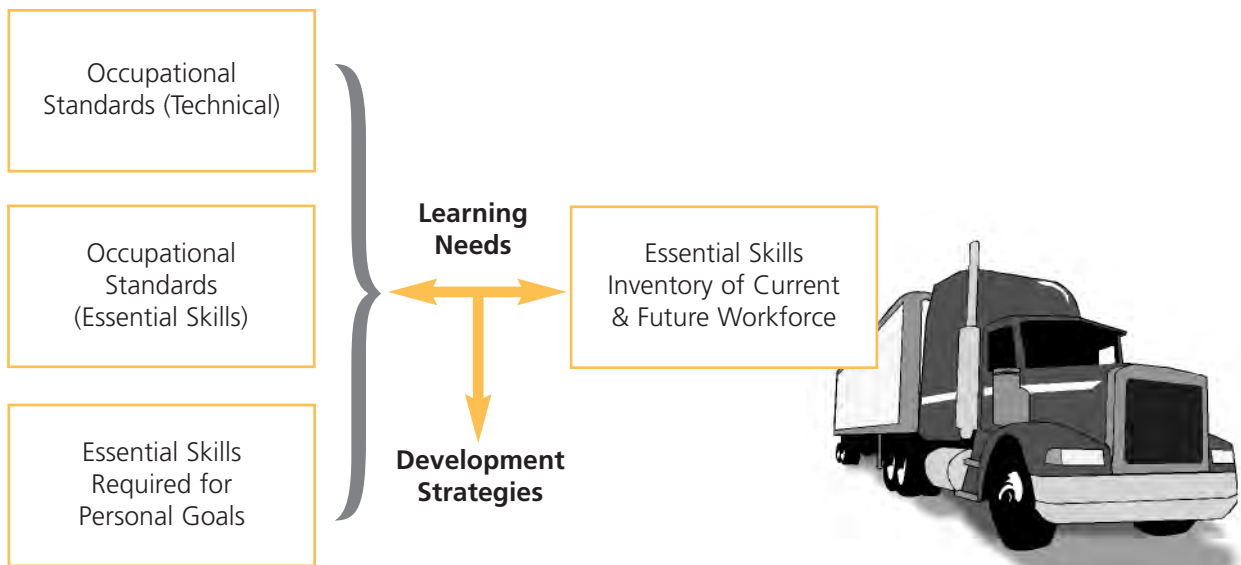




Essential Skills Needs Assessment of the Trucking Industry



Essential Skills Needs Assessment of the Trucking Industry



Prepared by:

Carol MacLeod, B.A., M.Ed.
 Carol MacLeod & Associates Inc.

June 1, 2002

THE CTHRC ACKNOWLEDGES THE FUNDING SUPPORT PROVIDED BY THE NATIONAL LITERACY SECRETARIAT, HUMAN RESOURCES DEVELOPMENT CANADA.



Table of Contents

EXECUTIVE SUMMARY(i)

1. INTRODUCTION 1

1.1 Objectives 1

1.2 Essential Skills Concepts & Definitions 1

1.3 Methodology 3

2. ESSENTIAL SKILLS LEARNING NEEDS 5

2.1 Current Professional Driver Workforce 5

2.2 Future Professional Driver Workforce 9

2.2.1 Aboriginal People 9

2.2.2 Immigrants 10

2.3 Current Dispatcher Workforce 11

2.4 Career Pathing in the Industry 11

3. ASSESSING ESSENTIAL SKILLS 12

3.1 Industry Practice in Essential Skills Assessment and Upgrading 12

3.1.1 Linking Essential Skills to Human Resource Interests 12

3.1.2 Use of Essential Skills Assessment Tools and Strategies 13

3.2 Test of Workplace Essential Skills (TOWES) 17

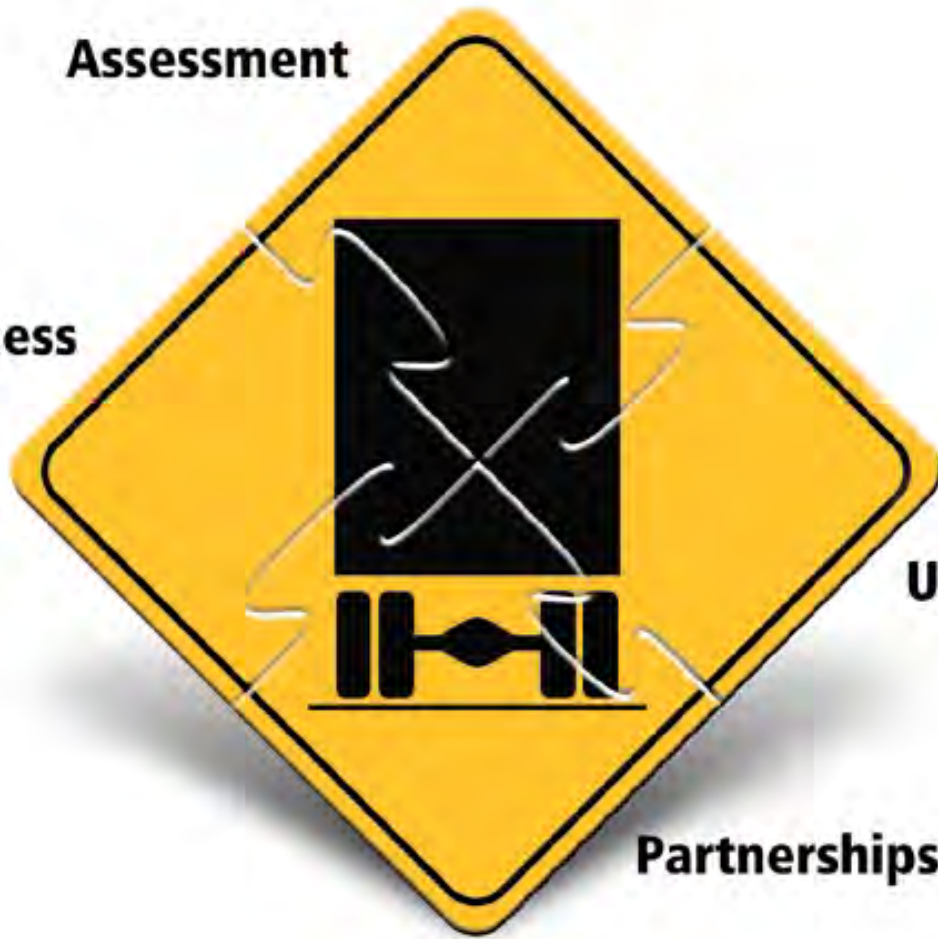
4. RECOMMENDATIONS FOR A CTHRC NATIONAL ESSENTIAL SKILLS STRATEGY 19

APPENDICES

 APPENDIX A: CTHRC Essential Skills Steering Committee 24

Assessment

Awareness



Upgrading

Partnerships

Executive Summary

INTRODUCTION

The trucking industry has one goal only—to keep Canada on the move. Today, trucks carry over three-quarters of the trade that passes between Canada and the United States, and Canada and Mexico. The Canadian trucking industry is a vital part of the economy—a \$42 billion business employing over 500,000 people. Free trade has opened up new and exciting opportunities. There are also changes in technology, changes in regulations, changes in traffic patterns. These changes, along with the boom in business, mean that the trucking industry needs a larger and better trained workforce. A severe shortage of qualified Professional Drivers is complicating matters. That's where the Canadian Trucking Human Resources Council (CTHRC) takes the wheel.

Essential skills (a.k.a. employability skills) are enabling skills (e.g., reading text, document use, numeracy, computer use) that help people to learn technical skills and to competently perform job tasks. The purpose of this Report is to identify learning needs in the current and future Professional Driver and Dispatcher workforce that are linked to essential skills and to recommend related development strategies. Discussions of the future workforce include a particular focus on Aboriginal people and immigrants.

KEY FINDINGS

- ◆ A significant number of Professional Drivers have poor reading text skill (i.e., prose literacy) and this poses challenges in adapting to industry changes. This is particularly true for workers in their 40s and 50s with low levels of education.
- ◆ Reading materials that Professional Drivers are required to use are too complex because they are not developed in accordance with the principles of clear language.
- ◆ Carriers often accommodate poor reading text skill by, for example, administering oral tests and relying on visual teaching techniques as long as other hiring criteria are met (e.g., clean driver's abstract, medical).
- ◆ In some regions of the country (e.g., Greater Toronto Area, Quebec, Vancouver) there are significant learning needs among Professional Drivers related to oral communication because English is their second language. Similar learning needs exist among new immigrants.
- ◆ The trucking industry is seeking ways to encourage Aboriginal participation as Professional Drivers. There are significant essential skills learning needs among Aboriginal people, as well as cultural and communication issues, to consider in establishing Aboriginal recruitment, training and retention methods. Building partnerships with Aboriginal organizations is critical to developing a strategy of inclusion.
- ◆ The current Dispatcher workforce has sufficient skill in reading text, document use and numeracy. Ongoing learning needs associated with computer use are adequately being handled by carriers.
- ◆ The Test of Workplace Essential Skills (TOWES) would meet the industry's needs better than the assessment tools and strategies currently in use.



RECOMMENDATIONS

The CTHRC plans on leading the industry in addressing its essential skills learning needs by rolling out a *National Essential Skills Strategy*. Its action plan features four components that drive related activities and eight pilot projects to move from vision to reality.

ASSESSMENT

- ◆ development of industry-specific TOWES assessments for four key occupations in the industry benchmarked to the CTHRC's occupational standards for essential skills
- ◆ development of an employment readiness version of TOWES for use in outreach initiatives among, for example, Aboriginal people
- ◆ development of administrative protocols and best practices

UPGRADING

- ◆ development of industry-specific curriculum to upgrade reading text, document use and numeracy skills
- ◆ integration of essential skills upgrading into the CTHRC's national *Earning Your Wheels* and *Professional Driver Improvement* programs

AWARENESS

- ◆ building the industry's capacity to profile essential skills requirements
- ◆ disseminating information on the CTHRC Web site about its *National Essential Skills Strategy* and related links
- ◆ hosting a national essential skills conference

PARTNERSHIPS

- ◆ coordinating with industry partners designated to lead eight pilot projects
- ◆ forging partnerships with Aboriginal organizations
- ◆ forging partnerships with universities and colleges
- ◆ securing financial partnerships



1. Introduction

1.1 OBJECTIVES

In May 2002, the CTHRC completed its efforts to produce a national *Occupational Analysis and Essential Skills Profile* for four key positions in the industry—Transportation Safety Professional, Professional Driver Trainer, Professional Driver and Dispatcher. The CTHRC is now pursuing second-stage objectives related to developing products, tools and services from the resulting occupational standards data on technical and essential skills requirements.

This study uses the CTHRC's national standards for essential skills as the starting point for research on related learning needs in the current Professional Driver and Dispatcher workforce. Given the industry's interests in recruitment and retention, this research also focused on the future workforce by exploring learning needs among those who have traditionally been underrepresented in the trucking industry, particularly Aboriginal people and immigrants.

The primary objective of this study is to forward recommendations on how the CTHRC may address the learning needs identified within the context of a *National Essential Skills Strategy*. As such, two important streams of inquiry are included in the research mandate: documenting current industry practices in essential skills assessment and upgrading; and, analyzing the feasibility of developing industry-specific assessments of essential skills from the Test of Workplace Essential Skills (TOWES).

1.2 ESSENTIAL SKILLS DEFINITIONS & CONCEPTS

Essential skills (a.k.a. employability skills) are enabling skills that people use to: learn technical skills; perform job tasks; and, adapt to workplace changes. Essential skills also enhance the ability of people to pursue their career goals and to manage transitions in their lives.

The Essential Skills Research Project of Human Resources Development Canada (HRDC) has a large body of information on essential skills in the world of work (www.hrdc-drhc.gc.ca/essentialskills). Their research shows that the following essential skills are found in virtually all jobs—only the levels of complexity and importance to the job differ:

- ◆ Reading Text
- ◆ Document Use
- ◆ Numeracy
- ◆ Writing
- ◆ Working with Others
- ◆ Continuous Learning
- ◆ Oral Communication
- ◆ Computer Use
- ◆ Thinking Skills
 - Problem Solving
 - Decision Making
 - Job Task Planning & Organizing
 - Significant Use of Memory
 - Finding Information



- ◆ The International Adult Literacy Survey (Organization for Economic Co-operation and Development and Statistics Canada, 1995) was the first international literacy survey done involving seven OECD countries. It profiles the literacy skills of Canadian adults in the skill domains of prose literacy, document literacy and quantitative literacy and offers detailed information relating to differences in skill levels by region, age, etc. The Canadian results may be compared to those of other countries (e.g., U.S.A., Germany), allowing international data to inform industry-driven essential skills initiatives.
- ◆ HRDC developed a methodology to profile occupational standards for essential skills, allowing for the development of *Essential Skills Profiles* for specific occupations. Their complexity rating scales for reading text (i.e., prose literacy), document use (i.e., document literacy) and numeracy (i.e., quantitative literacy) are compatible with those used in the International Adult Literacy Survey.
- ◆ An *Essential Skills Profile* describes the specific essential skills required to competently perform a particular job (e.g., Professional Driver). *Essential Skills Profiles* are an important part of HRDC's occupational standards development process. The CTHRC has been a leader in developing both technical and essential occupational standards in an integrated manner.
- ◆ The essential skills of reading text, document and numeracy are recognized as learning-to-learn skills and are often used as predictors of success in technical training and in the performance of job tasks.
- ◆ The CTHRC's national *Essential Skills Profiles* are broad enough to reflect the tasks and corresponding essential skills required by different segments of the industry (e.g., TL, LTL, special commodities). The CTHRC advises carriers to use the national occupational standards to develop carrier-specific *Essential Skills Profiles* that reflect unique organizational requirements. In some cases, carrier-specific requirements for essential skills may be less complex than those indicated in the national *Essential Skills Profiles* (e.g., carrier that does not haul dangerous goods and does not cross the U.S. border).
- ◆ The complexity level of workplace tasks is determined both by characteristics of the material used and by how job incumbents use the material. For example, scanning the minutes of a safety meeting to identify the date of the next meeting is less complex than reading minutes to assess how safety practices may be improved.
- ◆ *Learning to read* and *reading to learn* are concepts tied to an academic framework. A great deal of workplace learning involves *reading to do* with the reader taking various actions and assuming risks associated with error.
- ◆ Literacy skills acquired during childhood may not endure throughout adulthood. Like muscles, literacy skills strengthen with regular use and weaken with lack of use. That is one of the many reasons that a growing number of employers do not consider grade level attainment a guarantee that candidates possess the essential skills required for various jobs.
- ◆ Many workplace materials are of poor quality. An Essential Skills Needs Assessment also looks at whether the materials are appropriately matched to the occupational requirements for essential skills.

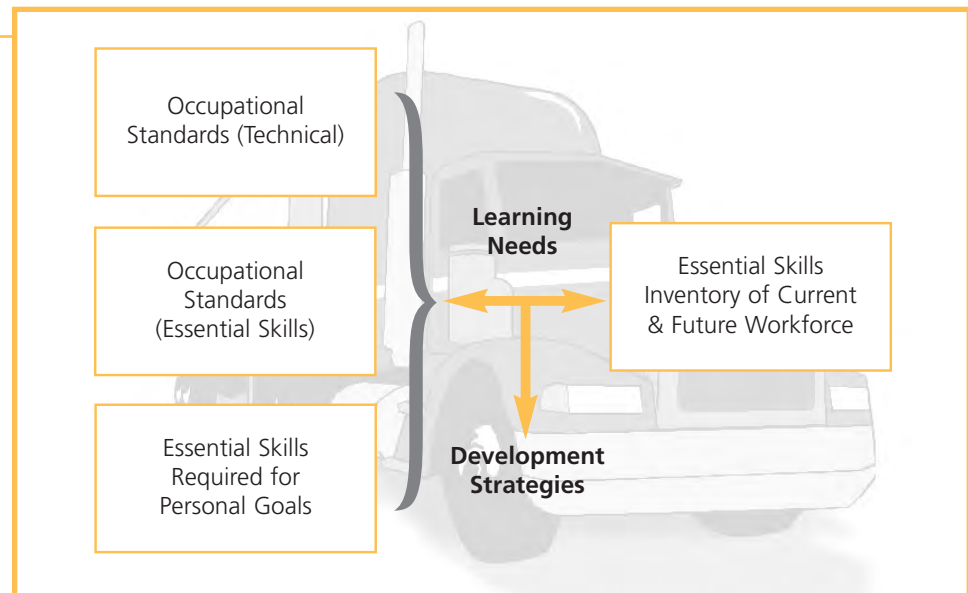
1.3 METHODOLOGY

Ms. Linda Gauthier, Managing Director, CTHRC served as the Project Manager. Ms. Carol MacLeod, Carol MacLeod & Associates Inc., was contracted to lead the research. Ms. MacLeod has worked closely with the CTHRC in developing the industry’s occupational standards for technical and essential skills in an integrated manner.

The CTHRC created an Essential Skills Steering Committee (Appendix A) to guide the research and to assist in the implementation of the recommendations. Two meetings were held in Toronto in October 2001 and May 2002. The Steering Committee included: six Human Resource Professionals (five from carriers and one from an agency); two carrier management representatives (i.e., General Manager, Operations Manager); one individual representing both a provincial sector council and a safety council; one provincial trucking association representative; and, one Aboriginal Traffic Supervisor from a carrier with 71% Aboriginal ownership. The Aboriginal Human Resource Development Council of Canada (AHRDCC) was offered a seat on the Steering Committee. Although time constraints did not permit their participation during the research phase, the CTHRC and AHRDCC agreed to explore the potential for partnership opportunities.

Figure 1 illustrates the research methodology. At the left are the CTHRC’s national occupational standards for four key occupations in the industry. They describe the competencies required for successful performance in each occupation; carriers may customize the national standards for technical and essential skills to reflect their specific requirements. Comparing technical and essential skills standards across occupations (e.g., Professional Driver to Dispatcher) provides useful career pathing information.

FIGURE 1
Model for Essential Skills Needs Assessment





It may be helpful to think of occupational standards as the industry's demand for skills—these are outlined in the CTHRC's *Essential Skills Profiles*. The mix of skills that, for example, Professional Drivers and Dispatchers have is the supply. Learning needs are identified by comparing industry's demand for essential skills with the available supply in the current and future workforce. With the CTHRC's *Essential Skills Profiles* in hand, the core research targeted supply side information.

Information was gathered through national consultations with industry stakeholders involving:

1. participation in a one-day workshop presented by the Aboriginal Human Resource Development Council of Canada on *Diversified Human Capital: The New Profit Centre*.
2. administration and analysis of a National Survey of Carriers and a National Survey of Private and Public Driver Training Schools.
3. four focus groups (i.e., Toronto, Belleville, Edmonton, Saskatoon) primarily with Professional Drivers with some participation by Dispatchers, Professional Driver Trainers and Transportation Safety Professionals. The focus group in Saskatoon was exclusively with Aboriginal employees at Northern Resources Trucking.
4. site visits and face-to-face interviews with Dispatchers, Human Resource Professionals, Professional Driver Trainers, Transportation Safety Professionals and others in management positions with carriers (e.g., Vice President, Operations Supervisor, Team Leader) in New Brunswick, Ontario, Alberta and Saskatchewan.
5. telephone interviews with selected industry stakeholders from carriers, public and private driver training schools and service providers in New Brunswick, Nova Scotia, Quebec, Ontario, Manitoba, Alberta and British Columbia.
6. one face-to-face meeting and phone consultations with TOWES representatives.

The Consultant also reviewed a report on the *Literacy Needs of the Trucking Industry* (1994) sponsored by the Manitoba Trucking Association and Canadian Trucking Research Institute.

2.

Essential Skills Learning Needs

2.1 CURRENT PROFESSIONAL DRIVER WORKFORCES

CONCLUSION #1

A significant number of Professional Drivers have poor reading text skill and this poses challenges in adapting to industry changes. This is particularly true for workers in their 40s and 50s with low levels of education.

The essential skill of reading text refers to reading material that is in the form of sentences and paragraphs. Professional Drivers use reading text skill to locate and interpret information written in memos, procedures, manuals and regulations. The complexity of the industry's requirements for reading text has increased over time as the industry faced stricter laws and regulations on the transport of goods. Furthermore, the consequence of misinterpretation is now higher with liability shared by both the Professional Driver and the carrier.

Seasoned Professional Drivers recognize that in today's world the job is about more than just driving. While their reading comprehension may not have been an important factor at the time they entered the industry, the skills bar has since moved up. There appears to be a correlation between age and level of reading text skill in the Professional Driver workforce. While younger (e.g., 20s, 30s) Professional Drivers do not always have proficient reading text skill, learning needs are particularly prevalent among Professional Drivers in their 40s and 50s. This is attributable, in part, to the younger workers' comparatively higher level of educational attainment. Also, the industry has become better at communicating its occupational requirements and expectations.

Information from the focus groups and interviews indicate that many Professional Drivers:

- ◆ have poor reading text skill;
- ◆ prefer to receive information verbally;
- ◆ entered the industry because they were not academically inclined;
- ◆ may face challenges in adapting to industry changes, especially those relating to compliance; and,
- ◆ may have strong technical skills even when their reading text skill is poor. Adults acquire information and develop skills in many different ways.

CONCLUSION #2

Reading materials that Professional Drivers are required to interpret are too complex because they are not developed in accordance with the principles of clear language. There is a mismatch between the reading text skills of many Professional Drivers and the complexity of the reading materials that they are required to use on the job (e.g., dangerous good regulations, procedures).

The issue of whether the complexity of workplace reading materials is appropriately matched to the information-processing skills of those required to use them on the job must be explored. This growing field is known as *clear language*.



In some quarters of the industry, it is recognized that the complexity of important reading materials doesn't "fit" with the level of reading text skill among Professional Drivers. For example, this was one of the main conclusions of *Literacy Needs of the Trucking Industry* (1994)—a study sponsored by the Manitoba Trucking Association and Canadian Trucking Research Institute. On May 10, 2002, the CTHRC's Steering Committee overseeing the development of national standards (technical and essential skills) for the occupation of Transportation Safety Professional reviewed this Report. They validated that this finding reflected their experience and went further in establishing a link between literacy and safety.

The federal government is on the verge of introducing a clear language version of the Transportation of Dangerous Goods (TDG) Act and regulations. While this is a welcome starting point, it still does not provide a document that is workforce ready. TDG information requirements vary by carrier, product and job function; carriers are required to teach regulations as they relate to specific job functions.

Transportation Safety Professionals and Professional Driver Trainers are responsible for teaching Professional Drivers to apply regulations to particular situations. A carrier's ability to prepare briefing information and procedures from the TDG Act and regulations for use by Professional Drivers is important yet most carriers are far from implementing clear language principles in the development of materials (e.g., driver's handbook, procedures, policies).

The industry is expecting a great deal of change with respect to Acts and regulations (e.g., hours of service, load securement) and is required to ensure that Professional Drivers can translate how these impact their day-to-day work. It is very timely to introduce the industry to clear language principles and to develop related tools and products.

CONCLUSION #3

At the point of hire there are learning needs among new Professional Drivers related to the skill of document use required to find and enter information on forms (bills of lading, drivers log) and to interpret maps, placards, tables, etc. These learning needs are typically short term, however, because they are addressed during a carrier's orientation program and subsequent performance monitoring.

The essential skill of document use refers to tasks that involve a variety of information displays in which words, numbers, icons and other visual characteristics (e.g., line, colour shape) are given meaning by their spatial arrangement. Professional Drivers are required to have high-level document use skill to interpret road maps, tables, bills of lading and schematic drawings and to use a variety of forms. It is among the most important essential skills of the job.

The education system tends to emphasize reading text (a.k.a. prose literacy) over document use (a.k.a. document literacy). Workplace reading is often centred on materials not generally seen in school settings (e.g., regulations, entry forms) and these materials may involve a combination of reading text and document use skills. As such, the world of work has typically assisted new entrants in building their document use skill as part of the technical training provided. The trucking industry does a good job in building a new hire's document use skill to the carrier's standards through its orientation program and in addressing any subsequent learning needs revealed by the rigorous monitoring procedures linked to compliance. This is, in part, because of the consequence of error.

CONCLUSION #4

In general, the current Professional Driver workforce has a sufficient level of numeracy skill. It was noted that numeracy skill appears to be adequate even among those with poor reading text skill. This is in keeping with research showing that essential skills function somewhat independently.

The complexity of carrier-specific numeracy requirements depends on the nature of the carrier's business. It is not surprising that, while numeracy learning needs do exist, it is not significant in the overall Professional Driver workforce. Numeracy skill is critical in day-to-day living outside the workplace so numeracy skill may be acquired even when reading text skill does not fully develop. The widespread use of pocket calculators in the industry also enables numerical calculation. As with document use, it may also be that industry is building a new hire's numeracy skill to the carrier's standards through its orientation program and addressing any subsequent learning needs revealed through monitoring.

CONCLUSION #5

In some regions of the country (e.g., Greater Toronto Area, Quebec, Vancouver) there are significant learning needs among Professional Drivers related to English as a Second Language (ESL).

While Canada is a bilingual country, it is important to recognize that English is the language of the trucking industry for the movement of goods between Canada and the United States. American legislation requires U.S. bound Professional Drivers to speak English. In an environment of heightened security following the events of September 11th American customs officers are showing less tolerance for those with less-than-proficient English language skills.

This is a major issue for the trucking industry in Quebec because French is the first language for 81% of the population (1996 Census, Statistics Canada) and most of the driver training programs are delivered in French. Some communities in Northern New Brunswick (e.g., Caraquet) have a similar language profile and ESL testing may lead to English language training at a community college.

It is also a challenge for carriers outside Quebec where immigrants represent a large and fast-growing proportion of the population. Data from the 1996 Census show that:

- ◆ approximately 34% of the total population in Vancouver has a mother tongue other than English or French (i.e., 593,005 of 1,813,935).
- ◆ approximately 36% of the total population in Toronto has a mother tongue other than English or French (i.e., 1,520,875 of 4,232,905).

In the Greater Toronto Area, ESL is a barrier in providing customer service even when the Canada-U.S. border is not being crossed. Dispatchers corroborated this, speaking of the difficulty in communicating at-a-distance with Professional Drivers and complaints from customers. OK Transportation Limited reports that many Owner-Operators in the Toronto area recruit a second driver from among their cultural peer group. While the Owner-Operator typically has a good command of the English language, the second driver often does not. The experience of the industry in Vancouver is similar.



Addressing ESL learning needs among those already working as Professional Drivers is challenging. Unlike other industries, mobile vehicles are their place of work and, as in the case of carriers with dedicated customers, Professional Drivers may not spend any appreciable amount of time at the carrier's facilities. For those that do, the Driver's room is typically not a peaceful environment conducive to learning.

Industry stakeholders are not confident that there is a desire among Professional Drivers to participate in ESL training. Outreach to community associations may assist the industry in identifying viable options to address ESL learning needs.

CONCLUSION #6

Carriers often accommodate Professional Drivers with low levels of essential skills as long as other hiring criteria are met (e.g., valid driver's licence, clean abstract, medical) by, for example, administering oral tests, relying on visual and hands-on training techniques and repetition. Although rare, some carriers will not hire Professional Drivers if their essential skills do not meet carrier-specific occupational standards.

Generally, there is a strong level of awareness in the industry about the essential skills learning needs of Professional Drivers, particularly among those involved in a carrier's screening process and in the delivery of training. In many instances, poor essential skills are not a barrier to employment, providing that other criteria related to technical proficiency are met. The rapid pace of change in the industry, along with the growing shortage of qualified Professional Drivers, influence the hiring practices of carriers.

Among a few carriers, such as Arnold Bros. Transport Ltd., poor essential skills are a barrier to employment. (Refer to 3.1.2 Use of Essential Skills Assessment Tools and Strategies.) In such instances, hiring policies are informed by:

- ◆ an awareness that complex essential skills are required due to the nature of a carrier's business;
- ◆ a sense that occupational essential skills requirements will become more complex given industry trends; and,
- ◆ experience that low levels of essential skills among Professional Drivers pose an unacceptable risk.

2.2 FUTURE PROFESSIONAL DRIVER WORKFORCE

2.2.1 ABORIGINAL PEOPLE

Data on the Aboriginal population of Canada from the 1996 Census (Statistics Canada) provide a backdrop for the industry in understanding the context for recruitment, training and retention among the Aboriginal workforce:

◆ Aboriginal population much younger than the general population

- The average age of the Aboriginal population is 25.5 years, 10 years younger than the average of 35.4 years in the general population.
- Children under 15 years of age account for 35% of all Aboriginal people, compared with only 20% of Canada's total population. These young people represent almost one-fifth (18%) of all age groups within the Aboriginal population, compared with 13% in the general population.

◆ Aboriginal population growing more rapidly than the general population

- There were 491 Aboriginal children under five years of age for every 1,000 Aboriginal women of childbearing age; this is about 70% higher than the ratio for the total population (i.e., 290 children per 1,000 women).
- A large increase within the Aboriginal working-age population will occur in the next decade.
- Similarly, over the next two decades, other segments of the Aboriginal adult population are expected to increase significantly, particularly those aged 35 to 54 who comprise the majority of the working-age population. By 2006, this group is expected to grow from 173,000 to 244,000, a 41% increase.

◆ More Aboriginal people live west of Quebec, and in the North

- Aboriginal people represent 12% of Manitoba's population, the highest proportion among the provinces; they represent 11% of Saskatchewan's population and 5% of Alberta's population, compared to, for example, 1% in Ontario.
- The highest concentrations by far are in the North. The 39,690 Aboriginal people in the Northwest Territories (as defined in 1996) represent 62% of its total population. There are 6,175 Aboriginal people in the Yukon, representing 20% of its population.
- About three out of 10 Aboriginal people live on rural reserves and another three in 10 live in census metropolitan areas. One quarter live in urban areas other than census metropolitan areas, and one-fifth in rural areas other than reserves, often isolated northern communities.

◆ One out of five Aboriginal people lives in seven census metropolitan areas

- 20% of Aboriginal people (i.e., 171,000) live in seven of the country's 25 census metropolitan areas – Winnipeg, Edmonton, Vancouver, Saskatoon, Toronto, Calgary and Regina.

◆ Three out of 10 Aboriginal people could carry on on a conversation in an Aboriginal language

- Just over 25% of the Aboriginal population report that they had an Aboriginal language as mother tongue (i.e., first language learned at home during childhood)
- Only 15% report that they actually spoke an Aboriginal language at home



The trucking industry is keenly interested in encouraging Aboriginal participation in the trucking industry through an increase in the number of Professional Drivers, particularly where Aboriginal people represent a high proportion of the total population. As such, this study included a mandate to identify essential skills learning needs among Aboriginal people.

This study included a site visit to Northern Resource Trucking in Saskatoon, which is 71% owned by Aboriginal organizations. The information gathered there, along with interview and survey data from other parts of the country, support the finding that there are significant learning needs among Aboriginal people in urban and remote settings in the key skills of reading text, document use and numeracy. Some of these learning needs relate to: educational attainment; cultural differences; English as a Second Language; and the Aboriginal tradition of oral communication over the written form.

Many carriers are unsure of how these barriers may be addressed. Others have a well-defined strategy for inclusion. Success in this regard requires partnerships with Aboriginal stakeholders and a substantial commitment to addressing essential and technical learning needs, along with cultural and communication issues, as part of an overall recruitment, training and retention strategy.

CONCLUSION #7

The trucking industry is seeking ways to encourage Aboriginal participation as Professional Drivers. There are significant essential skills learning needs among Aboriginal people, as well as cultural and communication issues, to consider in establishing Aboriginal recruitment, training and retention methods. Building partnerships with Aboriginal organizations is critical to developing a strategy of inclusion.

2.2.2 IMMIGRANTS

CONCLUSION #8

English as a Second Language (ESL) learning needs are prevalent among new immigrants and addressing them is linked to opportunities for recruitment and retention as Professional Drivers. This may be done through referral to community-based services.

New immigrants considering a career in the industry often have ESL learning needs. As carriers continue to emphasize customer service, oral communication skill is an increasingly important job requirement. Proficiency in English is mandatory for drivers crossing the U.S. border.

What is an appropriate role for the industry in addressing ESL learning needs of those who have not yet entered the industry? The industry may facilitate ESL development through referral to community-based resources. It may also wish to secure the input of various cultural organizations in identifying other approaches that may be considered.

2.3 CURRENT DISPATCHER WORKFORCE

CONCLUSION #9

In general, the current Dispatcher workforce has sufficient skill in reading text, document use and numeracy. There are, however, ongoing learning needs associated with the essential skill of computer use which are adequately being handled by carriers. Those considering a career as a Dispatcher have accurate information about the job; they do not self-select into this occupation if their essential skills are mismatched to the occupational requirements.

Is it easier to graft management skills onto a Professional Driver with industry knowledge and driving experience or to graft industry knowledge and driving experience onto someone with management skills? This is the dilemma that carriers have faced in the past and may face in the future.

A carrier that has opted for the former approach reported that this may limit the organization's ability to introduce new and more complex management tools if these tools raise the essential skills requirements of the occupation.

Once again, it is important to recognize that carrier-specific standards for the essential skills required by Dispatchers may be higher or lower than those outlined in the CTHRC's national occupational standards. Factors such as level of technology in use and how a carrier organizes work influence the requirements for essential skills.

2.4 CAREER PATHING IN THE INDUSTRY

CONCLUSION #10

Essential skills learning needs are also associated with an individual's career goals. Professional Drivers who want to move into other positions in the industry (e.g., Dispatcher, Professional Driver Trainer) must ensure that their essential skills will support the transition.

Essential skills learning needs are also associated with an individual's career goals. A comparative analysis of the national standards for technical and essential skills for various occupations in the trucking industry should spur the development of career-related products and services. An emphasis on career pathing may be part of a carrier's retention strategy.



3. Assessing Essential Skills

3.1 INDUSTRY PRACTICE IN ESSENTIAL SKILLS ASSESSMENT AND UPGRADING

3.1.1 LINKING ESSENTIAL SKILLS TO HUMAN RESOURCE INTERESTS

CONCLUSION #11

Awareness of the CTHRC's *Essential Skills Profiles* for Professional Driver and Dispatcher (released in 2000 and 1999 respectively) is low even though the industry is aware of the important role of essential skills in facilitating learning and job performance. (Note: The CTHRC has not yet introduced industry to the *Essential Skills Profiles* for Professional Driver Trainer and Transportation Safety Professional.)

In general the industry is aware of how essential skills link to its interests in the areas of recruitment, hiring, training and retention. Driver training schools understand that reading text, document use and numeracy skills are predictors of success in their training programs. In some provinces (e.g., Nova Scotia, New Brunswick) this awareness has prompted governments to establish mandatory essential skills screening protocols as a prerequisite to public funding of participation in driver training programs. Carriers link learning-to-learn skills to a Professional Driver's ability to adequately perform on the job and this has prompted the use of formal and informal assessment tools and strategies.

In practice, key industry stakeholders (e.g., Professional Driver Trainers) are aware of the important role of essential skills in facilitating learning and job performance. In general, however, the industry knows little about the CTHRC's *Essential Skills Profiles* for Professional Driver and Dispatcher (released in 2000 and 1999 respectively) and how these occupational standards relate to their human resource interests. This is not unexpected as this Report is a precursor to establishing a CTHRC *National Essential Skills Strategy*. The result, however, is that the industry does not yet:

- ◆ share a common language to discuss and exchange information on essential skills;
- ◆ understand HRDC's essential skills profiling methodology (the basis for developing the CTHRC's *Essential Skills Profiles* for key occupations in the industry) and how it connects to other occupational information (e.g., National Occupational Classification) in Canada;
- ◆ have the internal capacity to customize the national occupational standards for technical and essential skills to reflect carrier-specific requirements;
- ◆ recognize the value of ensuring a fit between the methodology used to establish national and carrier-specific occupational standards and the methodology used to assess an individual's essential skills against these standards.

CONCLUSION #12

Driver training schools and carriers understand that, while there is a strong association between educational attainment and proficiency in reading text, document use and numeracy, educational attainment does not guarantee proficiency. Their experience resonates with literacy research showing that factors, such as the length of time out of school and daily use of literacy skills, impact proficiency levels.

Literacy skills acquired during youth may not endure throughout adulthood. The potential for skills loss when literacy skills are not used regularly is among the main findings of the International Adult Literacy Survey. Many Professional Drivers have been out of school for some time and don't have a strong tradition of reading on the job or in their personal lives. It must also be noted that adults acquire skills and knowledge in many different ways and that someone with a low level of educational attainment may in fact be proficient in reading text, document use and numeracy.

CONCLUSION #13

Industry is already using formal essential skills assessment tools and informal essential skills assessment strategies for a variety of purposes such as: screening for hire; screening for placement with carriers; predicting success in technical training; targeting technical training to individual learning needs and styles; development; and, career pathing.

The trucking industry does a considerable amount of assessment related to verifying technical skills (e.g., road tests) and requirements (e.g., medical). This study only analyzed the industry's use of assessment relating to essential skills.

Industry is using formal essential skills assessment tools and informal essential skills assessment strategies for a variety of purposes. It must be noted that some Ontario-based private driver training schools expressed strong concerns about mandatory literacy testing because they successfully assist training participants with low levels of literacy in achieving carrier-specific standards for essential skills.

3.1.2 USE OF ESSENTIAL SKILLS ASSESSMENT TOOLS AND STRATEGIES

The fact that the industry is assessing essential skills proficiency in a multitude of ways shows an underlying awareness that there are essential skills learning needs among Professional Drivers and those seeking entry into driver training programs. The industry is using three main approaches to the assessment of essential skills: formal assessment tools available from Ministries of Education and service providers; formal assessment tools and techniques developed in house; and, informal assessment strategies that are invisible to the end user. The tables on the following pages summarize the research findings.



TABLE 1:
Industry's Use of Formal Essential Skills Assessment Tools Available from Ministries of Education and Service Providers

Name of Assessment Tool	Purpose	User	Comments
Canadian Adult Achievement Test (CAAT): Reading Comprehension, Number Operations, Problem Solving,	<i>Screening for training</i> Mandatory screening to determine eligibility for government funding of participation in driver training programs	NB and NS governments	NB centralizes the assessment of essential and technical aptitude with one contractor
Canadian Adult Achievement Test (CAAT): Reading Comprehension, Number Operations, Problem Solving, Mechanical Reasoning.	<i>Upgrading and Career Pathing</i> Identify learning needs among Professional Driver workforce. Assess potential for career pathing (e.g., warehouse to Professional Driver).	Armour Transportation, New Brunswick	Uses tests only if there is reason to suspect that there may be essential skills learning needs. May use mechanical reasoning test as a proxy for literacy skills.
Modified General Education Development (GED) Test	<i>Upgrading</i> Mandatory for those participating in the Fleet Driver Training program. Results lead to upgrading strategies and related learning is woven into the program	Ontario Safety League	Administered as the first step of the program. To date, 15% of participants have pursued broader GED upgrading in addition to job-specific upgrading.
Test développement général	<i>Screening for training</i> Mandatory for entry into public driver training programs in Quebec if academic requirements are not met.	Centre de formation du transport routier Saint-Jérôme	In Quebec, upgrading is available at no cost to all adults through the public school system.

The use of the CAAT in New Brunswick merits elaboration as the research included interviews and a site visit with key stakeholders.

With industry's support, the New Brunswick government instituted a Driver Assessment Program. Mr. Laurie Robichaud, IJP Consulting, won the contract to administer a battery of tests that includes: an Industry General Knowledge test; the Strong Inventory; and, the Canadian Adult Achievement Test (CAAT). All tests are administered in both French and English. It is important to describe the essential skills component of New Brunswick's Driver Assessment Program to compare it to the Test of Workplace Essential Skills (TOWES). The CTHRC's *Essential Skills Profile for Professional Driver* outlines the requirements for reading text and numeracy. In New Brunswick, the following CAAT tests are used to measure these essential skills within established timelines:

- ◆ CAAT Test 2: Reading Comprehension (60 minutes);
- ◆ CAAT Test 4: Mathematics - Number Operations (60 minutes); and,
- ◆ CAAT Test 5: Mathematics - Problem Solving (60 minutes).

The CAAT measures mathematical ability using two tests that are administered and scored separately to indicate strengths in number operations and problem solving. The resulting scores may be combined for a total mathematics score.

At the invitation of the CTHRC, Mr. Robichaud participated in the second meeting of the Essential Skills Steering Committee. He reported that 60% of the 300 people screened to date met industry requirements. Of the 40% who failed, 80% did so because they did not meet the minimum reading and numeracy requirements. Were these candidates lost to industry? While no statistics are available, several industry sources reported that some of these applicants: were lost to industry as counsellors guided them to other careers; did in fact access student loans to participate in driver training schools in New Brunswick that do not meet industry national standards; or, acquired training at private driver training schools in Quebec.

Whether or not there is a more appropriate assessment tool that could be used is a question that will be addressed later in this Report. The interesting point to be made is that there appears to be little participation in industry-specific upgrading activities among those whose CAAT scores don't make the grade even though a strong link between assessment and upgrading is widely accepted as a best practice. The essential skills learning needs of those who failed the CAAT and managed to enter the industry anyway have not disappeared. Furthermore, the upgrading available at community colleges to those who don't meet industry requirements is not conducive to building a pathway to industry. The community college system focuses on attaining Grade 12 as opposed to attaining the specific occupational standards for essential skills; the time required to achieve the former objective is greater than the time required to achieve the latter. This is characteristic of the tension between an academic focus and one which is linked to the workplace and occupational standards.

Recruitment and retention are among the trucking industry's most pressing concerns, yet there appears to be a disconnect between assessing and upgrading the essential skills of those interested in becoming qualified as a Professional Driver.

CONCLUSION #14

The assessment of essential skills used in the New Brunswick government's Driver Assessment Program (i.e., Canadian Adult Achievement Test) lacks a parallel emphasis on related upgrading strategies. Assessment is not strongly linked to upgrading, potentially closing doors to those who are interested in a career as a Professional Driver. This is counterintuitive given the industry's need to recruit and retain Professional Drivers.



TABLE 2:
Industry's Use of Formal Essential Skills Assessment Tools Developed In-House

Name of Assessment Tool	Purpose	User	Comments
Literacy Test	<i>Screening for Hire</i> Mandatory screening for all incoming applicants for the occupation of Professional Driver.	Arnold Bros. Transport Ltd.	Pilot testing for last 1 _ yrs. Administered at time of application. Takes one hour. Benchmarked to Grade 10. Those failing the test are not hired.
Log Book Test	<i>Screening for Placement</i> Identify reading text, document use and numeracy skills of Professional Drivers seeking placement with a carrier.	Unique Personnel Services Ltd.	Administered in French and English. Used as a proxy for literacy proficiency. One of many factors in assessing qualifications.

The development of a Literacy Test by Arnold Bros. Transport Ltd. and its use across the organization merits elaboration. Mr. John Wallis, Manager of Quality & Education, led the development of this literacy test from the carrier's Winnipeg office. He views it as an important step in risk management and cites the following reasons for the carrier's decision to invest in developing and pilot testing its own assessment tool and related administrative protocols:

- ◆ shortage of available drivers;
- ◆ larger numbers of immigrants;
- ◆ ESL is an issue when crossing the U.S. border;
- ◆ more complex essential skills are now required for the occupation of Professional Driver;
- ◆ there is less room for error given the increase in regulatory attention; and,
- ◆ regulatory attention will become more stringent in the future.

While those who fail the test are not hired, they are referred to community-based literacy organizations for upgrading and encouraged to reapply if their essential skills improve. While Arnold Bros. Transport Ltd. has gone the route of in-house development, Mr. Wallis indicated that they would welcome a national essential skills assessment tool.

TABLE 3:
Industry’s Use of Informal Essential Skills Assessment Strategies

Description of Assessment Strategy	Purpose	User	Comments
Professional Drivers complete the application form on the premises and it is used as an indicator of essential skills proficiency.	<i>Screening for Hire</i>	OK Transportation Ltd.	Invisible to the applicant. 60% of applicants are rejected because of essential skills issues. ESL is a large concern.
Question and Answer Techniques During the Interview	<i>Targeting Training Needs</i>	Westcan Bulk Transport	Invisible to the applicant. Personnel Administrator embeds questions and answers in the interview process to assess reading comprehension. Poor reading skills inform the training strategy.
Question and Answer Techniques During Interviews	<i>Screening for Hire</i>	ECL Special Commodities Division	Invisible to the applicant. Managers embed questions and answers in the interview process to assess reading comprehension. One of many factors in assessing qualifications.

3.2 TEST OF WORKPLACE ESSENTIAL SKILLS (TOWES) www.towes.com

TOWES is a new test of workplace essential skills which has recently been developed in Canada. It was developed by SkillPlan and Bow Valley College with financial support from Human Resources Development Canada. This study included a mandate to explore the feasibility of using the TOWES as the assessment component of the CTHRC’s *National Essential Skills Strategy*.

The CTHRC’s Essential Skills Steering Committee had a briefing session on TOWES at its first meeting in October 2001. A summary of key points follows:

- ◆ TOWES has proven validity and reliability as a workplace assessment tool.
- ◆ TOWES measures essential skills in three domains—reading text, document use and numeracy—using one test based on tasks that mimic workplace requirements.
- ◆ TOWES is not a single test but rather a bank of test items that may be selectively assembled to prepare customized assessment tools.
- ◆ A customized assessment tool allows an industry to assess an individual’s skills against its occupational standards for essential skills, as opposed to level of educational attainment (e.g., Grade 10). Customization also ensures that users visibly see that the test is linked to the industry and this gets buy-in.



- ◆ The first step in developing a customized assessment tool is to benchmark the occupational standards for essential skills. TOWES typically charges \$7,000/occupation for this service. The CTHRC has its *Essential Skills Profiles* in place and TOWES has agreed to waive its policy of validating this work because it has confidence in the validity of the research.
- ◆ The methodology used to develop TOWES matches the methodology used to develop the CTHRC's *Essential Skills Profiles* and over 150 *Essential Skills Profiles* publicly available through HRDC.
- ◆ The average time to complete a TOWES test is 1 _ hours, although up to 2 hours is permitted.
- ◆ Third-party scoring services are available through TOWES.
- ◆ TOWES will train industry stakeholders to do their own scoring.
- ◆ An Employment Readiness TOWES is also available. It is designed for users with low levels of essential skills.
- ◆ TOWES is presently available in English only. The co-sponsors of TOWES are interested in working with the CTHRC to develop and validate a French-language version of a test for Professional Drivers.

Based on its understanding of the industry's requirements, the co-sponsors of TOWES have advised the CTHRC to develop three industry-specific tests and are offering a price of \$15,000:

- ◆ Test 1 (Form A and B) would have the capacity to assess against the reading text, document use and numeracy requirements for the occupations of Professional Driver and Dispatcher. The two forms of Test 1 allow for pre-testing and post-testing. \$5,000
- ◆ Test 2 (Form A and B) would have the capacity to assess against the reading text, document use and numeracy requirements for the occupations of Professional Driver Trainer and Transportation Safety Professional. The two forms of Test 2 allow for pre-testing and post-testing. \$5,000
- ◆ Test 3 (Form A and Form B) – Employment Readiness TOWES - would have the capacity to assess against the employability skills required by entry-level jobs. It would be used to for individuals or groups known to have low-level literacy skills as a lead-in to upgrading. The CTHRC may use this test in its effort to recruit and train Aboriginal people. \$5,000

The customized tests need to undergo a validation process and this research will determine whether it is possible to roll Tests 1 and 2 together for a single assessment encompassing all four occupations. Proceeding with the development of a single test at this point is not advised since carrier-specific *Essential Skills Profiles* have not been yet developed from the CTHRC's national standards. As such, information on the range of complexity levels for three essential skills being measured is unknown at this time.

CONCLUSION #15

TOWES should be the basis for the assessment component of the CTHRC's *National Essential Skills Strategy*. It meets the industry's needs better than the assessment tools and strategies currently in use.

4.

Recommendations for a CTHRC *National Essential Skills Strategy*

The CTHRC is uniquely positioned to lead the trucking industry in addressing its essential skills learning needs. It currently offers industry a range of training resources to develop the technical skills of Professional Drivers (e.g., *Professional Driver Improvement Program*, *Earning Your Wheels*, *driver training school accreditation*). Enhancing the capacity of the trucking industry's extensive technical training infrastructure to include a parallel focus on essential skills is central to these recommendations. This model—known as integrating essential skills into technical training—has a proven track record of success.

The CTHRC *National Essential Skills Strategy* features four complementary components that drive the recommendations:





Assessment



RECOMMENDATIONS - ASSESSMENT

Is it feasible to develop national, industry-specific assessment tools? How should carriers and driver training schools identify essential skills learning needs? What approach to assessment measures against occupational standards for literacy skills as opposed to grade levels? How do you assess employment readiness as part of an overall strategy of inclusion for Aboriginal people? What administration protocols reflect best practices?

1. It is recommended that the CTHRC lead the development of two industry-specific versions of the Test of Workplace Essential skills (TOWES), each with two forms for pre-testing and post-testing, to facilitate assessment of literacy skills (i.e., reading text, document use and numeracy skills) against carrier-specific occupational standards:
 - ◆ Test 1 (Form A and B) for the occupations of Professional Driver and Dispatcher; and,
 - ◆ Test 2 (Form A and B) for the occupations of Professional Driver Trainer and Transportation Safety Professional.
2. It is recommended that the CTHRC lead the development of an industry-specific, Employment Readiness version of TOWES, with two forms for pre-testing and post-testing. This version should be benchmarked to the literacy skills required by many entry-level jobs, as opposed to the industry's comparatively higher level occupational standards. It may be used in outreach initiatives among Aboriginal people as part of an overall strategy of inclusion in which literacy upgrading is linked to technical skills training.
3. It is recommended that the CTHRC partner with TOWES in developing and validating a French language version of the test for Professional Drivers.
4. It is recommended that the CTHRC support TOWES in developing its capacity for on-line testing.
5. It is recommended that the CTHRC provide test-scoring services, along with TOWES, to facilitate 24-hour scoring turnaround from any point in Canada until on-line testing in English and French becomes available.
6. It is recommended that the CTHRC lead the development of administration protocols and best practices for the use of TOWES and communicate this information to industry.



RECOMMENDATIONS - UPGRADING

How can the link between assessment and upgrading be strengthened? Is there an existing essential skills upgrading curriculum that may be customized for the trucking industry? What is an appropriate role for the industry in delivering essential skills upgrading? How do upgrading strategies support the industry's recruitment and retention interests?

7. It is recommended that the CTHRC work with industry stakeholders to delineate an appropriate role for the industry in delivering essential skills upgrading and in referring to community-based services.
8. It is recommended that the CTHRC work with Bow Valley College to adapt its *Building Workplace Essential Skills Instructor's Guide* to reflect the context of the trucking industry and introduce this resource to the industry.
9. It is recommended that the CTHRC explore the feasibility of making the *Building Workplace Essential Skills Instructor's Guide*, and other essential skills upgrading resources, available on line.
10. It is recommended that the CTHRC integrate information about essential skills standards, assessment and learning strategies into its national *Earning Your Wheels* and *Professional Driver Improvement* programs.
11. It is recommended that the CTHRC further explore how to best address ESL learning needs in the existing Professional Driver workforce.





RECOMMENDATIONS – PARTNERSHIPS

What range and type of partnerships will support the implementation of the CTHRC *National Essential Skills Strategy*? How can the CTHRC involve innovative carriers and driver training schools in pilot projects? How can the CTHRC stimulate the industry's use of clear language principles in developing training materials? What Aboriginal organizations should be invited to partner in the implementation? What financial partnerships need to be explored?

12. It is recommended that the CTHRC partner with industry stakeholders willing to participate in pilot projects involving the use of customized TOWES tests and upgrading strategies. The pilot projects should reflect the following human resource applications:
 - ◆ Pilot Project #1 - assessing qualifications for entry into driver training school programs;
 - ◆ Pilot Project #2 - assessing trainees accepted into programs at driver training schools to establish individual and class skills profiles;
 - ◆ Pilot Project #3 - carrier screening of applicants where hiring is dependent on passing TOWES;
 - ◆ Pilot Project #4 - carrier screening of applicants where TOWES scores are weighed along with other information on qualifications;
 - ◆ Pilot Project #5 - driver leasing firm/agency screening of applicants for placement with carriers;
 - ◆ Pilot Project #6 - recruitment, training and retention of Aboriginal people seeking to enter the industry as Professional Drivers;
 - ◆ Pilot Project #7 - career pathing among the occupations of Professional Driver, Dispatcher, Professional Driver Trainer and Transportation Safety Professional; and,
 - ◆ Pilot Project #8 - exploring the possible link between safety and essential skills and preparing guidelines for the development of safety training materials in accordance with clear language principles.
13. It is recommended that the CTHRC explore the potential for a partnership with the Aboriginal Human Resource Development Council of Canada regarding Pilot Project #6 – recruitment, training and retention of Aboriginal people seeking to enter the industry as Professional Drivers.
14. It is recommended that the CTHRC secure financial support to implement its *National Essential Skills Strategy* from HRDC, industry stakeholders and other interested parties.
15. It is recommended that the CTHRC invite its Essential Skills Steering Committee to oversee the implementation of these recommendations.



RECOMMENDATIONS – AWARENESS

What activities will build an awareness of essential skills among industry stakeholders? How should the CTHRC promote its national occupational standards for essential skills? How can the CTHRC build the capacity of carriers to prepare Essential Skills Profiles that reflect specific organizational requirements? What career-pathing tools might be developed from the national occupational standards for essential skills?

16. It is recommended that the CTHRC enable industry stakeholders to participate in various conferences on essential skills to begin building an awareness of Canadian workplace literacy research and practice.
17. It is recommended that the CTHRC sponsor a *Profiling Occupational Standards for Essential Skills* workshop (Lewe & MacLeod) for industry stakeholders leading to certification as essential skills analysts by Bow Valley College. This will increase the industry's capacity to customize the CTHRC's national occupational standards for essential skills to carrier-specific requirements and to develop carrier-specific essential skills standards for other occupations.
18. It is recommended that the CTHRC coordinate a Mentorship program to support newly certified essential skills analysts from industry in: acquiring practical experience in preparing carrier-specific occupational standards for essential skills; and, in meeting quality standards.
19. It is recommended that the CTHRC post information about its *National Essential Skills Strategy* on its Web site and reference links to other sources of information.
20. It is recommended that the CTHRC host a national essential skills conference to introduce the industry to its *National Essential Skills Strategy* and related activities. The timing of this conference should coincide with the availability of information on actual industry experience in various pilot projects.
21. It is recommended that the CTHRC develop career pathing tools based on comparative analyses of the national standards (technical and essential skills) in place for the occupations of Professional Driver, Dispatcher, Professional Driver Trainer and Transportation Safety Professional.



APPENDIX A:

CTHRC Essential Skills Steering Committee

Joe Ball

Operations Manager, Truckload
Meyers Transport
Belleville, ON

Robin Doherty

Director of Safety & Compliance
Westcan Bulk Transport Ltd.
Edmonton, AB

Marlene Egeland

People Development & Culture Leader
ECL Group of Companies Ltd.
Calgary, AB

Brigid Hayes

Program Manager
National Literacy Secretariat
Ottawa, ON

Linda Gauthier

Managing Director
Canadian Trucking Human Resources Council
Ottawa, ON

Dianne Isnor

Executive Director
Trucking Human Resource Sector Council
& Nova Scotia Trucking Safety Association
Kentville, NS

Carol MacLeod

President
Carol MacLeod & Associates Inc.
Ottawa, ON

Michael Noble

Vice President of Human Resources
Unique Personnel Services Inc.
Dorval, QB

Nelson Olfert

Employment Services Supervisor
Reimer Express Lines Ltd.
Winnipeg, MB

Debra Rose

Director of Organizational Development
OK Transportation Limited
Scarborough, ON

Ralph Settee

Traffic Supervisor
Northern Resources Trucking
Saskatoon, SK

Betsy Sharples

Manager, Human Resources and Labour Issues
Ontario Trucking Association
Toronto, ON

Rob Weston

General Manager
Mercury Express Ltd.
Surrey, BC