

Chapter 7

Skills Upgrading Initiatives in Canada: Evidence from Alberta and the Northwest Territories

by

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This chapter discusses several initiatives recently undertaken in Canada to reinforce the need and importance of basic, essential skills in the workplace. It focuses on cases involving employers who, in collaboration with community colleges, have developed tools based on their local labour market needs to upgrade the skills of their workforce. These tools were developed in part through initiatives of the federal government. Following a general overview of the Canadian labour market, the authors examine the main policies in the field of skills development, implemented by both the federal and regional governments of Canada. They then provide detailed descriptions of skills upgrading initiatives in two neighbouring case study regions (the Northwest Territories and Alberta). The conclusion highlights the value of flexible skills assessment programmes that can be tailored to the specific needs of incumbent workers and their organisation.

Introduction

A growing body of evidence supports the view that human capital development is a key factor in driving economic growth. The OECD (2002) has noted that, despite increasing recognition of the importance of human capital development in meeting social and economic objectives, low-skilled workers often find that opportunities to enhance their skills and improve the quality of their jobs are scarce. In many OECD countries, including Canada, there is a high incidence of poverty among working households. Government training programmes tend to target the unemployed – especially the long-term unemployed – rather than the low-skilled, low-waged employed. Moreover, employers tend to provide more and better skills development programmes to workers who are already highly skilled.

OECD (2002) research also suggests that skills upgrading is often part of an “education” agenda related to the notion of lifelong learning, rather than simply an employment policy agenda. However, the demands and business needs of employers are often influential in the development of skills upgrading initiatives.

Some initiatives have been undertaken in Canada at the national, provincial/territorial, and local levels to promote upgrading of the skills of less-skilled workers. The case studies presented in this chapter shed some light on the opportunities and challenges associated with efforts to provide skills development opportunities to such workers.

The case studies involve two neighbouring regions of Canada: the northern portion of the Province of Alberta and the Northwest Territories. The studies include a diversity of initiatives that aim to meet the need for basic, essential skills in the workplace. The chapter largely focuses on cases involving employers who, in collaboration with community colleges, have developed tools – very much based on their local labour market needs – to upgrade the skills of their workforce. These tools were developed in part through initiatives of the federal government.

This chapter begins with a general overview of the Canadian labour market that highlights a number of key economic indicators and trends. The second section discusses the main policy initiatives in skills development implemented by both the federal and regional governments of Canada. The chapter then provides detailed descriptions of skills upgrading initiatives in

the selected case studies areas. It ends with a discussion of common themes and lessons learned.¹

The national labour market

Macroeconomic indicators

GDP indicators

Canada's gross domestic product increased over the last decade, rising an average of approximately 4% in real terms between 1994 and 2002, when it reached CAD 1.15 trillion (current dollars) (Statistics Canada, 2004a). From 1980 to the present, GDP per capita has risen gradually and not without interruption, increasing from CAD 23 650 to CAD 34 210 (in constant 1997 dollars). GDP per capita varies substantially between provinces, ranging from CAD 40 156 in Alberta in 2003 to CAD 23 929 in Prince Edward Island, with Quebec's GDP per capita at CAD 30 483 and Ontario's at CAD 37 049 (Statistics Canada, 2004b).

In 2003 there were sharp declines for certain industries within the manufacturing sector. Gains in the chemical industry and the manufacturing of information technology were offset by losses for food and wood product manufacturers, with the result that net output change remained flat. This impact on the manufacturing sector was partly due to the steep appreciation of the Canadian dollar, which made international exports less profitable (Statistics Canada, 2004c).

Employment indicators

Unemployment rates

From 1992 to 2000, Canadian unemployment declined steadily, from a high of 11.2% to 6.8% in 2000; with the economic slowdown beginning in 2000 came a modest increase to 7.7% in 2002 (Statistics Canada, 2004d). This general pattern was repeated in most provinces but historic patterns prevailed, with higher unemployment east of the Ontario-Quebec border.

Unemployment is higher for marginalised groups in Canada, especially youth, Aboriginal² people, persons with disabilities and recent immigrants. At the end of 2003, the unemployment rate for youth (aged 15-24) was 14%. Unemployment among Aboriginals was 19.1% in 2001.

Unemployment is inversely correlated with education; in 2002, individuals aged 25 and older with less than a high school education had a 10.3% unemployment rate, compared with high school graduates at 6.5%, non-university post-secondary graduates at 5.7%, university graduates at 5.1%, and those with postgraduate education at 4.2% (Statistics Canada, 2004e).

Employment by sector

Nearly three-quarters (74.4%) of Canadian employees worked in the service sector in 2002, a slight increase from the 73.3% level in 1992. Over the same period, growth in employment was led by management and administrative support services (increasing from 2.6% in 1992 to 3.8% of employees in 2002), professional and scientific services (4.6% in 1992 and 6.4% in 2002), and information and culture & recreation (3.8% and 4.6%). Employment declines appeared principally in goods-producing sectors, with agriculture declining from 3.5% to 2.1% of employees between 1992 and 2002, and forestry, fishing, mining, oil and gas declining from 2.2% to 1.8%. A notable decline in the service sector was in public administration (from 6.8% to 5%) (Statistics Canada, 2004f).

Employment by sector varies widely among regions. The manufacturing-intensive regions, principally Ontario and Quebec, employed more individuals in the manufacturing sector (18.5% in Ontario, 18.2% in Quebec) than the Canadian average (15.5%) in 2002 (Statistics Canada, 2004f), and suffered during 2003 owing largely to their dependence on the US economy as an export market. By contrast, the resource-rich regions of western Canada, particularly Alberta, have outperformed the rest of Canada, spurring spin-off employment in construction and service industries during recent years. While employment in the oil and gas sector is higher in Alberta than the Canadian average, any future employment gains are expected to be in other sectors.

Education Indicators³

Highest level of schooling

Education levels have steadily increased in Canada during recent decades. Between 1991 and 2001, the proportion of Canadians aged 25 to 64 with less than a high school education declined from 31% to 19%. By contrast, the proportion of Canadians in this age group with post-secondary credentials surpassed the 50% level for the first time in 2001; 23% had a university degree (up from 17% in 1991), 18% had a college diploma (up from 14%), and 13% had a trade certificate (unchanged) (Statistics Canada and CMEC, 2003, p. 381).

Secondary completion rates

The Canadian rate of high school completion in 2000 was 78%, up slightly from the 1995 average of 76%. In 1999, 12% of 20-year-olds had dropped out of high school, a decline from the 1991 level of 18%. The highest completion rates were recorded in the eastern provinces, with the western provinces not far behind. Although significant improvement was recorded over this five-year period, Yukon (59%), the Northwest Territories (39%) and Nunavut (35%) are

still far below the Canadian average (Statistics Canada and CMEC, 2003, pp. 100-101).

Post-secondary graduation rates⁴

College graduates accounted for 28% of their age cohort in 1998, up from 20% in 1989.

In 1998-99, 148 000 people completed trade and vocational programmes; over half graduated from pre-employment and pre-apprenticeship programmes or registered apprenticeship programmes. In 2000, there were 18 000 graduates from registered apprenticeship training programmes, marking a decrease of 7% from 1991 levels. The proportion of women completing apprenticeship programmes doubled over the 1990s, from 6% to 12% of all graduates of such programmes (Statistics Canada and CMEC, 2003, pp. 135-140).

The percentage of Canadian citizens with a university degree rose slightly during the 1990s, from 28% in 1991 to a 1994 level of 30%, where it remained until 1998.

Graduation rates for graduate-level study (master's and doctoral degrees) increased during the 1990s, to 5% for master's degrees in 1998 (up from 4% in 1991) and to 0.6% for earned doctorates (up from 0.4%) (Statistics Canada and CMEC, 2003, p. 374).

Education levels are considerably lower for Aboriginal Canadians at all levels than for the Canadian population as a whole, although there has been some improvement. Between 1996 and 2001, the share of working age (25-64) Aboriginals with only a high school diploma rose from 21% to 23%, while the share with post-secondary qualifications (trades, college or university) increased from 33% in 1996 to 39% in 2001. The proportions of working-age Aboriginal Canadians with trades certificates and community college are similar to those of the Canadian population, at 16% with trades certification (compared to 13% of the Canadian population) and 15% with college qualifications (compared to 18%). University education levels diverge, however, at 8% among Aboriginals, compared to 28% of all working-age Canadians (Statistics Canada and CMEC, 2003, p. 146). Initiatives geared specifically at upgrading the skills of Aboriginal persons are discussed later in this chapter.

Adult education and training: recent data⁵

In 1997, approximately 28% of Canadians participated in adult education and training, with similar rates for women (27%) and men (29%). The majority of participants, approximately 75%, took programmes for job-related purposes. Participation rates were highest in British Columbia (32%), Alberta and Ontario (both at 31%), with Manitoba (28%) and Saskatchewan not far

behind. Quebec (21%) and Newfoundland (19%) trail other provinces, just behind Prince Edward Island and New Brunswick.

An individual's level of education is a strong predictor of training participation in Canada. Only 11% of those with less than a high school diploma participated in some adult education or training in 1997. This compares with a 48% participation rate for university graduates, a 39% rate for college graduates, and a 22% rate for high school graduates (HRDC and Statistics Canada, 2001, p. 71).

Age and training participation are inversely correlated. Training participation rates are fairly stable for younger participants in the 17-44 age range, with a subsequent gradual decline by age. Beginning at age 45, there is a sharp decrease in training rate by age. For 17- to 24-year-olds, the participation rate is just under 40%, declining to 38% for those aged 25-34, 35% for 35- to 44-year-olds, and 30% for 45- to 54-year-olds, dropping to 15% for individuals aged 55-64, and just 5% for those aged 65 years and older. A similar inverse correlation appears between age and study duration.

Adult training participation is also closely linked to employment status. In 1997, 29% of employed people participated in job-related training, compared to 20% of the unemployed. Participation is higher for full-time (27%) than for part-time (20%) employees. There are no major differences by sex, with the single exception that women rely more heavily on self-financing (as opposed to employer financing) for adult education and training than men, a phenomenon explained by their lower labour market participation rate and higher rate of part-time work (HRDC and Statistics Canada, 2001, pp. 17-21).

The primary barriers to participation in adult education and training in Canada, as reported by individuals, are being too busy at work (reported by 62%), inconvenience of time or location of available training (41%), cost (37%), and non-child family responsibilities (14%). For women, non-child family responsibilities (cited by 26%) and childcare (17%) were of somewhat greater importance than for men (21% and 11%, respectively) (see HRDC and Statistics Canada, 2001, pp. 29-31).

Training suppliers and training provision by employers

Public education institutions provide three-quarters of all adult education and training programmes and one-quarter of all training courses.⁶ Employers themselves supply close to one-third of all job-related courses (including apprenticeship programmes), while commercial schools and private training providers offer 20% of courses. In addition, equipment producers and suppliers offer 10%.

The principal sources of financial support for adult education and training are employers and self-financing. Employers contribute to the cost of

63% of training courses, while individuals finance their own studies in 29% of cases. For adults requiring basic education, such as elementary or high school education, support is primarily through self-financing (42% of instances) or government (37%), or is offered at no cost apparent to the student (21%). Employers rarely contribute to this kind of education, offering funding in only 4% of cases (HRDC and Statistics Canada, 2001, pp. 24-28; pp. 79-80).

Employers are 2.5 times more likely to sponsor training for white collar workers (those in knowledge-intensive occupations or in professional and managerial positions) than blue collar workers (skilled and unskilled trades), with clerical staff receiving slightly more support than blue collar workers.

Firm size is a strong determinant of provision of employer-sponsored training: the likelihood of receiving employer-sponsored training was twice as high, at 34%, for employees of medium (100 to 499 employees) and large (over 500 employees) firms than that for employees in small firms (less than 100 employees), at 16%. This difference is largely attributable to the relatively high impact of fixed training costs for small firms.

Adult education and training policy in Canada

Investment in adult education and skills attainment has enjoyed a high profile in recent years in Canada. The economic advantages of a skilled labour force and a corresponding policy of human capital development have been recognised and increasingly well articulated among international scholars and non-governmental organisations, as well as by Canadian policy makers. At the heart of this policy is the observation that Canada's competitiveness will rely increasingly on its ability to provide citizens with the knowledge and skills they require throughout their lives.

Federal training policy

Canadian national policy regarding adult worker skills and training has historically been permeated by the tension between the federal and provincial/territorial levels of government. On the one hand, the constitutionally established jurisdiction of the Canadian provinces over education has been interpreted to include adult training. On the other hand the federal government has responsibility for unemployment insurance (now called "employment insurance" or EI), and funds adult skills training through that programme. The federal government used to be heavily involved in the delivery of training programmes (and not just for EI eligible clients). In recent years however, its role in sponsoring job training has changed substantially. The Canadian training system was overhauled in 1996 when the federal government agreed to withdraw substantially from direct support for worker training under the new Employment Insurance (EI) Act. The Act outlined a

process allowing the provinces and territories to negotiate devolution agreements, called Labour Market Development Agreements (LMDAs), with the federal government to share responsibility for active labour market policies. All provinces and territories, except Ontario, have negotiated an LMDA with the federal government since then. The 1996 resolution to devolve training to provincial and territorial authorities notwithstanding, the federal government explicitly retained jurisdiction over adult training for members of targeted groups, including Aboriginal peoples.

The federal government's skills agenda

Results of the Canadian portion of the International Adult Literacy Survey (IALS) in 1994 raised concerns about the levels of literacy and numeracy skills (prose literacy, document use and quantitative literacy) among adult Canadians. While Canada's performance on these measures was comparable with or better than many of its competitors, the revelation that 42% of Canadian adults had low or very low literacy skills – resulting in difficulties performing many everyday tasks required in the home, community and workplace – created a considerable momentum of support for measures to improve those (and other) skills. Evidence of relatively low levels of workplace-based training in Canada gave further cause for concern.

Following announcements in the 2000 and 2001 Speeches from the Throne, the government of Canada articulated its commitment to a human capital development policy when it released a report entitled *Knowledge Matters: Skills and Learning for Canadians*. The report set forth the framework within which the government's Skills and Learning Agenda was to be carried out.

There are three key aspects to this agenda. First, new sources of skilled labour will need to come from among Canadians whose capacity to contribute to Canada's economic well-being has not been fully realised. Special initiatives for Aboriginal Canadians, youth, and persons with disabilities constitute part of this response. Second, the skills of immigrants to Canada⁷ are often underused or not used at all; the federal government is therefore now working with professional regulators and educational system representatives to develop standards for the recognition of foreign credentials, beginning with occupations in high demand in the Canadian labour market. Third, it is paramount that the opportunity for Canadians to pursue higher education be universal, irrespective of family wealth. To this end, the government of Canada recently announced measures to encourage families to save for their children's post-secondary education and assist them, as well as increasing funding levels available to post-secondary students in need of student loans.

Skills development initiatives

The federal response to the workplace training gap has been more muted than in other policy areas, owing largely to the government's 1996 commitment to withdraw from worker training activity outside the confines permitted under the new Employment Insurance Act (discussed above).

Although federal funding does not support training directly (other than for certain targeted groups), it does provide indirect support for subsequent training by helping partners to conduct labour market research, develop and publish career information, and develop curricula. For example, the Sectoral Partnerships Initiative provides both core and project funding for sector councils, each of which represent an economic sector. These councils bring together labour and business representatives to address human resources development issues. Research and innovation funds support government and partner projects that increase knowledge and tools in support of improved labour market integration.

The Essential Skills and Workplace Literacy (ESWL) initiative was launched on 1 April 2003. Its goal is to enhance the skill levels of Canadians who are entering – or already in – the workforce. The Initiative does this by increasing awareness and understanding of essential skills, supporting the development of tools and applications, building on existing research, and working with other government of Canada programmes. According to the ESWL website, “essential skills” are those 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.

The value of two earlier projects that are now components of the ESWL – the Essential Skills Research Project (which resulted in the identification of occupational profiles and related essential skills profiles) and the Test of Workplace Essential Skills (TOWES) – are apparent in the case studies presented later in this chapter.

Essential Skills Research Project

The Essential Skills Research Project (ESRP) was initiated in 1994 to identify the measurable, transferable and teachable skills present in virtually all Canadian occupations listed in the National Occupational Classification (NOC), the authoritative taxonomy of occupations in Canada. The NOC organises the Canadian world of work into 520 occupational groups according to skill type and skill levels, and is the framework for occupational data collection in Canada. Essential Skills researchers are profiling the 520 groups and identifying the level and application of each of nine Essential Skills for every group; in doing so they are using rigorous, consistent standards – including, where possible, skill levels adopted from existing reliable measures including

the International Adult Literacy Survey (IALS). The profiles are published on the HRSDC website. The nine essential skills are: reading text; document use; writing; numeracy; oral communication; thinking skills; working with others; computer use; and continuous learning.

To date, 200 occupational profiles have been published; the majority of those remaining are expected to be completed by 2007. The ESRP has generated two principal products now used extensively by industry partners. The occupation-specific essential skills profiles are used by industry and educational partners to set training standards appropriate to particular occupations; and the same methodology has been adapted and applied to occupations too specific to receive their own profile under the ESRP. For example, both of the diamond mines included in this study have developed and used customised essential skills profiles for occupations specific to their industry using ESRP methodology.

Test of Workplace Essential Skills

The Test of Workplace Essential Skills (TOWES) began development in 1998 under the joint responsibility of Bow Valley College⁸ in Calgary, Alberta and SkillPlan, an initiative of the British Columbia Industry Skills Improvement Council. Funding for this project came from the National Literacy Secretariat at Human Resources Development Canada (HRDC).⁹ The resulting product is a test of the three essential skills (reading text, document use and numeracy) that had been measured in the International Adult Literacy Survey (IALS) in Canada in 1994. TOWES is unmatched by other individual-level tests of literacy and numeracy skills for two reasons. First, it has been validated against IALS (and therefore also with the Essential Skills profiles) and proved to correlate very highly with it. Second, because the test materials are authentic workplace materials collected by ESRP researchers and rated for complexity, test candidates are assessed realistically for their capacity to function in actual workplaces. Of the cases being examined in this study, TOWES has been used at Syncrude and Suncor in Fort McMurray and at BHP Billiton and Diavik in the Northwest Territories to assess or screen workers for training and placement.

Provincial and territorial policy responses

A detailed summary of the skills development initiatives undertaken by each of the Canadian provinces and territories would be too extensive to undertake here. Instead, the focus is on the two jurisdictions directly relevant to the chapter, namely the Northwest Territories and the Province of Alberta.¹⁰

Northwest Territories (NWT)

The department responsible for all of the major policy initiatives in the domain of adult education, training and skills upgrading in the government of the Northwest Territories (GNWT) is the Department of Education, Culture and Employment (ECE). The strategic framework driving the government's education and training policy is captured in the report entitled *People: Our Focus for the Future* (ECE, 2000), and further developed in the *NWT Labour Force Development Plan: 2002-2007* (Government of the Northwest Territories, 2002); the latter is itself an extension of a 1997 education and training plan. The NWT plan aims to establish and promote effective partnerships and networks between various public, private and non-profit organisations in NWT, including educational institutions, the private sector and governments as well as community and non-profit organisations. The labour force development plan emphasises challenges such as enhancing the labour force participation of Aboriginal citizens in remote communities and individuals with lower levels of education, disabilities, or wellness issues (Government of the Northwest Territories, 2002).

The NWT plan integrates three mutually reinforcing components with a view to ensuring a holistic approach to education, training, career development and support services.

The first component focuses on basic education and career services ("Building a Foundation"). The *Adult Literacy and Basic Education (ALBE) Directive* was devised to address skill deficiencies stemming in part from the NWT's historically high secondary school dropout rate. Programmes derived from the Directive are focused on improving adults' access to basic and secondary-level education, but also include community literacy and other basic skills programmes, workplace literacy and training programmes, and programmes for prison inmates. Funding is focused on developing and standardising curricula, quality standards, student-centred teaching methods and baseline literacy data. The career services are complementary to the skills training and upgrading component, as they provide support services such as counselling and labour market information.

The second component of the NWT labour market development policy ("Skill Enhancement") involves both skill enhancement and employment services. This initiative's main objectives are to develop effective skills training, professional certification programmes and new occupational standards where needed. This component emphasises a collaborative and multi-sector approach to training activities, and focuses on institutional and industry training and workplace learning. In NWT, institutional training is offered primarily at Aurora College's three campuses and twelve community centres.

The third component (“Supporting Change”) consists of income and personal support programmes. These include a variety of labour market information activities, such as the NorthWin web site, to match employers and jobseekers. GNWT provides direct financial support to individuals ineligible for Employment Insurance support who are pursuing skills upgrading, through the NWT Income Assistance Programme and the Community Skills for Work Programme.

Province of Alberta

Alberta’s low rate of unemployment and growing petroleum sector have created a regional skills shortage in numerous occupations, including many directly related to oil extraction and refining. While the province has had a degree of success in attracting skilled workers from other parts of Canada, skills shortages remain and are expected to grow in some regions, particularly in the oil-rich region around Fort McMurray, commonly referred to as the oil sand region. According to government officials, the oil sand’s development has been slowed in recent years because of a lack of workers in the construction trades. There is also a concern that the neighbouring province of British Columbia (BC) may draw away many construction workers from Alberta to work on projects associated with the 2010 Winter Olympics. Estimates suggest that as many as 75 000 workers will be needed in BC for Olympics-related construction projects.

The government of Alberta’s Skills Investment Strategy, unveiled in October 2003, is designed around four core functions: to provide career information and resources to all Albertans (“Career Information”); to support basic skills training for low-skilled individuals not working (“Work Foundations”); to train low-income members of the labour force in job and self-employment skills (“Training for Work”); and to support projects with organisations, employers and communities to help prepare them address skill shortages (“Workforce Partnerships”).

Alberta Human Resources and Employment (AHRE) is trying to shift some of its spending targeted at low-income and unemployed Albertans from adult academic upgrading to skill/occupational training. According to a government official, the thinking is that people can get into the workforce more quickly by taking training in a skill shortage occupation (e.g. trades) than by enrolling in a traditional academic programme.

Case studies from the Northwest Territories

The local labour market

The two case studies presented here, Diavik and BHP Billiton diamond mines, are situated near the city of Yellowknife in the Northwest Territories.

The city, the mine sites, and affected communities are situated in the North Slave and Fort Smith regions of the NWT. Much of the labour market information given below is for the Fort Smith region, which occupies the southern half of the Northwest Territories (NWT), and has a population of approximately 29 000 and an area of 618 000 square kilometres (see map in Appendix 6.A1).

The 2001 labour force participation rate in the NWT was 79%, a rate that has remained stable since 1996. The employment rate was 69.5% in 1999 and increased to 72.3% in 2001, while the unemployment rate declined from 12.2% to 8.6% over the same period. The majority of the labour force was employed in health, education, sales, business, finance, administration and other services.¹¹

In 1999, of the 5 158 NWT adults who were unemployed: 77% were mainly people of Aboriginal ancestry; most lived in small NWT communities; and most had lower levels of formal education than the general population. Although they are improving, employment rates in the NWT for Aboriginals continue to be lower than for non-Aboriginals.

The population of the Fort Smith Region is educated at levels close to those of the Canadian population as a whole. Between 1991 and 1999, the proportion of Fort Smith residents aged 15 and over with less than a secondary school diploma dropped from 37.1% to 28.8%, while the proportion whose highest level of education is a high school diploma increased from 9.7% to 21.5%, exceeding the Canadian average of 14.1%. A growing proportion of the Fort Smith population is university educated: 15%, just shy of the 2001 national rate of 15.8%.

Aboriginal adults have lower education levels than non-Aboriginal people of working age. Over one-quarter of NWT Aboriginal adults have less than grade 9 and 29% have not completed high school. According to a NWT Literacy Council research project, 66% of Aboriginal adults do not have the literacy skills needed for daily living (IALS level 3) compared with 31% of non-Aboriginal adults.

Both diamond companies have signed socioeconomic agreements with the government of the Northwest Territories and local Aboriginal groups to meet employment and training targets. These agreements exist to ensure that residents of the Northwest Territories are able to benefit directly from the economic activity of the diamond mines.

For example, BHP Billiton signed a socioeconomic agreement in 1996 with the government of the Northwest Territories in which the company committed to according hiring preference to “Northerners” and Northern Aboriginals. Northerners are defined as permanent residents of the Northwest Territories. The company has a hiring target: Northern Residents (Northerners) should make up 62% of its workforce. Northern Aboriginals

must comprise a minimum of 50% of the Northern Resident hiring target. In other words, Northern Aboriginals must make up at least 31% of the total workforce.

Similarly, Diavik signed a socioeconomic agreement in 1999 committing it to having at least 66% of its total workforce comprised of Northerners. It is also expected that at least 40% of the operation's workforce will be Northern Aboriginal, which means Northern Aboriginals will account for 60% of the Northerner hiring requirement. Diavik has also signed participation agreements with five Aboriginal groups in which the company has made extensive commitments to training, employment, business opportunities and scholarships (college and university).

Meeting these hiring targets can pose a challenge for both BHP Billiton and Diavik, given that the NWT has a population of only 42 000. Aboriginals make up half the population of the territory.

Another unique feature of these cases is the remoteness of the operation of both diamond mines. Both mines are located approximately 300 kilometres northeast of Yellowknife and, except for a short period when a winter road to them exists, they are only accessible by air. Air transportation between Yellowknife and the respective mine sites is paid for entirely by the diamond companies. These are the first paying jobs many of the Aboriginal workers in the diamond mines have held, a fact stressed in several interviews. Moreover, English is the second language to many of these workers.

BHP Billiton Diamonds Inc.: implementing the Workplace Learning Programme

BHP Billiton (BHPB) operates Canada's oldest diamond mine at its remote Ekati Diamond mine site, located approximately 300 kilometres northeast of Yellowknife, the Northwest Territories. Construction of the mine began in 1997 and mining in 1998. The mine currently employs approximately 750 workers and operates 24 hours a day, 365 days a year. Employees work 12-hour shifts, seven days a week, on a 2 by 2 shift rotation with two weeks on (onsite), and two weeks off (off-site).

In response to the low levels of literacy among a substantial proportion of the region's labour force (NWT Literacy Council, 2004), BHPB developed the Workplace Learning Programme (WLP), an onsite workplace literacy training programme geared towards literacy-skills upgrading. The programme focuses on teaching the essential skills of reading, writing, numeracy and oral communication. Individuals in the WLP can range from those working on pre-literacy programmes to those focusing on pre-apprenticeship.

The WLP was developed to assist the company in achieving its Aboriginal hiring commitments as well as in ensuring a safe and productive workforce.

Given that approximately 30% to 35% of the mine's Aboriginal employees struggle with reading simple documents (Schierbeck and Devins, 2002), literacy skills upgrading, particularly for new hires in entry-level positions, is a key component of the WLP. In addition to the core literacy upgrading component, the WLP offers pre-trades and apprenticeship preparation classes, and there are also structured classes and support for workers who wish to complete their high school equivalency diploma.

The WLP is available to all employees and BHP contractors who wish to upgrade their skills. Participation in the programme is voluntary and confidential. The WLP was officially launched in 2001, and by 2004 approximately 140 employees had completed the programme. In 2004 some of the original learners were still in the WLP, as they were at very low literacy levels. Others successfully passed the GED (high school equivalency exam): 18 in June 2004. Approximately 15 learners successfully took pre-trades examinations and moved on to apprenticeship programmes. Another group of learners accessed the WLP for assistance while doing their apprenticeship training and completed their trades training to become Journeyman Ticketed Trades people.

Operation of the WLP is funded by BHP Billiton, and the annual budget is approximately CAD 450 000. This amount includes three adult educator¹² salaries and benefits, computer resources, book resources, materials, mine site flights to and from Yellowknife, and accommodation and food for the adult educators. The government of the Northwest Territories provided a small amount of funding towards part of the salary of the pre-trades adult educators in 2004 and a slightly larger amount in 2003.

The company generally grants work-release paid time to attend the WLP, although sometimes students participate on their own (unpaid) time. The programme is primarily focused on onsite learning at the mine site in either a small group setting or through one-on-one tutoring with an adult educator. However, workers are also encouraged and supported to continue their learning when they return to their home communities on their two weeks off.

BHPB worked with Bow Valley College to develop customised essential skills profiles for four entry-level occupations (maintenance technician, process plant operation assistant, warehouse technician; and heavy equipment operator). The company and college also worked together to develop customised versions of the Test of Workplace Essential Skills (TOWES), called "Pre-Assessment TOWES". These are used to identify the gap between the skills required for a job and an individual's skill level. The WLP adult educators use the customised assessments to establish a student's workplace literacy skills, and then develop a learning programme for that individual worker. Pre-Assessment TOWES is used by BHP not as a screening

tool, but rather as an assessment tool. BHPB covered the full cost of developing the four customised essential skills profiles and customised Pre-Assessment TOWES tests with Bow Valley College.

A unique feature of the WLP is that the adult educators conduct job shadowing with their students, going out into the field with them to see how they apply their learning on the job. For example, heavy equipment operators are required to write frequent entries in logbooks as they move throughout the mine site, recording information on where they picked up a load, what its contents are, and where the load is destined. By shadowing these employees, the adult educators are able to see where literacy skills are used in the job, assess how well a student is progressing, and determine where they might need further help.

Supervisors have identified positive outcomes from the skills upgrading initiatives, such as increased self-esteem and participation among workers, a greater willingness to co-operate, and a safer working environment.

Several factors have contributed to the early success of the WLP; one was support from the company's top management. The CEO of BHP Billiton took a strong position in supporting skills upgrading with paid work release time to participate in the WLP. He felt that without paid release time, the WLP would never have been a success. Early stakeholder involvement in the programme's design and launch was noted as a further key to success. A deliberate effort was made to obtain a buy-in from both management and employees prior to the launch. For example, crew presentations were made at the mine to inform workers about the WLP and to emphasise that participation was entirely optional and would not figure in any subsequent employee evaluation. The adult educators also seek input from stakeholders in developing the curriculum and courses. Additionally, team leaders regularly give feedback on the programme and what progress they see in the participating workers. This allows the programme to continually evolve to meet training needs of both the company and individual employees.

Another key to success noted during the interview was the fact that the programme curriculum is customised for each student based on their individual assessment with the adult educators. The job shadowing of the adult trainers with students in the field has also helped further customise the training for individual workers.

Despite its notable success, a number of challenges in implementing and running the WLP were identified by a BHP Billiton adult educator. One is the fact that basic literacy programmes are not common in most workplaces. The company has thus had to create the WLP from scratch and continues to adapt it to meet changing needs. Another challenge is recognising that for some there is a stigma around low literacy. Given the close quarters at the mine site, it can be

somewhat difficult to maintain confidentiality of a students' participation or progress in the WLP. Furthermore, the split schedule of two weeks onsite and two weeks off is noted as a challenge in operating the WLP. This schedule means the adult educators have limited time with some workers and only certain windows to work with students before they have gone home again. This can sometimes interfere with an individual's programme development or progression.

In running a programme like the WLP, a continuous challenge is to balance the training needs of the students with the need to run the mine. Even though there is a great deal of management support for the WLP, it is understood that BHP Billiton is a mine and not a school. Although the company is accommodating in terms of release time for workers to participate in the programme, there is recognition that safety and production concerns at the mine must override WLP training needs.

Finally, the popularity of the WLP has resulted in a waiting list of employees who wish to participate. Yet the number of students who can participate in the WLP at any point in time is limited by the fact that there are only three adult educators at BHPB and with the 2-weeks-on/2-weeks-off schedule, all three may not be onsite at the same time. Until a full assessment of the WLP is conducted, it is difficult to assess whether students are moving through the programme at a sufficient speed or whether hiring more adult educators might be needed to address the backlog.

Diavik Diamond Mines Inc. – combining community-based training with an onsite learning centre

Diavik Diamond Mines Inc. (DDMI), based in Yellowknife in the Northwest Territories of Canada, is a subsidiary of Rio Tinto plc of London, England. DDMI operates the Diavik Diamond Mine, located on a 20 square kilometre island informally called East Island, in Lac de Gras, approximately 300 kilometres northeast of Yellowknife. The Arctic Circle is located 220 kilometres north of the mine.

Diamond production at the mine began in 2003, and the ore will be extracted over an estimated 20-year mine life. The plan includes mining of four diamond-bearing ore bodies, commonly called kimberlite pipes, using a combination of open pit and underground mining methods. To support diamond mining, the Diavik site includes a permanent worker accommodation complex, a processing plant, maintenance shops, a diesel power generating facility, fuel storage, a jet airstrip, water and sewage treatment facilities, and a processed kimberlite containment structure. The project capital costs were nearly CAD 1.3 billion and the mine currently employs approximately 700 workers.

Three key skills initiatives have been examined for the purpose of this study. One is geared toward building capacity in the local community by upgrading the skills of the local population through community-based training programmes. The second initiative focuses on how Diavik works to provide skills upgrading programmes for its workforce, mainly at entry-level positions, through its own company learning centre. Finally, the section looks at how the essential skills programme has been taken up by Diavik.

Community-based training programmes

Diavik's unique community-based training programmes were designed to offer northerners opportunities that will prepare them for long-term employment with Diavik or with other northern-based businesses. The main idea behind them is to build capacity in the local communities that can be moved into the company workforce, i.e. skills that Diavik and other employers need to build and operate their business.

The motivation for community-based training largely stems from the socioeconomic and participation agreements noted earlier. To support its employment commitments and meet its human resource requirements, Diavik works to upgrade the skill levels of the local communities from which its potential workforce is drawn. The company helps develop community-based training programmes through partnerships with local communities, territorial and federal governments, Aurora College, contractors, and other educational institutions.

Training includes a combination of classroom study and hands-on instruction. The classroom component teaches basic academic and personal skills development by qualified adult educators. The hands-on training component has included training in construction-related activities such as welding, carpentry and electrical and plumbing skills. It has also covered heavy equipment operation.

One of the key elements of Diavik's programmes is to train participants for projects that would benefit the community. Students have worked on a variety of community infrastructure projects, such as building a bridge and community halls.

Community-based training programmes have evolved to meet the needs of the Diavik operations. Recognising the demand for employees to help build the mine, the first programmes were geared at building construction skills. Diavik's construction training courses produced 234 graduates – a 77% success rate. Of these graduates, 70% moved on to employment at Diavik, with other mines, or with the local government. As the diamond mine has moved from the construction phase to operations, the focus is now on training northerners

for safe and productive employment within the mine and teaching the skills necessary to operate the specialised equipment onsite.

Community-based training not only provides northerners with the technical skills they will need in future jobs at Diavik, but also focuses on building essential workforce skills. Students are taught the importance of teamwork and how it is crucial for success in the workplace. The training programmes are designed in such a way that students must learn to work together and accomplish tasks as a group – something that would be required when working at the Diavik mine. Students also work on reading and writing skills, which are of prime importance for safety in the workplace.

Moreover, the idea of shift work was introduced into the communities through community-based training. The Diavik mine runs on a 2 by 2 shift rotation (2 weeks onsite, 2 weeks off), with 12-hour shifts, 7 days a week, 365 days a year. This same shift routine was incorporated into the training programme model. Students work two weeks in a classroom setting and two weeks on the practical component. This helps them become familiar with working the same shift schedule they would have at the Diavik mine.

For many in these northern communities, jobs at Diavik (as was the case at BHP Billiton) are the first paid jobs they have held, which has influenced the skills upgrading required. Diavik has built a system through these programmes that has proved most effective in meeting its social obligations and workforce needs at the same time.

Diavik managers that were interviewed for this study attribute the success of the community-based training programmes to a number of factors. Bringing the training to the communities allowed Diavik to build relationships and trust where it would ultimately be seeking its current and future workforce. This community mobilisation was a tool to make northerners aware of what working in a mine is about. The communities have taken ownership of these courses and now approach Diavik to help in course delivery.

Furthermore, it was found that the community benefits from having something constructed that will be used by residents (*e.g.* a community centre, a road, or an arena), and students benefit by learning skills they can take with them to a future job. There is a direct link between the skills developed in these programmes and those required at the Diavik mine site, and the strong skills match allows programme participants to take advantage of jobs there or elsewhere.

The company has noticed that hires that were originally part of a community-based training initiative have generally done better in the workplace in terms of fitting in and working well with others. This is largely attributed to the teamwork emphasis of the community training and to the fact that students have been exposed to the necessary workplace skills.

Partnerships are also seen as a key factor. The company attributes much of the success of these initiatives to its various partners such as Aurora College, corporate partners, government, and the communities themselves. Each partner has provided varying amounts of time and funding to specific community-based training programmes. The company notes that communities are now approaching Diavik for new projects: they have raised the funds themselves and have asked Diavik to promote the programme for them.

Diavik's Workplace Learning Centre

To address the training needs of its employees, Diavik operates a Workplace Learning Centre (WLC) at the mine site. There, two adult educators assist workers in developing training plans or upgrading programmes. The WLC is now in its second year of operation. Workers can upgrade math, science, and computer skills and they can also take a high school equivalency exam (the General Equivalency Diploma – GED), trade apprenticeship exams and college/university exams, all onsite. Diavik pays the entire cost of running the WLC. In the first year of the WLC's operation, the annual budget was CAD 60 000. In year two, the company has budgeted CAD 100 000 to run the centre (a 67% increase over year one). These annual budget figures do not include the cost of the two adult educator positions.

A unique feature of Diavik's approach to employee skills upgrading is that learning does not end when the workers return home (as part of the 2-week onsite, 2-week offsite rotation). Diavik has developed a system that allows for workers to continue their training in their community during their two weeks off each month. The company works with local communities and with Aurora College's satellite community learning centres, which are in many northern communities, to ensure that learning can continue when an employee returns home to his or her community. The idea is to have a learning centre in each community.

Managers at Diavik attribute the early success of the Workplace Learning Centre to several factors, such as support from senior management at the mine. This support has translated into release time for employees to participate in the WLC programmes, although it should be noted that there is no official company policy with regard to release time. Therefore, the centre must constantly show that it is adding value to maintain the support it has received thus far. As one manager noted, a goal is to have the WLC seen to be so valuable in the company that managers are more willing to offer release time for employees to attend programmes and workshops.

Additionally, managers noted that they had undertaken substantial research on skills upgrading to gather information about provision. They had

talked to other organisations that had their own initiatives in place and found out about their successes and failures. The company also has made a deliberate effort not to aggressively push the programme but to rely on word of mouth of employees. Managers also coach mine supervisors to encourage employees to use the programmes offered, and the company celebrates its successes whenever it can.

It is too early to assess the long-term impact of the Workplace Learning Centre (WLC) on the skill levels of employees, given that it is only in its second year of operation. However, the company has been making adjustments to the programme as it moves along. One of the key challenges in running the WLC is maintaining credibility and ensuring that the centre is seen as adding business value to the organisation. As such, the centre has recently repositioned itself “from a community centre to a learning centre”. For example, the WLC used to offer classes in activities such as painting and beadwork. The company has removed them and hired two onsite recreation co-ordinators to look after these types of non-business development and recreational activities. It is constantly made clear that the mine is a place of business and not a college. Managers of the centre note that they must focus on what is essential for workplace development to meet the company’s business and safety needs.

Piloting a customised essential skills programme at Diavik

Diavik recognises the importance of developing the essential skills of its workforce to meet its operational needs, and for workers to be safe and productive at the mine site. Safety is a key motivator in developing essential skills of the mine workforce, particularly for those with low levels of literacy. The importance of safety was noted frequently by several managers who were interviewed; it is an issue that is continuously reinforced in operating the mine. Again, reading and writing skills are seen as key elements in workplace safety.

Recognising the low levels of literacy in the workforce, particularly for those in entry-level jobs, Diavik began a programme that focuses on skills upgrading for low-qualified employees. The company noted that it did not want a literacy programme *per se*, but rather wanted value added knowledge for employees. In response, Diavik partnered with Bow Valley College in developing customised essential skills profiles in four entry-level positions seen as critical to operations: heavy equipment operator; warehouse technician; site services operator; and process plant operator. This profiling work was conducted by specially trained consultants well versed in the same profiling methodology used by HRDC in the development of the Essential Skills Research project (noted earlier). These customised profiles were used to develop customised versions of TOWES tests. Using this assessment tool, the

adult trainers at Diavik are able to identify gaps between workers' skills and the skills required to be effective and safe on the job. They are then able to determine the most effective interventions for the individual workers and provide that training. The costs of developing the customised essential skills profiles and TOWES tests with Bow Valley College were paid for entirely by Diavik.

It is important to note that Diavik, like BHP, chose not to use essential skills assessment tools to pre-screen potential employees (contrary to the case studies in Fort McMurray, Alberta discussed later in this chapter). For these two employers, building a skilled workforce requires that the TOWES tests be used as the basis for designing skills upgrading activities, not as a screening tool. Employees hired for the entry-level positions are largely hired on the basis of their attitude, previous work experience, and work ethic rather than their educational background or literacy skills. The company recognises that they have to accommodate the workforce available to them, as well as their current skill set, to fill the jobs they have available.

Use of the customised essential skills profiles and TOWES tests as an assessment tool began as a pilot in early 2004; approximately 46 employees have participated in the pilot so far. New entry-level hires participate in one-on-one sessions with the Diavik adult educators, who assess their skill level and develop a customised training path for their specific needs. The literacy training for some students can indeed be intensive depending on their current literacy level – some students have six hours of training per day. Management supports this initiative by giving students time off to participate in training during their shift.

Although the programme was still a pilot at the time of the interviews for this case study, the company has already seen skills improvements in many participants. Prior to participating in the programme, only 20% of the pilot students had passed their first reading test, conducted through a computer based test (CBT). After the pilot students completed their one-on-one training with an adult educator, almost all of them (97.7%) passed this same CBT reading test.

An interview with one of the students who participated in the pilot revealed how successful it had been to him personally – not only with improving his literacy skills but also in terms of building his confidence and self-esteem. This student found that his training had made his job easier, faster and – more importantly, perhaps – motivated him to want to learn more.

The pilot using the custom essential skills profiles and custom TOWES tests has been deemed such a success that the company is now developing a full programme based on the pilot. The key to success appears to be the ability

to develop a custom training map for each individual student to meet their particular development needs.

A lesson learned in developing this pilot is that some of the computer-based training (CBT) reading courses that were being used by Diavik in the Workplace Learning Centre were too advanced for the literacy levels of many entry-level workers. These CBT courses are now being adjusted and customised to the reading levels of the workers who use them.

Both diamond companies in the Northwest Territories invest heavily in upgrading the essential skills of many of their employees even though there is competition between these two companies (as well as among other employers in the area) for employees. The diamond companies acknowledge that poaching by other employers does occur and that another organisation may benefit from the skills upgrading they have provided. However, employee turnover or poaching was not cited as a major issue by either of the companies interviewed. It would seem these companies have little choice but to continue with their skills upgrading initiatives in order to meet the social obligations of their socioeconomic agreements (including hiring quotas) with the territorial government. At the same time, there is also the need to have a skilled and literate workforce to meet operational, business and safety needs. With a third diamond mine, De Beers Diamonds, set to begin mining operations in 2005/2006, the competition for employees will continue to grow. As one stakeholder at Diavik suggested, each of the diamond companies will have to focus on skills upgrading while striving to be an employer of choice.

Case studies in the Province of Alberta

The local labour market

The majority of the case studies examined in Alberta are located in the city of Fort McMurray in the northern part of the province (see map in Appendix 6.A2). Alberta has the world's largest oil sand deposits, and the region surrounding Fort McMurray has seen rapid growth in recent years.¹³

With an employment rate at 77.5% and unemployment at 4.9%, the region around Fort McMurray performs slightly better than the totals for Alberta (69.3% and 5.2%, respectively) and significantly outperforms the Canadian figures of 62.5% and 7.4%.

Unemployment rates are higher for Aboriginals in Alberta than for the general population. In 2003, the unemployment rate for Aboriginals living off-reserve in Alberta was 10.7% compared to an overall unemployment rate in Alberta of 5.5% (Alberta Human Resources and Employment, 2004).

The labour force of the Fort McMurray area is comparatively young, with a median age of 30.8, compared to a provincial median of 35; 76.7% of

the Fort McMurray population is younger than 45, compared to a provincial rate of 67.3%.

The level of education of working age residents of the Fort McMurray area is improving: between 1991 and 1996, the proportion of those aged 15 and older with less than a grade 9 education dropped from 9.6% to 6.2% of the population, while the proportion of those with some kind of post-secondary education increased from a 1991 level of 52% to 55.8% in 1996 (Statistics Canada, 1994; 2004g).

Aboriginals in Alberta have lower post-secondary education levels than the general population. In 2003, only 22.9% of off-reserve Aboriginals in Alberta aged 15 to 64 completed some kind of post-secondary education (Alberta Human Resources and Employment, 2004).

The education levels of Fort McMurray's working age population are compressed relative to national levels, with 22.3% aged 20 and older with less than a high school diploma compared to the national average of 27.9%. Nearly 13% have a high school diploma but no additional education (compared to 14% nationwide). On the other hand, post-secondary education is concentrated among trades, college diplomas and other non-university education; 47.9% have non-university postsecondary education, compared to 34.3% of the national population. By contrast, 11.2% have a university degree as their highest level of education, compared to 13.8% nationwide (Statistics Canada, 2004h).

The case studies presented below focus largely on the skills upgrading initiatives of oil companies, Syncrude and Suncor, located in Fort McMurray, Alberta. It is noteworthy that these two companies use the Test of Workplace Essential Skills (TOWES) differently from the case study companies in Yellowknife: customised TOWES tests are used as a recruitment screening tool for specific entry-level positions rather than as an assessment tool. Both oil companies also require all applicants to have a minimum grade 12 (high school) diploma.

The sharply different labour market in Fort McMurray is likely a key reason for the different approach. The oil companies received hundreds of applications a week from individuals seeking employment, and they needed a system to filter the huge number of applicants to ensure they had the sufficient skill levels required for specific jobs. Keyano College (in Fort McMurray) and Bow Valley College worked together to develop the customised TOWES tests at both oil companies. While the tests are based on the local labour market needs of these companies, they are also consistent with national occupational standards. Both Syncrude and Suncor paid for the cost of their customised essential skills profiles and TOWES tests.

It should be noted that some stakeholders in Alberta did not agree with the approach of using TOWES test scores as a screening tool for hiring. Some felt that the test may screen out qualified and even highly skilled candidates who simply did not perform well on the test. In Yellowknife, stakeholders noted that the local labour market would not respond well to any perceived “employment test” and therefore have not used TOWES as a screening tool – nor do they intend to do so.

Syncrude Canada Ltd – emphasising workplace literacy and numeracy

Syncrude is the world’s largest producer of crude oil from oil sand and the largest single source producer in Canada, currently supplying 13% of Canada’s annual oil requirements. It operates large oil sand mines, extraction and upgrading facilities, and utilities plants at its sites north of Fort McMurray, Alberta. Construction began on the Syncrude site in 1973; the official opening was in 1978.

Syncrude is one of the largest private sector employers in Alberta, employing approximately 4 000 people directly and an average of 1 000-1 500 maintenance contractor employees. Syncrude is also a major industrial employer of Aboriginal people in Canada. Aboriginals make up 12.5% of its employee/contractor workforce.

Syncrude has long recognised that its business success is dependent on a committed, skilled, and motivated workforce. The company has spent over CAD 23 million on training initiatives and has become a leader in developing the essential skills of its employees. Essential skills training has been a major focus of the company as noted in the quotation from the former head of Syncrude:

Essential skills training ensures that Syncrude employees have the skills and confidence required for today’s workplace, and that we are prepared to meet the challenges of the future (Eric P. Newell, Former Chairman and CEO Syncrude Canada Ltd).¹⁴

The Syncrude mine sites are very large industrial operations involving huge capital equipment and requiring a highly reliable workforce. At the same time, the importance of safety in the workplace is paramount at the mine sites. The company therefore needs a workforce that is literate, numerate and flexible, and workers that are able to communicate effectively with each other.

In the late 1980s Syncrude recognised that there was a need to increase literacy skills among its workforce. In 1987, Syncrude partnered with Keyano College in Fort McMurray to develop, manage and deliver a workplace literacy programme called ERIC (Effective Reading in Context). After several test pilots with supervisors at the company, the programme had its official kickoff in 1988

and is still in place at Syncrude today. Since its launch, the ERIC programme has had over 1 500 participants.

ERIC, promoted as a “workplace essential skills reading comprehension programme”, is offered to all Syncrude employees free of charge and is strictly voluntary and completely confidential. The reading workshops are offered away from the Syncrude mine sites at the Keyano College campus in Fort McMurray. Having the programme offsite in a college setting was a deliberate decision by the company to emphasise the confidential nature of the programme. Participants are also given orientation sessions at the campus to make them feel more comfortable and to familiarise them with the surroundings.

The programme is delivered by instructors from Keyano College. There is no testing of programme participants. Instructors conduct confidential one-on-one consultations and assessments with participants and then decide on a 12-, 28-, or 40-hour workshop. The choice of which workshop to participate in is generally left to the discretion of the individual, depending on their needs and time availability as well as on feedback from the instructors. The workshops are conducted in small group settings with up to eight participants per group. The use of small groups is cited as a key strategy, since group members are found to be very supportive of each other as they move through the workshops.

Syncrude gives employees release time to participate in the workshops. The workshops are generally offered during working hours, so workers are paid while attending the classes during company time. However, there is a lot of give and take by both the employees and the company. For example, if a workshop happens to fall on an employee’s day off, then they are still expected to attend but are not paid for this time. Also, if an employee is scheduled to work a night shift the day a workshop is offered, then they are often able to switch to a day shift so they are able to attend the workshop during working hours. This give-and-take approach has been recognised as a key factor in the success of the programme.

A unique and important feature of the ERIC programme is that participants themselves identify the materials they would like to work with in the workshops. The reading materials used in the programme are authentic workplace materials that employees would encounter. The customised workplace examples and exercises allow participants to see the connection with what they are learning in the classroom and how to apply this learning directly to their jobs. It is recognised that participants are adult learners and have a wealth of workplace knowledge that they bring to the table. They too are partners in developing the programme content. ERIC is fully flexible and can be customised for different groups with specific needs. The content is

adjusted so that it is relevant and practical in the workplace. For example, the content used in an ERIC workshop for a group of Syncrude engineers would be quite different from the content for a group of heavy equipment operators. Hence, participants learn reading strategies that they can apply immediately to materials they encounter each day in their jobs.

Apart from essential reading skills, management at Syncrude recognised a need to further develop the math skills of its employees in the 1990s. Once again, Syncrude partnered with Keyano College in developing and launching SAM – Syncrude Applied Math – in 1997.¹⁵

SAM is promoted as “a workplace essential skills math programme”, with customised workshops designed to include examples and exercises of relevant workplace math requirements. The SAM programme follows the same model as the ERIC programme, i.e. it is voluntary and confidential. SAM is offered to all Syncrude employees free of charge and the courses take place at Keyano College in small groups of up to eight participants.

The ERIC and SAM programmes are intended to help employees learn important reading and math skill strategies that will make them more flexible and adaptable workers in a continuously changing workplace.

As part of this study, interviews were conducted with a group of Syncrude employees who had participated in the ERIC or SAM programmes. Everyone in the group saw participation in these programmes as a positive experience, and considered what they learned invaluable in their work.

The group indicated that the benefits of ERIC and SAM are more than just learning strategies around reading and math – they are also about confidence building. Many also noted that the programmes helped with their personal growth and had increased their self-esteem. Some employees indicated that ERIC or SAM had helped them prepare for exams related to their jobs.

All indicated they would recommend ERIC or SAM to their colleagues and the majority had done so. Support by their supervisors to participate was cited as a key to their succeeding in the programme, and workshop participants liked the fact there was no testing to participate. All commended the instructors and noted they were key determinants in the success of the programmes. Some felt that a computer-based version of these programmes would likely not be as successful as the one-on-one instruction with the group and that instructors are what make the programme work.

The full cost of developing and running the ERIC and SAM programmes for Syncrude employees was paid for by the company.¹⁶ Keyano College develops customised ERIC and SAM programmes for other organisations on a cost recovery basis. The cost for adapting ERIC/SAM by Keyano College varies, but a recent adaptation of ERIC for a health organisation cost approximately CAD 22 000. This includes two pilot workshops, advisory committee meetings,

and course materials and promotion, and instructors' salaries. The substantial costs of adapting and maintaining programmes such as ERIC or SAM may mean that many organisations, particularly SMEs, may not be able to afford to adopt these types of skills upgrading initiatives in their workplaces.

A key to success appeared to reside in the fact that the company deliberately chose to make the programme voluntary and confidential. Also, the programmes have not been aggressively marketed within the company; rather, the strategy has been to rely on word-of-mouth promotion from workshop participants. Keyano College also regularly sends messages to all employees via email when new workshops are scheduled, and posters of upcoming workshops can be found on employee bulletin boards throughout the workplace. The decision by the company not to aggressively market their ERIC and SAM programmes is largely attributed to the fact that there is still a stigma around literacy and numeracy training.

Moreover, the content of the workshops is customised to participants and relevant to their workplace. The curriculum for ERIC and SAM is based on printed materials that participants use in their jobs and is therefore something they can begin to use immediately when they return to work.

Interviewees also attribute the success of Syncrude's skills upgrading initiatives to the fact that the programmes are continually adapting and changing. As described by one ERIC instructor, this is "a living programme" with flexibility that allows for continual adjustment to the needs of each workshop group. The content of the workshops may change but the learning strategies remain the same.

As with many successful initiatives, having support from the top within Syncrude – its former CEO – was also mentioned as a key to success.

The number of employees who have participated in ERIC since its launch is substantial. However, there is evidence that those needing the programme (and SAM) may exceed the numbers that have been entering. The fact that the company does not aggressively promote ERIC and SAM is seen as somewhat of a barrier by some: participants noted that many employees are simply not aware of these programmes, and this group could include employees who may benefit most. However, information on all training opportunities (including the ERIC and SAM programmes) is available on the company Intranet if an employee chooses to seek it out. It seems to be up to employees to find out what training opportunities are available to them. Some indicated that they wish they had taken these courses sooner but did not always know they were available; others suggested that there may be a need for more aggressive marketing of the programmes. For example, some suggested that Keyano College (which runs the ERIC and SAM workshops for Syncrude) should

consider more customised *marketing* of the workshops, aimed at specific groups of employees within the company.

Moreover, since participation in these programmes is voluntary, supervisory support for time off is not always guaranteed. Some employees noted that if their supervisor had not been willing to grant time off for participation in the workshops, they would not be able to avail themselves of the training.

Despite the barriers noted above, the ERIC programme has been seen as such a success in developing essential skills in the workplace that it has been brought to industry sector councils, and is integrated into the curriculum of a local high school English class. The promotion of ERIC and SAM in other sectors had largely been through the efforts of AWES (Alberta Workplace Essential Skills), which will be discussed later in this section. Syncrude owns the copyright for ERIC, and Keyano College delivers the programme and adapts it for different settings.

Finally, it is important to stress that all Syncrude employees must have a high school diploma. Therefore, those employees who participate in the ERIC and SAM programmes are arguably not the “low-qualified” workers that we have seen in other cases in this study. However, the company has recognised that its workforce needs to continue to develop essential skills, and sees these programmes as a way for those they hire to succeed in their jobs.

Suncor Energy Inc. – combining standardised and customised training

In 1967, Suncor Energy Inc. (Suncor) pioneered commercial crude oil production from Canada’s Athabasca oil sand in Northern Alberta by producing the first commercial barrel of synthetic crude oil. Suncor is now a major North American energy producer and marketer. The company has four business divisions in Canada and the United States, and has over 4 000 employees. The focus of this case study is Suncor’s operations in Fort McMurray, Alberta, where Suncor mines and extracts crude oil from the Athabasca oil sand deposit. Suncor is one of the largest private sector employers in Alberta. The company is also experiencing strong growth as crude oil production is expected to grow well into the next decade. IT’s capital spending plan for the next few years is expected to average between CAD 1.5 billion and CAD 1.7 billion; most of this money is to be spent in the Province of Alberta.

ERIC pilot with Suncor Union

In 2003, the union at Suncor invited Keyano College to run a pilot of the ERIC (Effective Reading in Context) workshop for some of its members. ERIC was first offered to CEP Local 707 (the Suncor union) shop stewards and

executive and safety representatives. The cost of this pilot workshop was paid for fully by the union.

Participation in the pilot for was voluntary and there was difficulty at first in getting a sufficient number of volunteers. This was attributed to an aspect heard in the cases described above: there is still a stigma around literacy training.

According to the union president, the reaction by workshop participants has been entirely positive. Participants in the pilot noted they had learned new techniques to gather information more quickly, and several had said it had a positive impact on their work. The president also noted that the union had deliberately chosen union leaders for the pilot, as it might later need this same group to sell the programme if it were initiated on a larger scale.

The cost of the ERIC programme was cited as the key barrier to expanding it further within the union or Suncor in general. Since there is no government funding for delivery of the training, most companies will want to see a strong business case for implementing programmes like ERIC before making the investment.

Aboriginal initiatives at Suncor

Suncor actively recruits Aboriginal people for employment with the company. In 2002, at the company's oil sand operations in Fort McMurray, Aboriginal employees accounted for approximately 10.8% of the workforce, just shy of the target of 12%. This was up sharply from 1997, when Aboriginal employees accounted for only 2.3% of the workforce.

The company also supports Aboriginal business ventures and education. In 2004, Suncor expects to issue contracts to Aboriginal-owned and -operated businesses worth about CAD 50 million. The company invests in Aboriginal education and skills upgrading through scholarships/awards to students who pursue studies relevant to Suncor's operations.

Suncor is also trying to bring awareness of job opportunities in the oil sand to younger Aboriginals. An interesting initiative by the company involves using "ambassadors" as part of its outreach to the local Aboriginal communities. The ambassadors are young Aboriginal Suncor employees who go into local high schools and talk to students about their jobs, how they got to be where they are today, and what skills and education they needed to get there. It is hoped that the ambassadors will encourage the students to graduate from high school if they see the success of fellow Aboriginals and future job possibilities.

It should be noted that this idea of "changing what people see" also figured in the earlier case studies in Yellowknife.

The Shapotowak programme: a local partnership to upgrade the skills of Aboriginal workers

Many companies in the Fort McMurray area – as in the Northwestern Territories – have Aboriginal hiring goals, and programmes in place to help develop the skills of the local Aboriginal workers and communities. The Shapotowak Programme provides an interesting case study of such an initiative.

The company 2000 Plus identified a need to get more of its young Aboriginal employees involved in skilled trades. 2000 Plus is a contractor to Syncrude and is owned by the Mikisew Cree First Nation of Fort Chipewyan, Alberta. It provides Syncrude with casual labour, grounds-keeping services and labour support for its maintenance shutdowns. As noted earlier in the chapter, there is great demand for skilled technical trades personnel in the Wood Buffalo Region (Fort McMurray), and advancement within the local economy requires a solid foundation in basic education and workplace skills.

Shapotowak is a pilot programme set up as a partnership between 2000 Plus, Keyano College, Syncrude Canada Ltd., Alberta Apprenticeship and Industry Training, the Athabasca Tribal Council and the Mikisew Cree First Nation. It is designed to meet the needs of young Aboriginal workers at 2000 Plus who require skills upgrading but cannot afford to quit working full time to attend school. The idea is to allow for both: tuition and other academic expenses are covered by 2000 Plus and the Athabasca Tribal Council. The Council is largely funded by the government of Canada. Most programme classes are scheduled in the evening and delivered at the Keyano College main campus in Fort McMurray. Syncrude allows for up to 60 hours of release time per student (contract employees) to participate in any ERIC or SAM workshops that may occur during a scheduled work shift. According to the chairperson of Aboriginal Education and Upgrading at Keyano College, this flexibility offers learning opportunities to students who might not otherwise be able to pursue additional training, because financial barriers have been eliminated.

When Shapotowak was launched in January 2004, the programme took on twelve students – the maximum number to whom Syncrude felt it could offer release time. These twelve were chosen by 2000 Plus based on their work history, prior education, attitude and career goals. The programme involves two phases, a classroom and hands-on component. The final decision on who participated in Phase I of the pilot was made by management at 2000 Plus. One interviewee suggested that the screening process might be improved in the future by having more stakeholders (including, for example, educators from Keyano College) involved in deciding who will or will not participate.

The company contracted with a psychologist to work with the students to help address any personal or family problems that could impact their success in the pilot. Phase I focused on essential skills upgrading in a structured

classroom setting. It included ERIC and SAM workshops that focus on upgrading literacy and numeracy skills as well as courses on grammar and computer skills. This phase was completed in June 2004. Phase II, still in operation at the time of this writing, focuses on skills required for career path choices, such as preparation to take a high school equivalency exam or trades apprentice exams. The second phase is more job-specific and will also include up to 100 hours of shop time for hands-on learning in specific trades.

Officials at Keyano College indicated that not all twelve students have continued to Phase II of the pilot. Some have left the community or the company; thus only 4 to 8 students are participating in evening classes at Keyano. Despite this attrition, stakeholders at Mikisew Energy Services Group (which owns 2000 Plus) indicate that they see Phase I as a success. Another interviewee noted that this is the first time that Syncrude has given release time to contractors for training, and that this is likely a key factor in the early success of the pilot.

In light of the generally positive results from Phase I, the company hopes eventually to expand the programme to all 2000 Plus employees (approximately 90 full-time employees). Only when the entire pilot is complete can a full assessment be undertaken, and keys to success or lessons learned determined. Other oil companies as well as other industries in the Fort McMurray area are closely watching to see how successful this pilot is as a way of reaching their own Aboriginal hiring goals.

The Alberta Workforce Essential Skills Steering Committee (AWES): the example of a sectoral labour market intermediary

The Alberta Workforce Essential Skills (AWES) Steering Committee is a non-profit group focused on “promoting the advantages of a confident, innovative, and literate workforce” in the province of Alberta. The Committee has a mandate to facilitate training projects and raise awareness of the importance of essential skills training for workers.

The Committee, whose members include employers, labour organisations and government, provides an example of strategic partnering to promote essential skills training.

The skills that AWES promotes are the same nine essential skills identified by Human Resources and Skills Development Canada (HRSD), noted earlier in this chapter: reading text, oral communication, document use, working with others, writing, numeracy (math), continuous learning, thinking skills and computer use.

AWES takes a sectoral rather than company-by-company approach. The Committee has successfully worked with a number of sectors in Alberta in promoting essential skills, including oil and gas (as noted earlier in the

Syncrude case study), construction, food processing and forestry, and is currently completing work with the tourism sector. The goal is to put essential skills on these sectors' respective agendas. For example, AWES and Keyano College developed customised versions of ERIC and SAM for the construction industry when that industry discovered a gap between the reading and math skills of workers and what it required.

In using a sector approach, the Committee hopes to promote essential skills across an entire industry rather than just a single company, and so to bring greater resources to the table. AWES has elected to work with these particular sectors because they have experienced growth and skill shortages. At the same time, business leaders and labour in these sectors have shown a strong interest in learning more about the impact of essential skills on productivity and performance.

The AWES Committee also supports essential skills practitioner training and development. This includes providing opportunities for professional development, access to essential skills resources and tools, and exposure to new research or projects on essential skills.

As a result of some AWES projects, materials have been developed that support improving and enhancing the literacy of workers. According to several stakeholders interviewed in this study, AWES has been a real catalyst for essential skills development in the province of Alberta. AWES Committee members interviewed note that as long as essential skills are needed, the Committee will be needed.

Funding for AWES projects has largely come from proposals submitted to the National Literacy Secretariat¹⁷ and the government of Alberta (though Alberta Learning¹⁸). Funding is project-specific and has also come from other federal departments as well as other provincial government departments in Alberta.

Having representation from labour, business and government on the AWES Committee is seen as fundamental to the success the Committee's initiatives. Some unions have even gone so far as to send their own trainers to be trained by AWES practitioners on essential skills projects and programmes. According to one of the Committee members, having a variety of players at the table ensures that "we are all working toward a common goal".

Like many of the case studies noted earlier in this chapter, the AWES Committee is seen as successful because of those who champion and believe strongly in the importance of essential skills in the workplace.

Essential skills in the Canadian trucking industry

Essential skills are also being introduced in the training standards and programmes set up by Canadian human resource sector councils. In Canada,

each business sector has a bi-partite council dedicated to human resource development that is funded by the federal government. This section examines how the trucking sector council has been promoting essential skills in the trucking industry in Canada. It also presents information on skills upgrading initiatives in a trucking company in Alberta.

The Canadian trucking industry employs over 500 000 people and contributes approximately CAD 42 billion to the Canadian economy. Established in 1994, the Canadian Trucking Human Resources Council (CTHRC) is a private, independent, non-profit corporation that plays a national leadership role in co-ordinating human resources research and development in the Canadian trucking industry. The mission of the CTHRC is “to assist the Canadian Trucking Industry to recruit, train and retain the employees needed to meet current and long term requirements”. The CTHRC is fully funded by the federal government.

In September 2004, the CTHRC launched the *Essential Skills Toolkit* – a suite of assessment and upgrading resources developed as part of its National Essential Skills Strategy. The toolkit is comprised of a number of resources to help promote these skills within the trucking industry:

Essential Skills Profiles: The CTHRC has completed occupational analyses for four occupations (Professional Driver, Dispatcher, Professional Driver Trainer, and Transportation Safety Professional) and developed custom essential skills profiles for these positions. The profiles are based on the nine Essential Skills identified by Human Resources and Skills Development Canada noted earlier in this chapter.

TOWES Test (Test of Workplace Essential Skills): The CTHRC has developed a customised version of TOWES for use by the trucking industry, which focuses on testing the essential skills of reading text, document use and numeracy skills.

There is no funding available by the CTHRC for customised development for organisations that may wish to develop enterprise-specific profiles, as seen in several of the previous case studies in this chapter. One stakeholder noted that at least one trucking company did hire their own consultant to develop their own customised profiles specific to their organisation.

The TOWES-PD pilot

The CTHRC conducted a pilot project with the Canadian Petroleum Products Institute (CPPI) to look at the relationship between essential skills and driver safety among drivers used by CPPI members. The CPPI is an association of Canadian companies involved in the refining, distribution and/or marketing of petroleum products. This partnership benefited both organisations – CTHRC was interested in further promoting essential skills in the trucking industry,

and CPPI had a desire to see an increase in safety and decrease in injuries in their sector.

During the summer of 2003, 231 CPPI certified drivers in Alberta participated in the Test of Workplace Essential Skills for Professional Drivers – TOWES-PD. The pilot looked at the relationship between the safety records of these pilot study drivers and their respective TOWES test scores¹⁹ on three essential skills: reading text, document use and numeracy. Findings from the pilot test analyses found that drivers with higher scores on the three essential skills were less likely to have had accidents or safety incidents.

Standards were also set for CPPI drivers on the three essential skills tested. The results found that 50% of drivers were below the benchmark for reading text, 41% were below the benchmark for numeracy, and 95% of drivers did not meet the benchmark for document use. According to stakeholders interviewed, this last result was particularly surprising given that the trucking industry is very document-driven. Document use among drivers who transport hazardous materials is particularly intense for safety reasons, and drivers are continuously using and completing documents (e.g. delivery forms, inventory forms). The results of the pilot have the industry rethinking its training protocols and how it designs workplace documents. They will help to identify and respond to other learning needs among CPPI and CTHRC drivers.

The CTHRC does suggest caution regarding the use of pilot test scores to predict future accidents. That is to say, low essential skills test scores do not necessarily predict that an accident is more likely. The Council also does not recommend that TOWES-PD test scores be used for selection or screening purposes; rather, they should be used to assist in determining training needs.

This pilot was funded entirely by federal government through CTHRC and in-kind involvement by the CPPI trucking companies, which granted paid release time for their drivers to participate. The TOWES-PD is important because it quantitatively measures the link between essential skills and safety. The CTHRC can use these results to further promote the importance of essential skills within the trucking sector.

Westcan Bulk Transport Limited: Implementing the TOWES-PD pilot

Westcan Bulk Transport Limited (Westcan) is a trucking company headquartered in Edmonton, Alberta. The company has approximately 600 employees and specialises in hauling liquid and dry bulk commodities in western Canada. Approximately 60 to 70 of Westcan's fuel drivers were part of the CTHRC TOWES-PD pilot. An interview with the manager of Training and Human Resources at Westcan focused on the company's experience in participation in the TOWES-PD pilot.

The TOWES-PD pilot was mandatory for the hazardous materials drivers at Westcan, and the company did acknowledge that there was some resistance by them. The company sought to address this resistance by developing an information package. A privacy policy was put in place to ensure all drivers that their individual test scores would not be available to Westcan; the CTHRC would only provide aggregate scores to Westcan (and other participating companies). If the company wanted an individual's test score for safety reasons, they would have to write the CTHRC and explain their request. The CTHRC would then write the individual asking their permission to release their scores. Westcan has not requested the test scores for any of their drivers. Perhaps most importantly, drivers were assured that no one would lose their jobs as a result of their test scores.

A stakeholder noted that Westcan's manager of training and human resources strongly championed the use of essential skills in the trucking sector and recognised the importance of the TOWES-PD pilot. As seen in several other case studies, a champion of essential skills has been found to be an important determinant in the implementation of these initiatives.

One of the lessons learned by Westcan from the TOWES-PD pilot related to having the TOWES tests conducted as a group. Unlike the other cases in this chapter where TOWES tests are generally conducted one-on-one with an adult educator or trained consultant (either of which must be a certified essential skills evaluator), participants in the pilot were tested as a group in a classroom setting. This was done for economic reasons, as there were so many individuals to be tested at once. By having the tests conducted in a large group there could be fewer certified essential skills evaluators present and employees could return to work sooner (since they were there on paid company time).

However, during the pilot some workers were clearly having trouble with basic literacy, as they were quite slow to complete the tests compared to some of their co-workers. The management of the company stated that in any future tests it would try to segment workers by their estimated literacy levels, based on the company's history with the employee and general knowledge from working with them.

The CTHRC has identified two key strategies it will follow based on the results of the TOWES-PD pilot. One is to focus on programmes and initiatives to upgrade the skill levels of drivers who most need upgrading. This will be accomplished through the development of new curricula and training programmes focusing on the essential skills most in need of improvement that can be offered to CTHRC members. A second strategy will be to develop customised literature/documents for the trucking industry that better suit the actual literacy level of workers in the sector.

Lessons learned

The initiatives in the case studies presented in this chapter are somewhat diverse, and the local labour markets in the regions studied are arguably each unique. Nevertheless, a number of lessons and keys to success emerge from examination of these initiatives.

Partnering

Partnerships and collaboration were key factors in the development and implementation of many of the skills upgrading initiatives. In fact the term “partnership” was mentioned in virtually all the stakeholder meetings and follow-up interviews. No one organisation has developed skills upgrading programmes in isolation; they have all deliberately reached out to other stakeholders to develop programmes or tools that address their needs.

Especially in evidence was a strong collaboration between employers and colleges in developing programmes or skills assessment tools. The examples in this study of such collaboration to meet a local business need are contrary to some other research findings. An OECD publication suggests that “colleges are often unaware of business needs and do not tailor the training courses according to local employer demand” and that this is often due to a lack of resources that would allow training providers to take a more holistic approach (OECD, 2002, pp. 29-30). Organisations like the Alberta Workforce Essential Skills (AWES) Committee are helpful in this regard, as they aim to “educate the educators” about essential skills and help provide them with training opportunities.

Competing employers have even begun to partner with each other to address a common business need. For example, some of the diamond companies in Yellowknife (including Diavik and BHP Billiton) are working with the government of the Northwest Territories to obtain funding to do more essential skills profiles for jobs within their organisations that they need to fill. As with their current essential skills tools, they can then map a training plan for the workers in these positions to meet their business needs.

In several interviews it was noted that the employers, educators, communities and students are all partners in their respective skills upgrading programmes. Each makes a valuable contribution to the programme’s development and continued success.

Funding

The majority of essential skills initiatives and programmes implemented in the private companies presented in this chapter were funded entirely by the companies themselves. As has been noted, these are all large companies and therefore arguably can afford the costs. For example, development and

operation of the Workplace Learning Centre at Diavik, the Workplace Learning Programme at BHP Billiton, and the ERIC and SAM programmes at Syncrude were all paid for by these respective organisations.

The federal government has contributed funding to the development of several of the essential skills tools noted in this chapter, namely the essential skills profiles and the assessment tool TOWES (Test of Workplace Essential Skills). As discussed in this chapter, some organisations have themselves paid for customised essential skills profiles and TOWES tests to suit their specific occupations.

However, there is also currently no direct financial support from government for organisations to develop customised essential skills profiles and customised assessment tests (TOWES tests).²⁰ Thus it may be difficult for smaller organisations to develop tools to meet their specific workplace training needs.

Customisation and flexibility

Assessment tools, based on a matrix of levels of essential skills by occupation, have been useful in identifying skill gaps and developing skill upgrading programmes tailored to the needs of the workplace. Employers have cited the importance of having training that is highly customised to address both their needs and employees' skill gaps.

At both diamond mines, customised essential skills profiles were developed for specific jobs within these organisations; customised assessment tests (TOWES tests) were also then developed for these company-specific profiles. This allows for assessments to be made of the gap between a worker's skills and what is needed to be safe and productive in the job. A customised training plan then can be made for the individual employee.

Likewise, many of the skills upgrading programmes discussed in this chapter are deliberately designed to be flexible and customisable. For example, the ERIC and SAM programmes developed at Syncrude are successful because they are content-specific and can be adapted to different settings (organisations and industries) and adjusted to the skills levels of each group of students. As noted by one stakeholder, "the content may change, but not the programme".

Time to train

Paid work-release time to train was found to be crucial in the success of many of the cases noted above. Although the companies were generally very supportive in granting work-release time, it should be noted that none of the companies had a formal policy to allow for release time. Also, as several stakeholders noted, there is a constant reminder that these are in fact business

operations and the companies' role is not to be educators: business and safety needs must come first. Granting paid work-release time could pose a problem in small- to medium-sized enterprises, as they may not be able to afford having workers on training if this would slow down production or business.

Learning environment

While time off from work to train is crucial for the programmes noted above, the location of the training is also an important factor in programme design.

At Syncrude, the ERIC and SAM classes are deliberately offered away from the mine site, in a college classroom setting at the Keyano College campus in Fort McMurray. This choice was made to help ensure the confidentiality of students in the programme, and those students interviewed all agreed that having the courses offsite in a neutral location was preferable. Keyano College does recognise that the formal classroom setting might be intimidating for some adult learners; an orientation session on the college campus is therefore part of the course curriculum for ERIC and SAM. This may help offset any uneasiness that the adult learners have about returning to a classroom environment.

In Yellowknife, training programmes are designed to take account of the fact that many students have been through the traditional classroom environment and failed, or in some cases have never been in a formal classroom setting. Therefore skills upgrading programmes offered at Aurora College and through Diavik's community-based training programmes use a mix of classroom and hands-on training. It is recognised that classroom training alone is not an effective method for low-skilled students. They also need to have hands-on experience to see how their learning can be applied directly to their lives and in their work.

The cases in Yellowknife are also unique in terms of the local learning provided in many of the remote Aboriginal communities. The ability of workers to continue their learning while home on their two weeks off is seen as key to their successful skills upgrading.

Relevance of the training to the workplace

The difficulties faced by many low-skilled workers (who sometimes alternate between low-paid jobs and unemployment) may reflect a failure of the secondary schools to adequately prepare young people not academically oriented for participation in the labour force. The relevance of the training and the selection of materials used in class curriculum are thus very important. The programmes presented in this chapter are designed to make learning as relevant as possible by using authentic workplace documents for training purposes.

Marketing skills upgrading

Take-up of the skills upgrading programmes has been enhanced by having employees who are former participants act as ambassadors to market the initiatives. The companies have deliberately chosen a low-key approach to promote their respective skills upgrading programmes and have relied on employee testimonials as a key marketing tool. In this sense, the students are seen as “partners” in promotional efforts.

It is interesting to note that some employees who had participated in their organisation’s skills upgrading programmes felt the company should now be more aggressive in marketing them – especially to new employees who can often be overwhelmed by the information when first starting, and who may not be aware these programmes are available. Some suggested that word-of-mouth advertising might not be as effective with a company with several thousand employees, and that customised marketing programmes targeting specific employee groups might increase employee take-up (or at least awareness) of the programmes.

Proponents within the management ranks and support for these activities from top-level management in the companies have also played an important role in sustaining/building skills upgrading. Arguably, trade unions could play a role in helping to promote essential skills within an organisation or an industry by providing information on essential skills programmes to union members. Unions have played a role in promoting essential skills in the province of Alberta through the AWES Steering Committee.

Community capacity building

Community capacity building was an important component in the case studies in Yellowknife. These companies have had to build the workforce they require to operate their mines, taking into account their social obligations in terms of Aboriginal hiring requirements. In the case of Diavik’s five participation agreements with local Aboriginal groups, this has also meant the company has had to provide skills upgrading and training to local communities. That involves not only teaching basic literacy skills but also basic workplace skills. The skills these local residents learn can later benefit Diavik should they become an employee at their mine.

The two case studies in Yellowknife are also noteworthy in that these organisations had to custom-build the programmes they needed for their unique labour markets and workforce. As noted earlier, workplace literacy programmes are not very common, but the reality of the literacy levels of the Aboriginal workforce at both diamond mines meant these companies both had to build a skills upgrading system that would meet their particular needs.

Essentially they created onsite adult learning centres. As one manager aptly noted, “You need to look outside the box. This is not standard training”.

Role of government

Federal and provincial or territorial governments have played roles in the development of many of the essential skills initiatives in the case studies described above. They have had little involvement in directly funding the delivery of the skills upgrading measures presented here except for some initiatives designed specifically for Aboriginal Canadians (*e.g.* the Shapotowak programme). However, governments have had an impact through their regulatory functions and through the development of tools tailored for use by the companies studied.

For example, the Government of the Northwest Territories (GNWT) has committed itself to ensuring that its residents will benefit from exploration and the mining of diamonds through the socioeconomic agreements it has signed with the diamond companies currently operating in the Northwest Territories. These contractual agreements have meant that many residents of the NWT will receive employment and business opportunities. These companies have had to focus on upgrading the essential skills of their workforce and local communities to meet their hiring quotas of Aboriginals and “northerners”. Thus they have largely had to build the skilled workforce they need to meet their business needs as well as their hiring requirements.

The federal government has also played a role through its development of the “essential skills” framework and funding the development of the profiles and generic assessment tools for essential skills (TOWES).

Adult educators

The adult educators are also a key factor. Students of skills upgrading programmes often attributed much of their success in the courses to the strong commitment of the instructors and their passion for teaching. The adult educators working in the companies are also very dedicated to their students and strongly believe in skills upgrading. The ability of the adult educators to work one-on-one with students and help them develop customised training plans is often cited as a key reason for success.

This study did not examine the selection or hiring practices of the adult educators within the colleges and organisations. However, feedback from various stakeholders suggests that the adult educators clearly have a great impact on the outcomes of their students. An organisation like the AWES Committee can play an important role in keeping adult trainers and educators informed of the latest research and tools to promote essential skills.

Measuring success

Although the case studies provide some anecdotal and qualitative evidence of success, there has been little effort to systematically measure outcomes (such as employment, wages and health) over time. The skills upgrading initiatives in several of the case studies were relatively new and no formal assessment had yet been performed.

Until organisations can better demonstrate the impact of skills upgrading initiatives on issues such as productivity, safety and the bottom line, these initiatives might not be taken seriously in other sectors or businesses. Given that many stakeholders noted the need to constantly show the added value of their programmes to maintain credibility, more efforts to actively measure outcomes of skills upgrading initiatives clearly must be undertaken.

The Canadian Trucking Human Resource Council (CTHRC) TOWES-PD pilot study provides one of the few concrete examples of an attempt to quantitatively measure the link between essential skills and safety performance. This information will be used by the Council to help further promote essential skills to its members and to develop training curricula that address areas identified as needing improvement.

Perhaps not all positive outcomes of these skills upgrading initiatives can be quantified. Many students noted that they gained confidence and pride from participation in these programmes. Clearly, these effects cannot be measured in any simple way.

Employee take-up of skills upgrading opportunities

In the case studies presented above, only a relatively small percentage of workers actually participated in these skills upgrading programmes although they are generally available to all employees. This does not necessarily imply low interest. Rather, these initiatives may have a low employee take-up because not all employees need basic skills upgrading. In some cases, however, there was evidence of a lack of awareness of the programmes.

The reliance on one-on-one sessions with adult educators and customised training strategies for individual learners (employees) may in fact limit the number of students who can participate in a programme at a given time (as has been seen at BHP Billiton). Once employee participation reaches a certain point, many of these companies may need to look at increasing the number of adult educators working in their programmes. This of course would require additional financial resources.

Low employee participation in these programmes may also reflect the fact that for many there is still a stigma associated with literacy and numeracy training. The organisations studied made a deliberate effort to ensure that

their respective programmes were not seen as “literacy” or “numeracy” programmes *per se*, to avoid any negative connotation.

Reaching small business

Given the fixed costs involved in many of the case studies presented in this chapter, it would be more difficult for SMEs to participate in these initiatives. Many small organisations would likely not have the time or resources to develop skills upgrading assessment tools or programmes for their workforce. Sector councils and organisations like AWES can, by pooling resources, play a role (and have done so in Canada) in mitigating these problems.

Most small and medium-sized businesses are often unable to afford the direct cost of delivering the training (*i.e.* the costs of the adult educators). Given how important the adult trainers are seen as being here, this will likely be a major issue in implementing skills upgrading initiatives in such organisations.

Conclusions

This chapter has presented case studies of unique partnerships between employers, training providers, governments and other key players in developing and promoting skills upgrading tools and programmes. The focus of these studies has been geared at upgrading the skills of incumbent workers within large companies and on special initiatives for Aboriginal Canadians.

These case studies have shown the value of flexible and customisable skills assessment tools and programmes that can be tailored to the specific needs of the individual worker and his or her organisation. The essential skills framework has been an important innovation underlying the development of these tools in the companies studied. In particular, it has brought a focus on linking skill assessments and training programmes to materials derived from real workplace contexts. Customisation of the basic framework has allowed these organisations to assess the gap between a worker’s skill level and what is needed for a specific job. It has also allowed for skills upgrading to be tailored to the needs of both employer and employee, so that what is learned is immediately applicable to the job. From interviews with managers and workers, it is evident that this aspect of the skills upgrading initiatives has been paramount to the degree of success that they have had so far.

Although few efforts have been made to systematically measure the impact of these skill upgrading programmes, feedback from programme participants, company managers and adult educators strongly point to improvement in employee skill levels. The programmes are still relatively new for many of these organisations and most plan to more formally assess their initiatives in the future. The lack of specific measures should not discourage

future programme development, but rather should be something incorporated into future programme design and assessment.

It is in any case clear that more research is needed on measuring the impact of essential skills initiatives in an organisation. More quantitative research is also needed on the scope of skills upgrading initiatives in Canada, particularly with regard to SMEs. While there are data available on training activities in general (and on delivery models such as on-the-job or classroom training), data are lacking on the incidence of skills upgrading initiatives for low-skilled workers, or the extent to which the essential skills framework is used in Canada.

Despite the unique characteristics of the cases presented above, they offer valuable insight into grassroots efforts to develop essential skill assessment tools and upgrading programmes by organisations to meet a real business need for a productive and safe workforce.²¹

Notes

1. The authors would like to thank Mr. Erik de Vries of Human Resources and Skills Development Canada (HRSDC) for his permission to use the text of the background report in this chapter and acknowledge the assistance of Caithlin McArton and Awo Nuuh of HRSDC in developing the background report with Mr. De Vries.
2. Aboriginal people (Aboriginals) are the descendants of the original inhabitants of North America. The Canadian Constitution recognises three groups of Aboriginal people – Indians, Métis people and Inuits. These are three separate peoples with unique heritages, languages, cultural practices and spiritual beliefs. This definition is taken from the Department of Indian and Northern Affairs document *Treaties with Aboriginal People in Canada*, found at www.ainc-inac.gc.ca/pr/info/is30_e.pdf.
3. In the following section, post-secondary education is divided into three distinct categories. Vocational or trades training is offered at community and private colleges, and includes vocational and pre-vocational training, apprenticeship programmes, and skills upgrading programmes. College education is acquired through community colleges, CEGEPs (Collège d'enseignement général et professionnel) in Quebec, technical institutes, regional and hospital nursing schools, and specialised training institutions. In Canada, high schools offer a wide variety of vocational courses for new entrants, academic courses for students preparing for universities (especially in provinces like Quebec, Alberta and British Columbia), shorter vocational courses for upgrade training, courses for employees of specific firms, adult education, basic skills education, and sometimes short-term labour market programmes. University education includes university degrees at undergraduate and graduate levels, and post-graduate certificates.
4. Graduation rates are calculated by dividing the number of graduates in a given type of programme by the population at typical graduation age for that programme; the ages used for this calculation in Canada are: secondary – 18 (except Quebec, where it is 17); college – 21; undergraduate university – 22; master's – 24; doctorate – 27 (Statistics Canada and CMEC, 2003, pp. 200-201).

5. Adult Education is adapted to the Canadian context using the definition employed by UNESCO. This definition includes all formal education for adults, which supplements, replaces or enhances their initial cycle of education. It includes persons 17 years of age and older but excludes those students involved in their initial cycle of formal education. It thus excludes all full-time students enrolled in a post-secondary programme between the ages of 17 and 24, as well as students aged 17 to 19 enrolled in a full-time, non-employer-sponsored elementary or secondary programme (HRDC and Statistics Canada 2001, pp. 7-8). Unfortunately, neither of the two surveys from which the information in this section is drawn – the Adult Education and Training Survey (AETS) or the Workplace and Employee Survey (WES) – covers the three Canadian territories.
6. In the section that follows, a course is understood to be any formal learning episode to develop knowledge or skills, while a programme is a selection of courses leading to a degree, diploma or certificate.
7. The composition of immigrants to Canada by source country has changed substantially over the past 20 years. Until 1981, most immigrants to Canada were of European origin. However, since 1991 the majority of immigrants have been from Asia, and the transferability of foreign credentials continues to be a hurdle for many of these people.
8. Bow Valley College is a post-secondary education institution that has been providing adult education since 1965. The College serves 11 000 learners annually in Calgary and at other campuses in Alberta, with a focus on workforce preparation and workforce development. The College was one of the first institutions in Canada to embrace the concept of Workplace Essential Skills, and has been a partner in the development of TOWES (the Test of Workplace Essential Skills).
9. Human Resources Development Canada (HRDC) is now split into two departments: Human Resources and Skills Development Canada (HRSDC) and Social Development Canada (SDC). The Essential Skills project is currently housed in the former.
10. It should be noted that the skills upgrading initiatives developed by the Province of Alberta and the Northwest Territories are not the focus of the regional case studies presented in this chapter. These provincial/territorial initiatives are presented as context for the reader.
11. The main sources used for the following data are the Census 2001 from Statistics Canada and the 1999 Labour Force Survey conducted by the Northwest Territories Bureau of Statistics.
12. The term “adult educators” generally refers to educators or trainers who specialise in working with adult students (or learners) in a school or workplace setting. Adult educators typically have a university degree in education, human resources, or any one of a variety of other areas that qualify them as subject matter experts. Some colleges may require that their adult educators have a certificate in adult education programmes.
13. Data are for Census Division No. 16, an area of about 97 000 square kilometres in northeastern Alberta surrounding the city of Fort McMurray.
14. Quotation drawn from presentation by representative from Keyano College to OECD Canadian study group in Fort McMurray, Alberta, 13 May 2004.
15. Originally the programme was titled WIN – Working in Numeracy – but the name was changed in 2003.

16. The amount was not made available to the authors.
17. The National Literacy Secretariat (NLS) is a federal government department that works to promote literacy as an essential component of a learning society, and to make Canada's social, economic and political life more accessible to people with weak literacy skills. It works in partnership with the provinces and territories, other government departments, business and labour, the voluntary sector and non-governmental organisations to build capacity for literacy opportunities across Canada. Since 1988, the NLS has funded over 5 000 innovative projects in order to meet these objectives. See www.nald.ca/nls/aboutnls/about.htm.
18. Alberta Learning is a department of the government of Alberta that has a mandate to provide Albertans with access to quality lifelong learning opportunities. See www.learning.gov.ab.ca/default.asp.
19. CPPI maintains a database on driver safety performance, which was cross-referenced with driver TOWES test scores by a third-party essential skills consultant for CTHRC.
20. BHP Billiton and Diavik are currently seeking funding from the government of the Northwest Territories to conduct more custom essential skills profiles for occupations within their organisations (as noted earlier in the chapter).
21. The authors would like to thank the individuals and organisations presented in this chapter for their participation in and valuable contribution to this study.

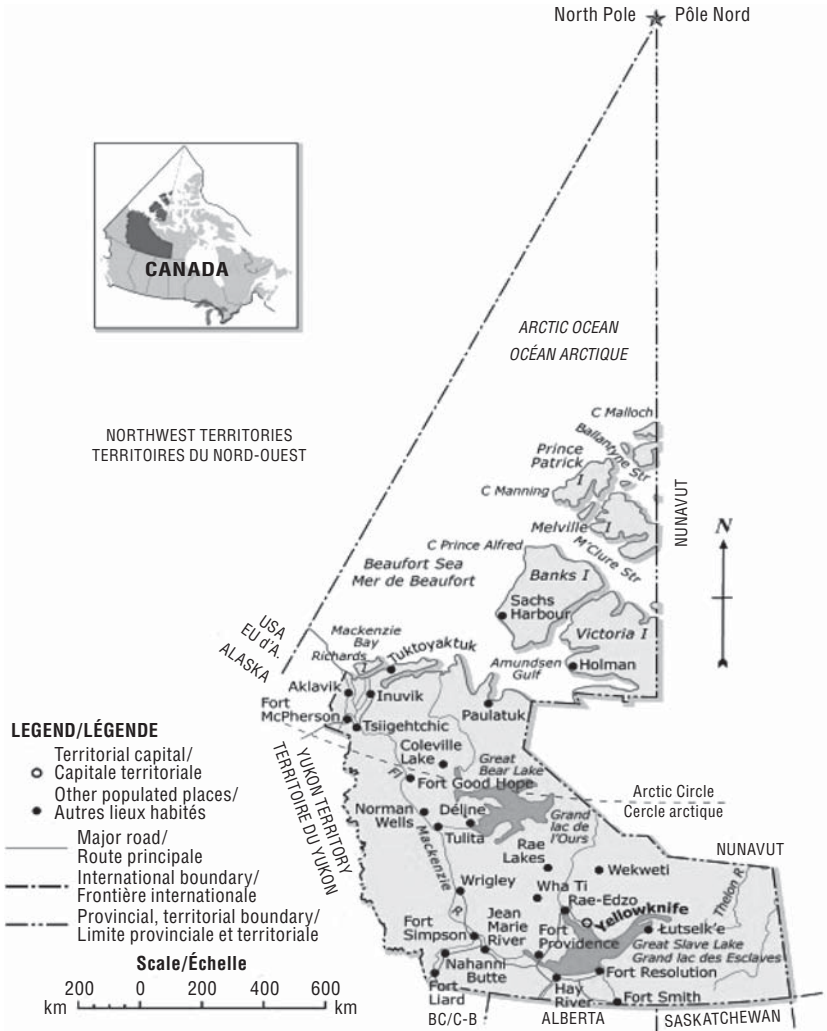
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ANNEX 7.A1

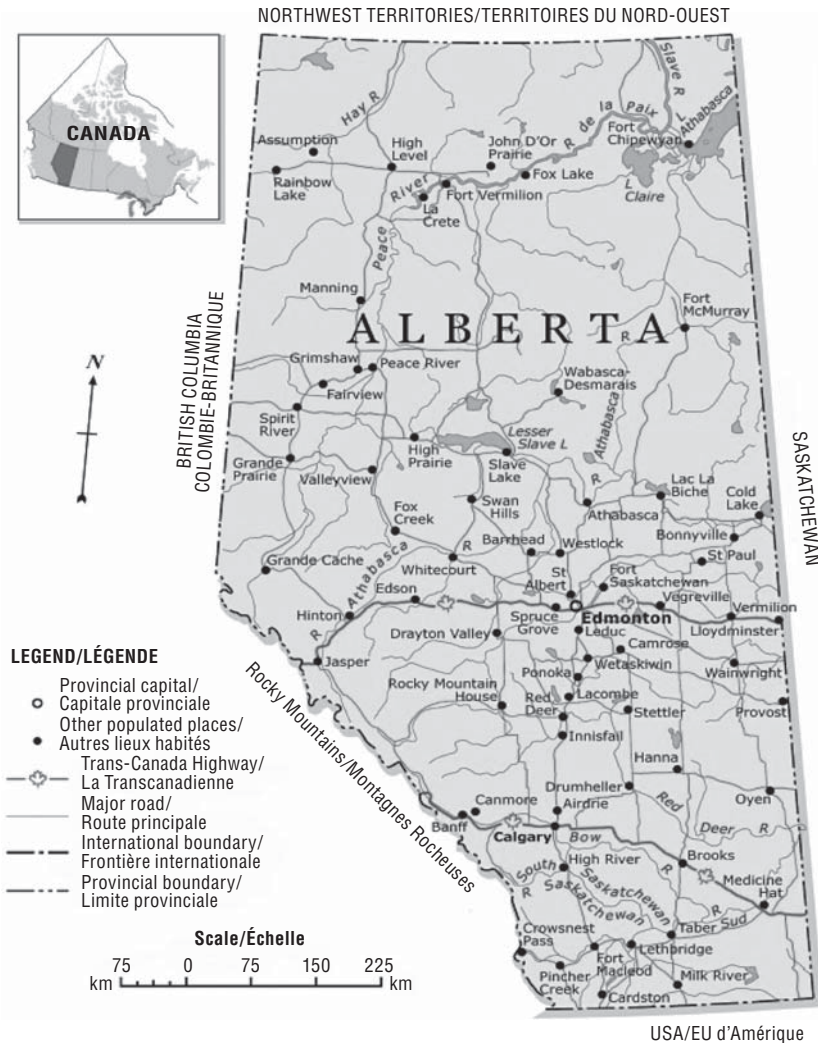
Map of Northwest Territories



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ANNEX 7.A2

Map of Alberta



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These maps were taken from The Atlas of Canada: <http://atlas.gc.ca/site/english/index.html>.

ANNEX 7.A3

Web Site Information on Organisations and Government Agencies Included in this Study

- Alberta Human Resources and Employment – www3.gov.ab.ca/hre/.
- Alberta Workplace Essential Skills (AWES) – www.nald.ca/AWES/.
- Aurora College – www.auroracollege.nt.ca.
- BHP Billiton Diamonds Inc. – www.bhpbilliton.com.
- Bow Valley College – www.bowvalley.ab.ca.
- Canadian Trucking Human Resources Council – www.cthrc.com.
- Diavik Diamond Mines Inc. – www.diavik.ca.
- Government of the Northwest Territories – Education, Culture, and Employment – www.ece.gov.nt.ca/.
- Human Resources and Skills Development Canada – Essential Skills and Workplace Literacy Initiative – www15.hrdc-drhc.gc.ca/.
- Keyano College – www.keyano.ca.
- Suncor Energy Inc. – www.suncor.com.
- Syncrude Canada Ltd. – www.syncrude.com.
- TOWES – www.towes.com.
- Westcan Bulk Transport Limited – www.westcanbulktransport.com.

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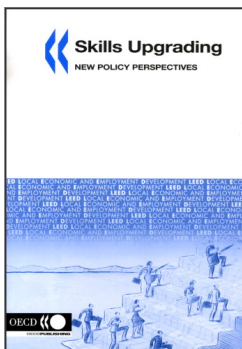
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Acronyms

AE	Adult Education (<i>Voksenuddannelse</i>) (Denmark)
AF	<i>Arbejdsformidlingens</i> – Name of the Danish Public Employment Service
AHRE	Alberta Human Resources and Employment (Canada)
AMU	Adult Vocational Training (<i>Arbejdsmarkedsuddannelserne</i>) (Denmark)
APEL	Accreditation of prior experiential learning (Flanders)
AVU	General Adult Education (<i>Almen VoksenUddannelse</i>) (Denmark)
AWES	Alberta Workforce Essential Skills (Canada)
BLOs	Business Links Operators (UK)
CEGEP	Collège d’Enseignement Général et Professionnel (Quebec)
CET	Continuous Education and Training
CPPI	Canadian Petroleum Products Institute
CTHRC	Canadian Trucking Human Resource Council
CVT	Continuing Vocational Training
DDMI	Diavik Diamond Mines Inc. (Canada)
ERIC	Effective Reading in Context (Canada)
ESF	European Social Fund
ESRP	Essential Skills Research Project (Canada)
ESWL	Essential Skills and Workplace Literacy (Canada)
ETPs	Employer Training Pilots (UK)
FOA	Public Employees’s Union (<i>Forbundet af Offentlige Ansatte</i>) (Denmark)
FVU	Preparatory Adult Education (<i>Forberedende VoksenUddannelse</i>) (Denmark)
GCSEs	General Certification of Secondary Education (UK)
GED	General Equivalency Diploma (Canada)
GVU	Basic Adult Education (<i>Grunduddannelse for voksne</i>)
HF	Higher Preparatory Examination
HHX	Higher Commercial Examination
HTX	Higher Technical Examination
IAG	Information Advice and Guidance
JARC	Jane Addams Resource Corporation (US)
KAD	Women Workers’ Union in Denmark (<i>Kvindeligt Arbejderforbund</i>)

LIRI	Local Industrial Retention Initiative (US)
LLL	Lifelong Learning
LMDAs	Labour Market Development Agreements (Canada)
LSEq	Low Skill Equilibrium
LO	Danish Federation of Trade Unions (<i>Landsorganisationen i Danmark</i>)
LSCs	Learning and Skills Councils (UK)
MOWD	Mayor's Office of Workforce Development (US)
NNSP	The National Network of Sector Partners (US)
NVQs	National Vocational Qualifications (UK)
PES	Public Employment Service
RAR	Regional Labour Market Council (<i>Regionale Arbejdsmarkeds Råd</i>) (Denmark)
SERV	Flemish Social and Economic Council (Flanders)
SID	General Workers' Union in Denmark (<i>Specialarbejderforbundet i Danmark</i>)
SSDA	Sector Skills Development Agency (UK)
SMEs	Small and medium-sized enterprises
STC	Sub-regional Employment Committee (Flanders)
TANF	Temporary Assistance for Needy Families (US)
TIF	Tax incremental financing (US)
TOWES	Test of Workplace Essential Skills (Canada)
UPL	Educational Planning (<i>Uddannelses Planlægning</i>) (Denmark)
VDAB	<i>Vlaamse Dienst voor Arbeidsbemiddeling en Beroepsopleiding</i> – Name of the Flemish Public Employment Service
VET	Vocational Education and Training
VESOC	Flemish Economic and Social Consultative Committee (Flanders)
VET	Vocational Education and Training
VEUD	Adult Vocational Education and Training (<i>Voksenerhvervsuddannelse</i>) (Denmark)
VEU-reform	Adult Education Reform (<i>Voksen- og Efteruddannelsesreform</i>) (Denmark)
VUC	General Adult Education Centre (<i>Voksenuddannelsescenter</i>) (Denmark)
VUS	Act on Educational Support for Adults (<i>Voksenuddannelsesstøtte</i>) (Denmark)
VVU	Further Adult Education (<i>Videregående VoksenUddannelse</i>) (Denmark)
WIA	Workforce Investment Act (US)
WLP	Workplace Learning Program
WRTP	Wisconsin Regional Training Partnership (US)



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