

# Our Competitive Advantage CAF 2008

Essential Skills and Apprenticeship Training

## SkillPlan's Mandate

*The mission of SkillPlan is to develop strategies to improve the Essential Skills of people working in the unionized construction industry in BC and the Yukon Territory*

- Not-for-profit society
- Equal board representation – Unions & Employers
- 14 international building trades, 40 000+ workers, 500 employers

# SkillPlan Services

- Tutor apprentices from 14 trades
- Prepare Publications
- Conduct research

*Focus on Essential Skills*

# Research Focus

*What effect does Essential Skills training have on completion rates and performance in apprenticeship programs?*

# Technical Trainers' experience

How “ready” are Level 1 Apprentices for technical training?

(That is, have adequate Reading, Numeracy skills etc. to learn applied skills.)

# Technical Trainers' experience

90 instructors at 20 institutions in BC

- 20% lack Reading Skills
- 25% lack Document Use Skills
- 30% lack Numeracy Skills

## Completed Studies

1. Northern Alberta Institute of Technology (NAIT)
2. SkillPlan Level 1 Plumber study sponsored by BC Industry Training Authority (ITA)

# Essential Skills & Apprenticeship... A Case Study

NAIT, Canada's largest apprenticeship trainers, used TOWES to:

1. Determine which 1<sup>st</sup> year carpentry apprentices lack the required level of ES; and then
2. Offered additional support to those lacking the required Essential Skills



The following two slides show how NAIT's use of Essential Skills has lowered drop-out rates and training costs

# Apprenticeship & Essential Skills...

## A NAIT Study (2002 – 2003)

<b>Carpentry Completion Rates</b>			
<b>2002-2003 Field Study</b>			
<b>Group</b>	<b>Class Size</b>	<b>Average Completions</b>	<b>Average Provincial Exam Result</b>
1	29	76%	75%
2	42	71%	73%
3	27	96%	81%
4	29	100%	81%
5	27	61%	71%
<b>Total</b>	<b>171</b>	<b>78%</b>	<b>76%</b>

# The ROI... (Using Alberta's Training Costs)

<b>NAIT First Carpenter 2002 - 2003</b>		
<b>42 unsuccessful completions</b>		
<b>Average training cost</b>	<b>\$4500 / apprentice</b>	<b>\$189,000</b>
<b>Tuition</b>	<b>\$ 750 / apprentice</b>	<b>\$ 31,500</b>
<b>EI Cost</b>	<b>\$ 400 / week / apprentice</b>	<b>\$ 134,400</b>
	<b>Total</b>	<b>\$ 354,900</b>
<b>Cost per unsuccessful completion</b>		<b>\$ 8,450</b>

<b>NAIT Second Carpenter Research 2003 – 2004</b>	
<b>10 apprentices were successful with remediation</b>	<b>Cost savings \$84,000</b>
<b>17 apprentices were unsuccessful</b>	<b>Cost \$143,650</b>

**\*does not include costs for on the job training**

## ITA Research Site

Where: Pacific Vocation College

Who: Plumbers – Level 1

How many: 100 in each of 2 groups

When: January 2006 to December 2006

# Deliverables

## January to December 2006

- **Provide Essential Skills support for 100 apprentices in the Plumbing Trade (and others)**
- **Provide an analysis of the impact of this intervention model on the completion rate and relative costs and benefits**

# Setting

## **Pacific Vocational College PVC**

### **Piping Trades – Continuous Intake Program**

***17 to 25 years – 63%***

***26 to 30 years – 18%***

***31 to 46 years – 19%***

***Only 5 individuals did not complete grade 12, most completed Math 11 in high school.***

## Report A Baseline

*As a result of this preliminary assessment, we can unequivocally claim that lower Level performance predicts higher Level and final IP performance, especially for theory performance.*

Theresa Kline PhD, University of Calgary

## Report B

*Those apprentices who had access to the Essential Skills Training Program (i.e., those in the January 2006 – June 2006 group) performed better than those who did not (i.e., the June 2005 – December 2005 group). Moreover, these differences were consistent across all eight of the theory modules. There were no differences in the practical modules.*

<b>Theory</b>	<b>2005 (Before ES)</b>	<b>2006 (ES Training)</b>
Cutting, Soldering and Brazing	84.2	87.4
Drafting and Blueprint Reading	81.9	86.7
<b>Mathematics</b>	81.9	86.4
Pipes, Valves and Fittings	79.8	84.0
Rigging	86.8	91.9
Safety	86.4	89.8
<b>Science</b>	78.1	83.7
Tools	88.1	94.9

## What did we learn?

- Early ES intervention is important (level 1)
- ES intervention = better training performance
- ES intervention = improved retention

# Essential Skills Business Case Project



Canadian Apprenticeship Forum  
Forum canadien sur l'apprentissage

Please visit us online at [www.skillplan.ca](http://www.skillplan.ca)

# CSC Business Case Project

1. Measure Essential Skills and the impact on Apprentice performance in technical training.
  - George Brown College, Toronto
  - Camosun College, Victoria
  - Saskatchewan Indian Institute of Technologies
  - District Council 38, International Union of Painters and Allied Trades, Joint Trade Society Training Centre, Vancouver

# CSC Business Case Project

## 2. Link results to Return on Investment research. (CAF 2006)

*“On average, for each \$1 invested in an apprentice, a benefit of \$1.38 accrues to the employers. All 15 trades surveyed show an overall net benefit of apprenticeship training. Net benefits are generated for 12 of 15 trades after year 1 and all but 1 after year 24.”*

## Essential Skills Business Case Project

Uses TOWES to measure ES for all Level 1 Apprentices in the study.

### Trades Standard

- Reading Text **Level 3**
- Document Use **Level 3**
- Numeracy **Level 3**

Identifies and provides support for those Apprentices with the weakest skills.

# Essential Skills Business Case

**How can we quantify the return  
for \$ invested in Essential  
Skills upgrading?**