reasonable expectations. They are not willing to wait for a long time for things to get better. (Source: Interim Report from the Saskatchewan Training System Review Panel Sept. 2005, p.11)
3. University – Trades imbalance: A national Ipsos Reid survey in 2004 says that the future supply of skilled tradespeople is at risk since ***University is the first choice post secondary education option among Canadian youth and their influencers.***
 - 68 percent of parents say that they would be likely or very likely to recommend a career in the skilled trades to their children. Yet 59 percent of young people say that their parents have not encouraged them to consider skilled trades as a career option.
 - 72 percent of young people say their school guidance counselors have not encouraged skilled trades as a career option.
 - University is the first choice post secondary option for 67 percent of young people aged 13 to 24 and 55 percent of adults, ahead of college and apprenticeship or trades programs. (CAF-FCA/SCC poll conducted by Ipsos-Reid , 2004)

- 42 percent of young people aged 13 to 24 said they would be unlikely to consider a career in the skilled trades, against 26 percent who said they would likely consider that option.

Federal, provincial and sectoral campaigns are designed to increase the appeal of trades, by positioning the trades as a low cost – high value post secondary choice. But it is on the front lines where the battle for candidates will take place. Solutions need to create a stronger alignment between youth expectations and employer needs.

3.1 High School Links to Apprenticeship

The Sector Committee recommended the exploration of relationships with Saskatchewan High Schools in Recommendations 8 and 9 of the 2000 Saskatchewan Piping Sector Human Resource Strategy:

Entry Level Strategies

Recommendation # 8. High School Communications and Recruitment

The Sector Committee confirms the need to establish a comprehensive recruitment and communication strategy to market Apprenticeship trade careers to youth and assist youth to make informed career decisions. There is a strong need for greater involvement at the high school level in order to expose students to future career opportunities.

-2000 HR Strategy

Entry Level Strategies

Recommendation # 9. Consider Expanding Apprenticeship and Trades Curriculum to all Saskatchewan schools.

1. Establish contact with Saskatchewan Learning to identify curriculum opportunities for education about our trades.

-2000 HR Strategy

Within the core curriculum of Saskatchewan Learning, the Practical and Applied Arts (PAA) courses provide learning opportunities for students to make the transition from school to work. Apprenticeship recognizes training for autobody, construction/carpentry, commercial cooking, cosmetology, electrical/electronics, mechanics, automotive, machining, and welding. Courses pending trade board approval are food studies, horticulture, tourism/hospitality, entrepreneurship. This means that students who have completed the designated trades courses may be eligible (subject to regulations and time frames) to challenge the Level One examination. (Source: SATCC's website "High School to Apprenticeship.")

Plumbing and piping is the only one of the major trades not represented at the high school level. There is presently no provincial curriculum for plumbing. The lack of piping trades exposure at high school puts the trade at a disadvantage compared to other available careers and does nothing to address any negative or outdated image of the plumbing trade

that may exist. There may be a lost opportunity to teach students basic skills that they might choose to follow up on later in life or as a career.

A framework for locally developed high schools programs is in place based on local needs and interests. This type of high school program operates with the approval of Saskatchewan Learning and course, instructor and facility approval of Apprenticeship. Cochrane High School in Regina is the only program we are aware of that operates a local program.

While locally operated programs are possible, consultation with the Apprenticeship Commission pointed out that there are a number of barriers to implementation of a province wide curriculum. For example, the number of students pursuing the trade at each school is not known and may not be sufficient to warrant the required investment in facilities and materials. Another challenge would be the identification of qualified instructors. More exploration of industry's needs in each location and a feasibility analysis might be required to determine costs and benefits. In the meantime a new Apprenticeship initiative in high school is targeted at increasing apprenticeship education and is likely to have an impact on trade careers at the high school level.

Youth Apprenticeship Initiative

The Saskatchewan Apprenticeship Commission has completed a youth apprenticeship pilot program. About 130 students in Regina, (Assiniboia Composite High School and Thom Collegiate) have completed an apprenticeship module and have received certificates of achievement for their successful participation. The pilot projects have demonstrated the need for better trades career information and resources in the high school, and have pointed to some improvements to be made in the program. The pilot project will be continued in these schools next year, and will be expanded to include schools in Saskatoon, LaRonge and LaLoche.

The program has several goals:

- to increase awareness about great career opportunities in trades;
- to help students and school officials to understand what it takes to succeed in trades careers; and
- to keep students in school so they can get the basic and essential skills for success in work and in life.

The Commission is working towards implementation of the youth apprenticeship initiative on a province-wide basis in 2006-07. This educational program is a positive development addressing industry needs.

3.2 SIAST Pre-Trade Plumbing and Pipefitting Program

The plumbing trade, a compulsory trade, allows no more than half of the first year hours to be worked prior to becoming indentured with an employer. An employee would then be required to enroll in Level 1 plumbing.

Candidates may also obtain Level 1 plumbing training prior to indenturing, through a 17 week Pre-trade Plumbing and Pipefitting program offered by SIAST, and receive recognition for completion and hours in training, upon being indentured. Pre-trades training, sometimes called pre-apprentice training, is defined by the Apprenticeship Commission as a short training initiative designed to respond to immediate labour needs of local industry, usually offered through Regional Colleges. Prior to 2003, pre-employment training in the piping trades took place, which is lengthier full time training, designed for individuals with no job or skills in a trade but wanting to improve their chances of finding a job.

The consultation process regarding pre-employment needs of industry produced many questions about the operation and results of the current pre-apprentice or pre-trade system. It was recognized that, in effect industry's involvement with the programs at the coordinating level is limited.

In this report, we summarize a brief history of industry's involvement with pre-trades, identify general training practices, and outline program results that are available. The report also reviews the advantages and disadvantages of pre-trades programs and looked specifically at industry involvement and leadership opportunities. Industry wants to increase discussion about the impact and effectiveness of pre-trades as a vehicle to serve industry needs.

Background

In February 2005, 50 employers were asked their opinions about pre-employment and pre-trade programs in a telephone survey. (see 2005 Piping Sector Employer Survey Report). The reaction was mixed. Almost half were unfamiliar with them and could not even comment. Another group of respondents were critical, mainly about the qualification of candidates. Many felt participants should have more hands on experience before going into the trades. Others were looking for more input and consultation on the part of industry in the operation of the programs. On the other hand, 32 percent indicated satisfaction with the system. The mixed results indicate that there is not a consistent level of support for pre-trades, at least not amongst this industry sample.

Issues around pre-employment programs as a way to bring new people into the trade were raised by Sector employers in 2000. At that time concerns about low education levels, program costs and timing not meeting hiring periods were expressed, leading to a recommendation about pre-employment programs from the original Piping Sector Human Resource Strategy and Needs Analysis:

Entry Strategies

Recommendation #7. Examine the feasibility of Job Site Training Programs.

The Sector Committee believes that pre-employment training programs must be closely aligned with industry needs and labour market demand, and that effective programs must operate with the planning and participation of employers.

Action: Conduct a review of industry needs to determine whether an industry endorsed job-site development program would be feasible.

In 2003, as a result of industry feedback and longstanding concerns, the Plumbing Trade Board approved a new training model, the 17 week Plumbing and Pipefitting Pre-Trade Program.

The Pre-Trades program is offered as an Applied Certificate program by SIAST. It provides entry level knowledge and skill development in plumbing installation, water supplies, waste systems and plumbing fixtures. The pass mark for each course is 60 percent. Graduates who have a weighted point average of 70 percent will, upon becoming indentured, be able to apply to the Apprenticeship and Trade Certification Commission to receive credit for Level One technical training. Entry criteria is Grade 11 and the program is offered as a special project through off-campus programming. The program description and content is found in Appendix B.

Ultimately, the Sector did proceed to implement two pre-trade plumbing programs for the Aboriginal sector, coordinated by the Saskatchewan Indian Institute of Technologies and with SIAST delivered training. This initiative had strong industry participation in all phases of planning, delivery and follow up. Program delivery in Saskatoon and Regina in 2003 and 2004 produced both success stories and lessons learned. More about this training is included in Section 4.

Plumbing & Pipefitting Pre-trades System: General Overview and Results

To increase understanding of current practices and approaches used to offer pre-trades training, we summarized an overview and also inquired about plans for future programs.

The Extension Departments of each SIAST campus and Regional College collaborate to offer the SIAST training. Standard practices include;

- Programs run by Regional Colleges are supported by local employer requests, or identified through annual regional needs assessments. At times the Colleges will contact local employers to ask for support for proposed programs.
- A business plan is submitted to Apprenticeship, but is not presented to the Trade Board for approval each time.
- Employment results are not normally provided to industry groups or employers.
- Programs are filled on a first qualified, first selected basis.
- Selection process is institution-run.
- Students are either tuition payers or eligible for Provincial training support.
- Fees are set on a cost recovery basis.
- Typical class size is 12 students, but exceptions are made.
- It is expected that one or two students will not complete training.
- Follow up to determine program success (employment rates) occurs at six months and one year following program conclusion.
- Content remains constant regardless of location.
- Timing for training is based on the availability of a mobile trailer which houses all equipment and materials required for program delivery.

The following program results were provided by SIAST and Carlton Trail Regional College (CTRC):

Plumbing & Pipefitting Pre-Trade Results 2003/04

Location	Length	Total	Incomplete	Working in the trade	Working elsewhere	Not working	Not able to contact
Regina*- SIIT 2004	24 wks	12	1 (8 %)	7 (58%)	2 (16%)	2 (16%)	0
Davidson – CTRC 2004	17 wks	9	1 (11%)	5 (55%)	1 (11%)	1 (11%)	2 (22%)
Saskatoon – SIAST 2005**	17 wks						
Davidson – CTRC 2005**	17 wks						

* Sponsored by Sector Partnership

**Training in progress.

SIAST conducted a survey of Pre-trade graduates for its comprehensive survey of SIAST Graduates in 2004. In that year there were 31 pre-trades graduates and 14 (45 percent) responded to the survey. There is some overlap with the above results.

SIAST 2004 Graduate Report Pre-Trade Plumbing & Pipefitting Selected Results

	No. of Students	percent
Total Available to work	13	100%
Not Available to work	1	
Total Employed	10	77%
Employed in the trade	5	38%
Employed in other industry	5	38%
Employed out of province	2	15%

Source: 2004 SIAST Graduate Report

* the results are calculated using the total number of students available to work as a base.

The report indicates that 38 percent of students surveyed were employed in the piping field. This was the first year that a more detailed survey of graduate results was available. SIAST's format for reporting now also includes monthly salaries, and status and reasons for various results. Students rated the quality of training as excellent (36 percent) or very good (43 percent). The complete summary is included in Appendix E.

In the three situations mentioned above, 38 percent, 55 percent and 58 percent of participants found employment in the piping trade. If industry supports programs, why weren't the immediate results higher? Possible reasons are:

- Employment is not available in the piping sector when graduates are available;
- Graduates decide they are not suited and don't want to work in the industry;
- Better reporting or tracking of results might indicate greater employment rates.

Are these results acceptable? Will the candidates maintain employment? Will they be indentured? More information is required in order to determine whether people who start in

pre-trades, stay in the industry. Does the cost of pre-trades delivery warrant the moderate success rates and industry impact? How can the results be improved upon?

New Programs Planned

The following programs are underway or planned for the 2005-06 year:

<u>Location</u>	<u>College</u>	<u>Start Date</u>	<u>Available</u>
Saskatoon	Kelsey Campus	July 2005	Nov 2005
Battlefords	North West Regional College	October 2005	Jan 2006
Davidson	Carlton Trail Regional College	Nov 2005	March 2006
Swift Current	SouthEast Regional College	March 2006	July 2006

The impact on industry would be as many as 48 new graduates available for work in Saskatchewan in 2005/06. The list does not include a planned Aboriginal initiative in Prince Albert, an SIIT – Prince Albert Grand Council partnership for February 2006. Industry feels that all the graduates could be absorbed by employers.

In practice, the MCAS is not notified of new program approval or graduation, and typically learns of new programs from members calling for information.

Benefits & Disadvantages of Pre-Trades to Employers

The primary benefit of completion of a pre-trades program to the employer is the assurance that a candidate who has taken the initiative to enter the trade and meet program requirements, should understand employment conditions and demands, have basic safety training and be ready for indenturing. In addition,

- Fee-paying participants who pay their own way are likely to make more careful career choices and be motivated to employment.
- Programs can match qualified candidates with job openings.
- Can lead to lower turnover if match is strong.
- Decreases recruiting and training costs.
- Screens out unsuitable candidates.

This discussion does not take into account content issues.

However, some employers feel that regardless of program completion, candidates still lack the hands-on experience and length of work experience to truly know what they are getting into. Some candidates may only have the two weeks work experience that they take in the program.

- Concerns with unsuitability of candidates are still apparent – primarily lack of essential skills and education level.
- Employers may support a program as an easy way to get short term/seasonal employment without considering the long term need.
- They may just prefer to do their own training in house.
- Hiring is limited if graduates are seeking employment at non peak times.

Increasing the value added by pre-trades

Industry expectations are that the SIAST pre-trades training system operate with meaningful planning and participation of employers and industry for program effectiveness and industry acceptance. When the pre-trades system was updated in 2003, sector support of training was provided via the Trade Board, on the condition of industry involvement (specifically MCAS and SPPTA), the industry and worker representatives with a provincial outlook) and support expressed for each program proposal. In practice, the MCAS and SPPTA are not consulted on additional programs. Industry needs pro-active involvement in program decisions on timing and location, ongoing participation and input, and a process to share employment results and overall impact on the industry. Industry needs consistent results. From industry's perspective, the lack of connection with programming at the coordinating level, is a missed opportunity to establish a relationship with the labour force coming into the trade and to increase the value of the pre-trades programs to industry.

Evidence of local available employment is required for program approval by Apprenticeship, however limited industry involvement overall:

- leads to missed employment opportunities and linkages. If the Provincial associations are not aware of programs they cannot fully support them.
- not fair to students who graduate at off peak times, when employers are not hiring, and then can't locate employment.
- contrary to the principles of an industry-led apprenticeship system.
- a disservice to industry at a time when a competitive and comprehensive provincial human resource strategy is critical to piping industry productivity and growth.

More information needed

Apprenticeship training and certification is an industry led initiative, governed by industry participation and leadership. The majority of board members are selected by industry to represent employers, and programs respond to the needs of employers. The piping trades support the apprenticeship system and culture.

Industry would like to see the collection and sharing of additional results oriented data and demographics on a regular basis, and recognizes that there has already been movement toward that objective. Some examples would be:

- Cost of training programs
- The proportion of feepayers and tuition supported candidates.
- Program evaluation data.
- Student feedback on instructors, facilities, contents
- The demographic characteristics of pre-apprentices
- Does the completion of a pre-trades program facilitate entry to apprenticeships and lead to indenturing?
- The proportion of journeypersons entering the trade through pre-employment/pre-trades compared to other entry points.

The slate of upcoming pre-trades programs in 2005-06, represents an opportunity to strengthen communications and performance. With increasing interest in all trades, program coordination via industry is more important than ever. It is critical that industry increase its voice in pre-trades programs and be visible as an active partner to drive home the fact that apprenticeship training is 80 percent industry responsibility. This more coordinated

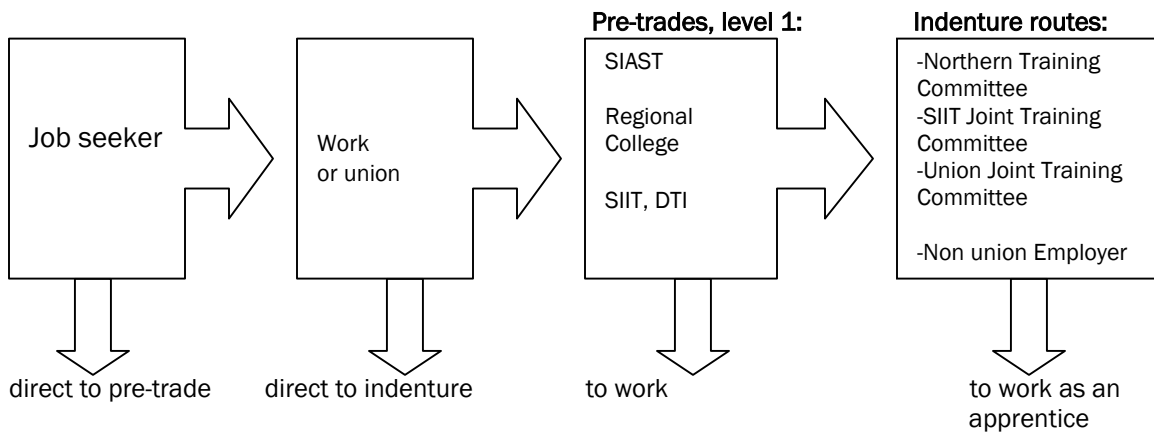
approach and consistent, enhanced industry presence is vital to meeting industry's human resource needs.

The action plan to strengthen pre-trades results will start with:

1. Establish relationships with Regional Colleges at the program planning and needs assessment level and increase awareness of Sector Partnership activities and initiatives. There is an opportunity to connect with the Senior Academic Officers of the Regional Colleges, who meet regularly for program planning purposes.
2. Approach Apprenticeship to facilitate industry leadership of programs i.e. request that Colleges include Sector/MCAS support and/or require Trade Board to approve each program application.
3. Improve communication of issues and activities by requesting an increase in frequency of Trade Board Meetings and a better preparation of Trade Board on issues.
4. Request sharing of program results with Trade Boards and Sector.
5. Identify a process to share statistical information about participants' demographics, and gather and share longer term results.

3.3 Beyond Pre-trades

Anecdotes offered by employers and union trainers indicate that employees often leave the trade within the first year when they are faced with choices and decisions about indenturing and commitments to employers. Or they decide they're "not cut out for the trade." A basic picture of the steps an individual may take towards employment engagement shows the possible routes to apprenticeship.



There are many avenues that a candidate can take to establish a foothold in the industry and just as many barriers that can discourage a candidate from continuing. Once someone has entered pre-trades, it is in industry's best interest to ensure that they are supported throughout their five year education to journeyman and beyond. The strengthening of the journeyman role will assist in retention of apprentices, however the journeyman, as a loyal employee, is not always in a position to provide career information and guidance or support on other than technical issues. A vehicle to provide support on a long term basis is needed to groom and support candidates through the system.

Pre-employment needs of the piping sector

To compete for candidates with other trades, other sectors and other careers, industry needs to strengthen its entry system:

1. Increase industry's dialogue with and understanding of future apprentices.
2. Help people to make good career choices and find and prepare people who will thrive in piping careers.
3. Identify those with a potential interest and aptitude for piping trades, possibly in high school.
4. Establish an employer centered selection process.
5. Educate candidates about industry characteristics.
6. Encourage career planning and career path research and analysis.
7. Strengthen training culture and promote learning attitudes from apprentice through to journeyman and beyond.
8. Increase knowledge about the roles and responsibilities within the Apprenticeship system.

9. Develop a coaching or mentorship process to monitor and foster career growth and development through the five years training to become a journeyman, and beyond.
10. Increase capacity of employers to meet needs of new workers, upper year apprentices and journeymen.

Toward an Industry – Led Entry System

Industry envisions a consistent entry point welcoming candidates and supporting candidates throughout their growth as apprentices. Services for both individuals and employers will enhance training effectiveness and that of the apprenticeship system. A relationship with clients seeking careers in the piping industry can fill service gaps that otherwise exist throughout the five year apprenticeship certification period.

Industry wants to create a stronger connection with its future human resources. A Piping Industry Career Service could coordinate awareness programs, assist with long term career development, promote workplace based training, screen individuals, refer to appropriate agencies, offer front end sessions about industry, basic safety, and support employment and training needs. This service could potentially include sheet metal, refrigeration and all trades under the MCAS umbrella, which are compulsory trades. This service model would:

- Meet both employer and participant needs.
- Enable employer leadership and therefore ownership.
- Encourage candidates to test or be assessed for careers suitability.
- Improve transitions to work and from one employer to another in the event of layoff.
- Promote workplace-based training.
- Increase education about the apprenticeship process.
- Increase industry education partnerships.
- Support strong candidate selection for pre-trades.
- Access new sources of funding.

One entry strategy for the establishment and operation of such a centre might include a partnership of agencies anchored by or including Human Resources Development Canada Youth Link (Service Canada) programs. Under a pilot project approach, a career and employment service would be characterized by:

- Candidates not eligible for employment insurance, between the ages of 18 and 30 who have not made the transition to work.
- Promotion of apprenticeship careers with emphasis on workforce attachment.
- Enable individualized skills development and career planning.

Further in depth discussion and analysis by partners will be needed to determine the direction to be taken on this concept.

4.0 Aboriginal Employment Strategies

Over the past several years, the Sector has worked to strengthen relationships with the Aboriginal community, led by the establishment of an ongoing working relationship with Saskatchewan Indian Institute of Technologies (SIIT) as a means to promote plumbing and piping careers to the Aboriginal sector.

Together with partners, two industry –sponsored pre-trades programs have been offered through SIIT. These are the first pre-trades offered following the revamping of pre-trades programs, which took place in 2003.

2004 Regina Plumbing Pre-Apprentice Program: Follow Up

The Regina program in 2004 was characterized by strong industry support and involvement, including MCAS and SPPTA participation on the selection committee, several classroom visits and assistance coordinating work experience components. A graduation ceremony attended by the Minister of Employment and Community Resources, Joanne Crofford, and presentations to participants, marked the conclusion of the training. An overview of program participants and partners that contributed to the success of the program is in Appendix C. Six months after the conclusion of the program, seven candidates were still working in the trade and 2 were working elsewhere.

Location	Length	Total	Incomplete	Working in the trade	Working elsewhere	Not working	Not able to contact
Regina- SIIT	24 wks	12	1	7 (58%)	2 (16%)	2	

SIIT contacted program participants in Feb/March 2005, and shared the results with Industry. The participants' comments give a picture of the program and how effective they felt the training was for them. The results are in Appendix D.

Sharing feedback with industry enhances the institution-industry connection, even though follow ups after program completion are limited due to participant mobility. As a partner in the program, the Piping Sector is able to actively contribute to positive outcomes, monitor the outcomes and placement of participants and liaise with employers more effectively, leading to increased retention in the industry. The program evaluation indicates that the following practices are very important to success:

- A knowledgeable and supportive instructor.
- Classroom visits with information delivery from industry and union.
- Message of support from industry.
- Message of coordinated industry- institution training.
- Marketing of program to industry, for work experience placements and employment.
- Connect with students by obtaining feedback on their learning experience before they leave the program and six months later.
- Coordination with Industry needs -appropriate timing for participants to be seeking employment.

The Sector plans to continue to coordinate training needs with SIIT, which is opening a Meadow Lake industrial training centre. Casino construction near Saskatoon may provide additional opportunities to prepare Aboriginal candidates to enter the workforce.

Prince Albert

In 2005, a program was initiated at the request of the Prince Albert Grand Council. Several meetings have already provided the opportunity for meaningful discussion about maintaining the integrity of the apprenticeship culture while meeting the unique characteristics of Aboriginal communities. The jurisdictional issues of operating the Provincial apprenticeship system on reserve or in isolated communities, as well as lack of a variety of work will be the focus of future discussions.

Northern communities wish to upgrade the qualifications of maintenance personnel, who are experienced at performing plumbing related work duties, but do not possess adequate education to meet trade standards or SIAST entry criteria. To address this concern, a collaboration with SIAST and community resource people will enable candidates to access upgrading and academic tutoring in their home community prior to attending the pre-trades program. Other concerns include the availability of on-site supervision by a qualified journeyman. Further discussions will take place to address options related to this need. An actual program will not likely take place until early 2006, however, the discussion and planning of this endeavor is very significant.

Aboriginal Education and Awareness

The need for employer education about Aboriginal issues is stronger than ever. Some figures show that Aboriginal representation in the piping trades is at 8.2 percent, which is higher than average 6.9 percent for all occupations, as reported in the Saskatchewan Job Futures report. However, a representative workforce would include about 13 percent Aboriginal workers, according to the proportion of Aboriginal people in the population. The sector considered the option of holding awareness training for plumbing sector employers, and concluded that the market base is not large enough to support a targeted program. However, a program geared to construction industry employers as a whole would provide a sufficient target market to enable program delivery.

We also recommend that employers hiring from the SIIT programs are offered awareness training.

Summary

The Sector is committed to working to develop all of Saskatchewan's future workforce and finding ways to meet the needs of the apprenticeship system and employers along with the needs of the Aboriginal sector. Dialogue and relationships built on the Prince Albert programs have led to increased insight into issues on both sides.

Action Plan:

1. Continue to support the Prince Albert pre-trade program as it develops.

2. The Sector continues to promote the services of the Construction Careers Centre to Contractors for their general labour needs. Construction Careers Projects are now located in Regina, Saskatoon, Prince Albert, La Ronge and under development in Meadow Lake.
3. There is an opportunity for further development of the Aboriginal workforce regarding trades with the 2006 Dakota Dunes Casino project. We will raise the possibility of additional training, and explore the extent of contractor hiring needs, training system capacity and funding for an Aboriginal Pre-trades program.
4. Advise the Saskatchewan Construction Association of an interest in awareness training.

5.0 A Mentorship Framework

Mentoring, as part of on-the-job training is a key instrument for an apprentices' development. In fact, apprenticeship can't happen without mentoring. However, according to the current research, the typical journeyman is not well prepared to be a mentor. Mentoring requires strong personal attributes and essential skills, and there are many barriers to effective mentoring. Barriers include the skills and attitudes of individual journeymen, the lack of incentive available to them, cost and commitment factors for employers, and a lack of commitment to the training process by some apprentices.

Barriers identified by the Construction Sector Council in its report on "Emerging Trends in Management, Supervision and Mentoring," are:

- some journeymen expect others to learn the hard way, just like they did. Some see new employees as potential competitors for jobs.
- From an employers perspective, the daily pressures on work productivity and the need to complete jobs cost effectively in a competitive environment is said to make it difficult to devote worker time to mentoring.
- Some employers are concerned about the cost of apprenticeship training and the potential to lose the mentoring/training investment they make.
- There is typically no immediate incentive to perform the mentoring task well, for example premium pay for added responsibilities, or enhanced recognition in the firm

The Sector's recognition of the importance of mentorship is outlined in the following recommendation:

Post Journeyman Training

Recommendation # 13

The Plumbing & Pipefitting Committee recognizes the importance of the journeyman status to the trade and the powerful influence that journeymen have in the development of young tradespeople. There is a need for Journeymen to be provided with teaching skills and tools that will enable them to direct the growth and development of new Apprentices.

-2000 HR Strategy

Saskatchewan Apprenticeship has indicated informally that in the future it plans to implement a mentorship training program based upon further consultation with industry. Such a program might take the format of a one or two day workshop in third or fourth level of training. The Plumbing Committee urges the development and inclusion of training based on an industry consultation of needs as soon as is feasible.

Journeymen have traditionally shared their mastery of technical skills and guided the development of their apprentice in an environment of respect, based on the values of excellence and quality workmanship. Today, the time pressures, cost consciousness, work demands and labour shortages facing many worksites have impacted the ability of a journeyman to take the time to adequately mentor the apprentice. In reality the journeyman is constantly balancing training duties with the duty to be productive for the

contractor. This is why changes to the journeyperson- apprentice ratio are not under consideration at this time. Mentorship and train the trainer strategies are tools to increase the retention of knowledge and skills within a workplace and to help the journeyperson fulfill his or her responsibilities.

Mentorship, as it is known in human resource terms, is a key recruitment and retention strategy. It is a process of knowledge and skills transfer. It can be an effective bridge to bring together employees of diverse backgrounds and capabilities. It is a low cost learning model that can increase performance and effect organizational change. Mentorship connects employees with successful role models and professional networks for growth. Mentorship, as expressed in the journeyperson – apprentice relationship, is the essence of the apprenticeship culture.

The Construction Sector Council utilized the following definition of mentorship in its research:

- Pairing for a period of time an apprentice with a journeyperson that he can go to for guidance and instruction.
- The development of a professional relationship between the journeyperson and apprentice, in which the journeyperson takes a keen interest in the success of the apprentice. Involving the journeyperson in developing the training objectives for the apprentice.
- Time spent by the journeyperson explaining, demonstrating, monitoring and correcting the work of the apprentice, coaching by the journeyperson about working in the industry

Mentorship skills generally include communication skills, instruction skills, watching and listening skills, handling conflict, analytical skills, integrity and trust building, motivational and career development skills. Some journeypersons are more equipped to handle these types of skills than others. Leaving mentorship skills development to chance should not be an option. As one company put it:

“Shut up and watch me is not good enough.” Executive, Construction Firm

Source: Emerging Trends in Management, Supervision and Mentoring in the Construction Industry.

Summary of Benefits of Mentorship

The apprentice gains:	The journeyperson/ mentor gains:	The organization gains:
<ul style="list-style-type: none"> ▪ industry and /or company knowledge ▪ knowledge of and preparation for various career paths. ▪ confidence in skills and performance ability ▪ well rounded skills base ▪ builds a personal network ▪ enhance awareness of current issues and policies 	<ul style="list-style-type: none"> ▪ the satisfaction of leaving a legacy, giving back to the company and to the next generation ▪ development of their own skills base 	<ul style="list-style-type: none"> ▪ Low cost system for transferring knowledge ▪ Committed workers ▪ Lower attrition ▪ Stronger performance ▪ Fewer mistakes ▪ Better integration of new employees,

To explore mentorship for human resource development in the piping industry, we discussed the Saskatchewan Provincial Pipe Trades Association’s Mentorship Program. This mentorship program utilizes the skills of recently retired workers and matches them with a company with a specific training objective. An employer or organization that wishes to utilize

a mentor would propose the objectives of the mentorship training, and essentially hire a retired journeyman to take on the tasks. In each case, several key issues are discussed:

1. Process of selecting the mentor (retired member);
2. Process of selecting the end user (employer);
3. Monitoring the program;
4. Remuneration for the mentor;
5. Expectation of the end user (employer);
6. Expectation of the mentor.

While the content and target of the mentorship program is open to the needs of the industry, this type of formal program would require considerable time to implement and monitor. The SPPTA experience has been moderately successful, but there have been some concerns with disputes about financial payments and liabilities.

Could this model be applied to the Sector as a whole? The Sector needs more information on the viewpoints and attitudes of industry and partners on mentorship before determining a direction beyond the existing framework of “journeyman as mentor”. If the Sector in the future decides to expand its mentorship programming, the following outline may be useful in guiding development:

Effective Practices in Mentorship Program Development

1. A statement of purpose and long-range plan;
2. A recruitment plan for both mentors and participants;
3. An orientation for mentors and participants;
4. Eligibility screening for mentors and participants;
5. A training curriculum for all mentors and participants;
6. A matching strategy;
7. A monitoring process;
8. A support, recognition, and retention component;
9. Closure steps that include private and confidential exit interviews to de-brief the mentoring relationship;
10. An evaluation process.

Options for a Piping Sector Mentorship Framework

The Piping Sector places a high priority on the reinforcement of the importance of mentorship as fundamental to the apprenticeship training culture. There is a need to bridge knowledge and expertise from seasoned professionals to apprentices, especially to retain knowledge of retiring or retired workers. An informational campaign to employers should be undertaken to increase awareness of the benefits and importance of mentorship, and the proven ability of mentorship to impact business performance and results.

The Action Plan includes:

1. Work with the Apprenticeship Commission toward incorporating a mentorship and Train the Trainer skills development approach into journeyman training. Apprentices should also learn more about their responsibilities as good mentees.

2. Identify and promote existing training that enables journeypersons to enhance mentorship and train the trainer skills.
3. Promote awareness of the benefits and business impact of increasing mentorship skills.
4. Promote the availability and approach of the Saskatchewan Provincial Pipe Trades Association mentorship program and seek further direction based on discussions.
5. Increase feedback and discussion on what can be done to strengthen mentorship and formulate additional direction based on consultations.

6.0 COMMUNICATIONS STRATEGY

The Sector's communication plan has two main targets:

1. job seekers and youth, for career awareness, and
2. employers, to share results of research findings, promote various human resource practices, increase two way communication about apprenticeship and human resource challenges and to source and promote sector success stories.

6.1 Communications Plan for Career Awareness

Target: Youth

Message: The importance of staying in school, how the trades have changed. Any literature should make it easier to find information and promote day to day realities so people will make informed choices about their careers.

As a subset of the construction industry, the sector's needs are unique, but we benefit from the awareness campaigns of organizations with a broader membership base such as the Saskatchewan Home Builders Association, and Saskatchewan Construction Association. The Sector will utilize a combination of targeted and broad awareness initiatives to raise awareness:

- "Get a Grip" campaign for annual Career Fairs. A "Get a Grip on Your Future" brochure was updated and will be distributed annually to students, agencies and partners. (see Appendix F)
- Skills Canada Saskatchewan.
The Piping Sector was proud to participate in the Skills Canada competition for the first time in 2005. The Skills Canada mission "To promote skilled trades and technology as a first choice career option for young people in Saskatchewan," fits the Sector's intent to promote trades and support the workforce of the future – our youth. The Sector sponsored a plumbing competitor and recommends continuing to do so in the future.
- Bring trades awareness and education into high schools.
There is no provincial curriculum for the plumbing and piping sector. The new Apprenticeship high school education program will make an impact on trades career awareness in high school students. Businesses willing to speak in high schools have been identified.
- Ride-a-Long program with Sask Power.
This new initiative will expose youth to on the job activities of provincial gas inspectors and be available for the northern Region in the fall of 2005.
- Maintain and promote scholarship and awards programs for apprentices.
- Ongoing Communications
 1. Conduct an annual mailout of brochures and key industry information to agencies, schools, partners, timed to the school year.

2. Continue improvements to the website - introduce a careers section.
 - Develop a powerpoint presentation for placement on website and share it with community and schools.
 3. Increase use of media to advertise announcements, achievements.
- Develop new communication and education tools including an up to date video, CD or website.

2005 Distribution:

There are 320 high schools in Saskatchewan, with high school enrollment of 45,716 from Grade 9 to Grade 12. There are about 50 First Nation high schools in the province.

We printed 1,000 brochures (500 sent out fall 2005) which were sent to:

1. Regional Colleges
2. Canada Saskatchewan Career and Employment Centres
3. Tribal Councils & Bands
4. Métis Employment Centres
5. High Schools
6. Partners and Stakeholders

Responses will be monitored and then decisions made about future mailouts. Phone calls were made to the larger high schools to get names and contacts, and to promote the SaskPower Ride a Long program.

6.2 Communications Plan for Employers

Target: Employers

Message: Increase industry awareness of and participation and input into Sector activities Promote strengthening of HR practices i.e. succession planning, supervisory training, mentorship programs by:

- Promoting training and education opportunities.
- Promoting use of community resources such as Construction Careers Project for referrals and hiring.
- Identifying and celebrating success stories. Utilize vehicles for raising awareness such as:
 - National Award for Small Business Skills Development-Conference Board of Canada.
 - Training for Excellence Awards - Sask. Labour Force Development Board.
- Ongoing Communications
 1. Continue improvements to the website with information, articles and links for employers and for potential job seekers.
 - placement of powerpoint and sector developed tools and reports on website.
 - establish use of website to gather opinions of employers with a feedback mechanism or polling capability.

2. Utilize email to deliver Sector Bulletins on a quarterly basis. Develop a recognizable identity and format for the Bulletins.
3. Network with agencies and stakeholders to exchange information.

Most of the initiatives are low cost and can be supported through partners and networking.

7.0 Conclusions and Recommendations

In the Saskatchewan Piping Sector, both the owners (MCAS) and the UA have organizational legacies going back 80 and 100 years respectively. Many companies are second or third generation contractors. There is a strong sense of the traditional apprenticeship culture amongst many workers and owners. With a new generation of workers and owners introducing present day work values to the mix, employers must adapt human resource practices and become more innovative to compete in the workplace environment.

Apprenticeship and provincial government recognition of the costs that employers bear before receiving a return on investment through the introduction of a proposed Apprenticeship Training Tax Credit is an important direction that is supported by the Piping Sector Industry. Industry looks forward to continuing discussions on the impact and implementation of such a training incentive.

Industry leadership is a fundamental principle of the apprenticeship system. The Apprenticeship Commission's 2005 Annual Report states: "*Apprenticeship employers and employees are the principal providers, clients and partners in apprenticeship, and as such have a leading role in the direction and governance of the apprenticeship system.*"

Industry's leadership in the next five to ten years is especially critical. It takes at least five years to produce a certified journeyman, and many sectors and companies are courting the best of today's youth.

Consultation with the Sector Committee has defined and validated 12 recommendations for action.

NEXT STEPS: FOR DISCUSSION

1. Enhance resources and communications within the Saskatchewan Apprenticeship and training system.

The Trade Board process is considered the front line of industry's voice in the apprenticeship system. Information on apprenticeship developments also flows through the Trade Boards to industry. Presently the frequency of trade board activity is inadequate to address issues. Lead time before meetings should increase to ensure the trade representatives have time for adequate preparation and consultation on issues. An annual face to face meeting of industry and Apprenticeship would also be mutually beneficial.

In our view, the apprenticeship training system is under resourced in personnel and financing, considering its strategic impact on Saskatchewan's economic productivity. Industry has observed:

- Lengthening response times to inquiries.
- Unavailable data or inability due to cost and/or lack of time to provide data specific to the trade.
- An increase in new trades designations and sub-trades which may impact the ability of the apprenticeship system to proactively respond to needs and provide accountable,

timely service to the compulsory trades, which are already participating in apprenticeship near the capacity of the economy.

- Lack of availability of trade specific brochures and promotional material based on cost of materials.
- The capacity of SIAST to meet needs is restricted by lack of office and shop space, and it has been acknowledged that pipefitters have needed a new training facility for many years. The recently announced SIAST training expansion is expected to alleviate some of these concerns.

2. Increase industry leadership with respect to Pre-trades system.

Stronger, more clearly defined, industry coordination and partnership with SIAST, Colleges and Apprenticeship from program planning, to evaluation and sharing of results will benefit job seekers, employers and all stakeholders. More information on short and long term outcomes and pre-trades impact on indenturing and journeyperson certification is needed to improve program effectiveness and lead to increasing numbers of completions.

3. Improve Exam Pass Rates

In 2004/05 the exam pass rate for plumbers was at a low of 48%, and has not exceeded 60% in the past four years, following years of 80% plus success rates. The Sector needs to work together to identify reasons for lack of success, and determine an appropriate response, including introducing study tools and guides to assist journeyperson to prepare for interprovincial exams.

4. Identify and Examine Standardized Entry Criteria

Given wide variation in academic standards and abilities of potential apprentices, the Sector should identify and examine standardized, competency based entry testing systems that will better prepare candidates to meet workplace requirements. The Sector would benefit from reviewing selection processes in use by other jurisdictions and options for reading, mathematical and essential workplace skills testing.

5. Address rural Saskatchewan training needs.

Fifty percent of Saskatchewan plumbers live in rural Saskatchewan, where they are more likely to own businesses and provide essential services to their communities. Rural business owners struggle with taking time away for training. They are more likely to lose people to other industries and locations, and are facing more dramatic declines in workforce numbers. Training linked with economic development is needed in rural areas.

6. Explore portable, mobile training system for apprenticeship training delivery.

The ability of SIAST and Regional Colleges to provide training to meet employer and employee needs on a timely basis throughout Saskatchewan is reaching capacity limitations. Presently one mobile trailer equipped with training materials circulates in the south and one in the North to deliver pre-trades training. Industry ownership of a training system should be explored. Such a service would better meet needs of rural and Aboriginal communities and reduce barriers to training, not only for pre-trades, but for all levels of apprenticeship training.

Employers also indicated support for technology and computer training options.

7. Improve training coordination.

The Training System should work with employers and apprentices to find ways to balance uneven or seasonal demand for training for the piping trades.

8. Enhance Aboriginal partnerships and employment strategies.

In 2006, a Pre-trade program is planned for Prince Albert. Starting immediately, we will determine the pre-trades training needs of contractors and training needs of Aboriginal workers hired for Casino construction which is anticipated in Saskatoon in 2006. The Sector continues to support and promote the services of our sector partner, the Construction Careers program.

While some sectors have identified an immigration strategy as a source of future skilled labour, the Piping Sector is committed to working with First Nations and Métis organizations and individuals to fill available jobs with qualified workers.

9. Explore business impact of proposed retention solutions and steps to accelerate journeyman status. Possible approaches are:

- a. The proposed Apprenticeship Tax Training Credit for employers. Industry is supportive of this development, and moving to assess impact in the Piping Sector. The Sector is interested in applying the Apprenticeship Training Tax Credit in a manner that reinforces responsible employer training practices.
- b. Changes to the journeyman – apprentice ratio. The Trade Board has been asked to consider whether changes could potentially alleviate ratio concerns. Indications are that this approach is not a priority at this time, due to training pressures already facing journeymen.

The next steps of assessment in these areas, involve gathering more information on:

- hiring needs at each level of certification, in order to assess the extent to which lack of journeymen are restricting hiring.
- Impact of an apprentice training tax credit on the sector.

10. Promote mentorship and post journeyman training.

The Sector will use a communications approach to raise awareness of the benefits of mentorship, promote the development of mentorship programs within companies and share the Saskatchewan Piping Association program mentorship model. The Sector also is committed to working with the Apprenticeship Commission to increase mentorship skills directly through apprenticeship training.

11. Implement and evaluate communications strategies.

Employers: Through a quarterly Piping Sector Bulletin, the Sector will reinforce the key message that apprenticeship is industry led, and clarify industry's responsibilities in a system where 80 percent of training is work based. Each Bulletin will focus on two or three important issues designed to increase industry engagement, and increase discussion and generate ideas and solutions. Increasing industry input and dialogue will be easier with a new industry website that has a forum feature and the ability to poll industry on issues.

Awareness Strategies: The Sector will work with partners to deliver joint promotional activities and support and adapt the "Get a Grip campaign", Careers powerpoint and brochure following website launch. The feasibility of developing a video or multimedia career resource useful for awareness campaigns should be explored.

12. Establish approach for, and secure funding for an industry-led training service for launch in 2006.

A pilot program to connect youth with the workforce will raise the profile of apprenticeship at the community level and meet employment needs of youth and industry.

APPENDIX

References

Aboriginal Human Resource Development Canada: Learning the Trades: A Factsheet www.ahrdcc.com

Canada West Foundation; Toward a Bright Future: Recommendations for Addressing Skills Shortages in Western Canada. January. 2005. www.cwf.ca

Canadian Apprenticeship Forum; Accessing and Completing Apprenticeship Training in Canada. January 2004. www.caf-fca.org

Canadian Apprenticeship Forum: Backgrounder: Skilled Trades: A Career you can Count On. August 2004.

Canadian Apprenticeship Forum: Making It Work Training Guide.

CAF /HRSDC "Skilled Trades: a Career you can Build on". Trade Facts – media backgrounder.
www.apprenticetrades.ca www.careersintrades.ca www.skillscanada.com

Construction Sector Council: Future Labour Supplies for Canada's Construction Industry. Winter 2004. www.csc-ca.org.

Construction Sector Council: Emerging Trends in Management, Supervision and Mentoring in the Construction Industry. Winter 2004. www.csc-ca.org.

Construction Sector Council: Impact of Technology on the Construction Labour Market. www.csc-ca.org.

Construction Sector Council: Training Canada's Construction Workforce, Winter 2004. www.csc-ca.org.

Construction Sector Council: Preliminary Construction Outlook. November 2004. (LMI)

Conference Board of Canada: Solving the Skilled Trades Shortage. 2002. www.conferenceboard.ca

Conference Board of Canada: Mining Youth Potential. 2002. www.conferenceboard.ca

HRSDC: Canada's Innovation Strategy –Knowledge Matters. www11.sdc.gc.ca

HRSDC: Essential Skills. www15.hrhc-drhc.gc.ca/english/general/es.asp

National Mentoring Partnership; www.mentoringcanada.ca; www.mentoring.org

National Pipe Trades Human Resource Committee; www.mcac.ca (Mechanical Contractors Association of Canada)

1. Pipe Trades National Human Resource Needs Analysis 1997
2. Prior Learning Assessment and Recognition: Apprenticeship and Trade Certification in the Pipe Trades
3. Certification and Training for the Pipe Trades: Planning for the Future 2003

Saskatchewan Apprenticeship & Trade Certification Commission: High School to Apprenticeship; www.saskapprenticeship.ca

Saskatchewan Apprenticeship & Trade Certification Commission: Annual Reports 1995 to 2005. www.saskapprenticeship.ca

Saskatchewan Chamber of Commerce: Action Saskatchewan – A Blueprint for 2005, the Human Resources Plan – “A Call to Action.” May 2002.

Saskatchewan Job Futures. www.saskjobfutures.ca

Saskatchewan Training System Review Panel: Interim Report, Sept. 2005. Final Report www.sasked.gov.sk.ca/branches/institutions/tsr/TSRFinalReport2.pdf

SIAS: Annual Report. www.sias.sk.ca.

SIAS: Equity Reports, 2000 to 2003. www.sias.sk.ca.

SIAS: 2004 to 2009 Business Plan. www.sias.sk.ca.

SIAS: SIAS Graduate Report 2004. www.sias.sk.ca.

SIAS: Saskatchewan Urban Training Needs Assessment 2005. June 2005. www.sias.sk.ca.

TOWES: Test of Workplace Essential Skills. www.towes.com

APPENDIX B

Program Overview

Pre-Trades Plumbing and Pipefitting is an applied certificate program. It provides entry level knowledge and skill development in plumbing installation, water supplies, waste systems and plumbing fixtures. The pass mark for each course is 60percent.

Graduates who have a weighted point average of 70 percent will, upon becoming indentured, be able to apply to the Apprenticeship and Trade Certification Commission to receive credit for Level I technical training.

Admission Requirements

- Grade 11

Location

- The program is offered as a special project through off-campus programming.

Length

- 17 weeks (530 hours)

Courses

DRAW 101	Blueprint Reading
MATH 106	Applied Mathematics
PLMB 100	Gasfitting
RIGG 183	Safety, Knots and Rigging
SCI 108	Trade Science
STEAM 100	Hydronic Heating Systems
TOOL 108	Basic Tools and Materials
WORK 105	Work Experience

DRAW 101 - Blueprint Reading

You will learn how to produce and interpret basic shop drawings and piping sketches as used at a typical work site. You will study the trade's code book and learn how to apply code regulations to the installation of a residential plumbing system.

MATH 106 - Applied Mathematics

You will review basic mathematics and the metric system of measurement. You will re-examine basic mathematical concepts as they apply to the plumbing/pipefitting trades.

PLMB 100 - Gasfitting

You will learn how to install and test a domestic natural gas piping system. The safety factors involved in working with natural and propane gas, and the importance of accurate code interpretation will be emphasized.

RIGG 183 - Safety, Knots and Rigging

You will study general safety as it applies to the plumbing/pipefitting trades. You will develop skill in the safe lifting and moving of materials and equipment used in the shop. You will become familiar with WHMIS and articles of the Occupational Health and Safety Act that apply to the trades.

SCI 108 - Trade Science

You will gain an understanding of the basic scientific principles that apply to the plumbing/pipefitting trade.

STEA 100 - Hydronic Heating Systems

You will be introduced to the various types of boilers and hot water heating systems. You will learn how to install circulating pumps and piping systems. You will have the opportunity to practice installing different heating and piping systems in the shop.

TOOL 108 - Basic Tools and Materials

You will be introduced to the various hand and power tools used to install and join the different types of piping systems used in the plumbing/pipefitting trades.

WORK 105 - Work Experience

You will gain valuable experience through a two-week job placement in industry. You will have the opportunity to apply your trade related technical skills as you increase your understanding of the workplace and employer's needs.

APPENDIX C

CONGRATULATIONS TO THE PLUMBING PRE- TRADES CLASS OF 2004!

New Level 1 Apprentices

REGINA SK.



Kneeling front row: Fabian Genaille, Tim Eashappie, Shane Sparvier
Standing Left to Right: Craig Sugar, Jody LaPlante, Chad Moran, Marcel Pelletier, Brandon Pelletier, Trevor Prettyshield, Wendy Thorne, Dwayne Dustyhorn, Dennis Pastl (Instructor) Back Row Standing: Kelly Stewart.

THANK YOU TO ALL WHO MADE THIS PROGRAM A SUCCESS!

- Mechanical Contractors Association
- United Association of Plumbers and Pipefitters Local 179
- Saskatchewan Plumbing and Piping Industry Sector Human Resource Partnership
- Saskatchewan Apprenticeship and Trade Certification Commission
- Saskatchewan Indian Institute of Technologies (SIIT)
- SIAST Wascana and Kelsey Campus
- Construction Careers Regina (CCR)

Funding for the course provided by:

- Aboriginal Apprenticeship Initiative
- Quick Skills Funding- Department of Learning
- Saskatchewan Indian Institute of Technologies (SIIT)

- Regina Treaty/Status Indian services RT/SIS
- First Nations Employment Centre
- Touchwood Tribal Council
- FHQ Tribal Council
- Carry the Kettle First Nation
- Southern Plains Métis Employment and Training

Employers who trained and hired apprentices:

- Able Plumbing & Heating
- Grasswood Mechanical
- Reinhardt Plumbing & Heating
- Pow City Mechanical
- Welldone Plumbing Heating and Air Conditioning
- McKenzie Plumbing & Heating
- Christie Mechanical
- Marquardt Mechanical
- Sterling Plumbing & Heating

APPENDIX D

Regina 2004 Plumbing & Pipefitting Pretrades Follow up Survey:

The survey follow up was responded to by 4 people:

- Two were working fulltime, the other two were not.
- Two were employed prior to the course in areas unrelated to plumbing (the same who were working after the course) and two were not.
- Two were indentured to SIIT, one to an employer and one was not indentured.
- Grade 11 plus some post secondary, (1) Grade 10 or 11, Grade 12 (2),

Survey results:

	<u>Average Rating</u> (5 is the highest):
How helpful was the instructor?	4.5
Did you receive enough industry information?	4
How helpful was the on the job supervisor?	4.5
Did you receive enough job search/work preparation?	3

Participants were asked what part of the program they felt was most important to them. Two participants felt that the trade skills were the most important to them, while industry support and the academic part of the program were mentioned by the other two participants.

<u>Ranked Most Important</u>	
Trade skills	2
Industry Support	1
Academic skills	1

How well did the program prepare you for employment? Rating=3.75

- It was a way of getting my foot in the door. The on the job training was a good way to show an employer one's work ethic
- The program was taught well, I felt confident when I started to work in the field

Have you been back to the training centre or job coach since you started employment?

No	3
Yes	1

What would be one piece of advice you would give to someone wanting to enter the plumbing industry?

- Must like working outdoors in all types of weather
- Try it you might like it
- I would encourage anyone to take up the trade.
- See what is involved in all aspects of the plumbing trade before deciding it is career for them.

What was the one thing that would have made your classroom experience better?

- It was a great course to be part of
- Nothing
- Better math and science instruction
- Get rid of those who weren't committed and due to poor attendance. Time was spent catching them up.

What was the one thing that would have made your on the job experience better?

- It was a good experience because I landed a job out of it.
- Going to work in the beginning of the project
- Patience on behalf of the journeyman.
- was happy with on the job experience as I chose where I was going and wanted to be at the end of the course.

What was the one thing that made your classroom experience great?

- Meeting new people in the class and industry
- The instructor
- The students and teacher.
- Instructor

Pre-Trades Plumbing and Pipefitting

Applied Certificate

Graduates: 31

National Occupational Classification Code: 7611

Respondents: 14

7611

Kelsey

Extension

Response Rate: 45%

EMPLOYMENT STATUS

	(% available to work)
Available to work	13
Employed	10 77%
Full-time	8 62%
Part-time/casual	2 15%
Employed part-time/casual by choice	1 8%
Training-related employed	5 38%
Full-time training-related employed	5 38%
Part-time training-related employed	0 0%
Self-employed	0 0%
Unemployed (not working but looking for work)	3 23%
Not available to work (not looking)	1

Full-time training-related monthly salary

		n = 5
Highest	\$1,800	
Average	\$1,552	
Median	\$1,650	
Lowest	\$1,236	

Location of training-related employment

		n = 5
Regina	2	40%
Saskatoon	1	20%
Prince Albert	0	0%
Moose Jaw	1	20%
Other Saskatchewan location	1	20%
Outside Saskatchewan	0	0%

Employed out-of-province (training & non-train. rel.)

		n = 2
By choice	2	

Reasons why employed outside Saskatchewan

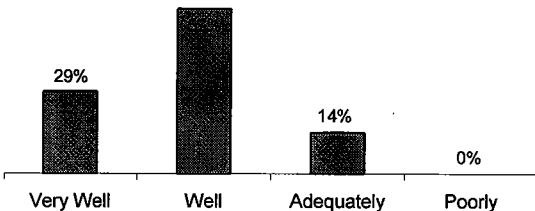
		n = 2
More employment opportunities	0	
Better wages	0	
Personal reasons	2	
Other	0	

Sample of training-related occupations:

- Plumber
- Apprentice plumber

TRAINING PREPARED FOR EMPLOYMENT

n = 14



NOT EMPLOYED

n = 4

Reason not currently employed

		n = 4
Employment is seasonal	0	
Require further training	0	
No jobs in desired location	2	
Not enough experience	0	
Not available to work at present	1	
No jobs available at all	1	
Other	0	

Actively looking for work

n = 4

Yes = 3 No = 1

Reason not looking for work

		n = 1
Returned to school	0	
Health/disability problems	1	
Family responsibilities	0	
Given up looking	0	
Other	0	

Have worked since completing training

n = 4

	Yes	No
	3	1

Work was training related

n = 3

	Yes	No
	2	1

Scheduled to return to work in the future

n = 3

	Yes	No
	2	1

PURSuing FURTHER EDUCATION

Currently enrolled in further education

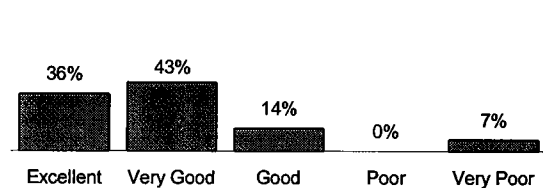
Yes = 3 No = 11 n = 14

Type of further education

SIAS program	1
University program	0
Apprenticeship program	2
Other type of program	0

QUALITY OF TRAINING

n = 14



Notes:

Available to work: The employed and the not employed who are looking for work

n: Number of respondents to the question

The Saskatchewan Plumbing & Pipefitting Sector Partnership

Human resource development in our dynamic industry is led by the Mechanical Contractor's Association of Saskatchewan, Saskatchewan Provincial Pipe Trades Association, employer and business representatives, employee representatives, SaskPower, SaskEnergy, Aboriginal training institutions, Saskatchewan Learning, SIAST, & the Saskatchewan Apprenticeship & Trade Certification Commission.

The Saskatchewan labour market is changing. Many of our skilled tradespeople are retiring, leaving openings for the workforce of the future – our youth!

The Piping Sector's Human Resource Strategy is working to:

- attract and retain new workers into our highly respected trades,
- promote attitudes of life long learning,
- raise career awareness of our trades,
- create new pathways into the trade,
- co-ordinate strategies with the Aboriginal community to help develop a growing segment of the labour force.

For more information, contact:



Judy Nagus
Executive Director
Mechanical Contractors Association of Saskatchewan
Saskatoon, Saskatchewan

www.mca-sask.com

Tel: 306-664-2154



Ken Busch, Coordinator
Joint Training Committee for
United Association Local 179
Regina, Saskatchewan

www.ualocal179.com

Tel: 306-522-4237

2005

Careers in Mechanical & Piping Trades

Get a Grip on Your Future!

Plumber

Steamfitter-Pipefitter

Sheet Metal Worker

Refrigeration Mechanic



Career Expo 2005

www.mca-sask.com

Look At Our Trades Now!

Mechanical and piping trades are changing with the times. You might be surprised to discover what we have to offer!

- Learning on the job means you're earning a wage right from the start, which keeps down the cost of starting a career.
- Apprenticeship programs combine working on the job (80% of the time) and in school training (20% of the time) for up to five years.
- Yes, you need solid math skills for success in our trades!
- An exciting career with room to grow - into supervision, management and even owning your own business.

If you're interested in satisfying work you can take pride in, then find out more

What Do Plumbers, Steamfitter-Pipefitters, Sheet Metal Workers, & Refrigeration Mechanics Do?

We are the professionals who keep your homes and offices, schools and industrial sites functioning and comfortable. Who could survive the winter without furnaces and heating systems? No one wants to face summers without air conditioning!

We install, fix and maintain piping and heating and ventilation systems in homes, commercial buildings, manufacturing sites, schools and hospitals.

In our trades, men and women who like to do hands-on work can make a difference in the quality of life of our community and our province, for generations to come.

When you become a journeyman, you could be earning up to \$25/ hour or more in a satisfying occupation ***instead of paying back student loans!***

Our industry needs people with the skills and motivation to keep up with the latest technology. But, these trades are not for everyone.

Can you handle it?

- *High school Math and Science.*
- *Hands on work*
- *Responsible and able to focus on tasks*
- *Physically demanding work, all weather work, and odours.*
- *Teamwork- with supervisors, co-workers and customers*
- *Non-stop learning.*

Respect, Pride and Satisfaction in your Career



How to Get Started

1. Talk to people in the trade to find out more. Read about it on the Internet. Try a work placement. ***Make a good decision for your future!***
2. Find an employer willing to hire you and provide you with the on the job training. After six months work you will be eligible to apply to be indentured as an apprentice.
3. Contact the Apprenticeship & Trade Certification office in your area, to get more information.

Check Out These Sites and Services:

- ✓ www.careersintrades.ca – (for parents too!)
- ✓ www.saskjobfutures.ca
- ✓ www.sasknetwork.ca
- ✓ Saskatchewan Apprenticeship & Trade Certification Commission
www.saskapprenticeship.ca
1-877-363-0536
- ✓ SIAST
www.siastr.sk.ca
- ✓ Construction Careers Saskatoon
373-4695
- ✓ Construction Careers Regina
721-4473
- ✓ Construction Careers Prince Albert
953-7228