

COUNCIL OF MINISTERS OF EDUCATION, CANADA
CONSEIL DES MINISTRES DE L'ÉDUCATION (CANADA)

252 Bloor Street West
Suite 5-200
Toronto ON M5S 1V5
☎ (416) 964-2551
... (416) 964-2296
✉ cmec@cmec.ca

THIRD NATIONAL FORUM ON EDUCATION
Education and Life - Transitions

St. John's, Newfoundland
May 28-30, 1998

UPDATING ESSENTIAL SKILLS FOR THE WORKPLACE

Reference document coordinated by Human Resources Development Canada
for the sub-theme on *The Changing Labour Market Environment*

The opinions expressed in this paper are not necessarily those of Human Resources Development Canada nor of the Council of Ministers of Education, Canada.

Updating Essential Skills for the Workplace

Table of Contents

Executive Summary	i
1. Introduction	1
1.1 New Title	1
1.2 Purpose	1
1.3 Structure	1
2. Setting the Stage: Background Information	2
2.1 Terms and Concepts Related to Updating Essential Skills for the Workplace	2
2.2 Essential Skills Updating Needs of Canadian Adults	3
3. Increasing Opportunities for Adults to Update Essential Skills for the World of Work ..	6
3.1 Shifting Paradigms	6
3.2 Workplace as a Venue for Learning	6
3.3 Partnerships and Linkages to Policy	8
3.4 Sustainability	11
3.5 Principles of Adult Education	13
3.6 Prior Learning Assessment and Recognition	15
3.7 Learning Technologies	15
4. CMEC: Untapped Potential for Impact and Influence	16
References	
Appendix A: Acknowledgements	

Executive Summary

Setting the Stage: Background Information

To recognize that there are many enabling skills which influence employability, this paper was retitled *Updating Essential Skills for the Workplace* from its advertised title *Updating basic employability skills: literacy, numeracy and computer literacy*.

The relationship of adults to the workforce, and related transitions at points throughout their working lives (e.g., re-entering the labour market, adjusting to unemployment, adapting to workplace change), is the context for this paper.

Essential skills are enabling skills that help adults to: perform required job tasks; learn occupation-specific skills; and adapt to workplace change. The definition of essential skills for the workplace has evolved beyond the three Rs to include such dimensions as oral communication, thinking skills, working with others, continuous learning and computer use.

The Essential Skills Research Project of Human Resources Development Canada (HRDC) is having a growing influence in helping stakeholders to understand the world of work. HRDC is producing Essential Skills Profiles that describe how essential skills are used in different occupations and making linkages to other initiatives.

Structural changes in the Canadian economy have led to a new and complex labour market environment which requires higher levels of essential skills. Findings from the International Adult Literacy Survey (IALS) indicate that large proportions of Canadian adults are in need of essential skills updating and are more likely than those with high-level skills to face difficulties in acquiring and maintaining employability. Most of the workers of tomorrow are already in the workforce, putting a new emphasis on retraining.

Gradually improving the K-12 and Postsecondary education (PSE) systems alone will not eliminate the need for essential skills updating. In the new economy, essential skills training will be an ongoing requirement. This is due to continuous workplace change and the fact that essential skills acquired during childhood may weaken if not used in daily activities.

The central question relates to the development of public policy which will significantly increase the opportunities for adults to update and strengthen their essential skills on an ongoing basis.

Increasing Opportunities for Essential Skills Updating

Championing a new paradigm of adult workplace education and lifelong learning is the most viable way of addressing the challenge at hand. The central tenets of an adult workplace education system point to the importance of:

- identifying the **workplace as a venue for lifelong learning**.
 - the workplace provides daily opportunities to maintain and strengthen essential skills
 - workplace education is a natural extension of the ongoing dialogue between workplace stakeholders (e.g., labour and management)
 - essential skills enhancement may readily be integrated into overall training plans
- forging **partnerships** and building **linkages to policy** in new and different ways.
 - some governments have successfully acted as catalysts in bringing private-sector stakeholders into partnerships
 - there are spin-off benefits to building linkages to socio-economic policy areas relating to a national industrial strategy, family literacy and training supports for the employed and unemployed
- planning for **sustainability**, based on funding from both the public sector and private sector.
 - sustainable funding is the life-support system of workplace learning initiatives
 - the sustainability of workplace programs which rely solely on government funding will always be at risk due to policy shifts
 - policy intervention can support sustainability but a one-size-fits-all approach does not work

- there is a need to generate policy options which support sustainability and ways to earn the public will to implement them
- best practices that business and labour have used to achieve sustainability, in the absence of ongoing government funding, should be shared
- valuing the **principles of adult education** and their implications for program planning, practitioner training and competency-based outcomes.
 - governments have a role to play in enabling workplace partners to perform program planning tasks, such as providing seed money for the development of materials or offering the services of experienced workplace adult educators
 - professional development opportunities for practitioners need to be enhanced
 - competency-based outcomes must be woven into all aspects of workplace education and the human resources activities of employers – grade levels are not valid indicators of underlying competencies
- enhancing **prior learning assessment and recognition**.
 - PLAR enables adults to move more readily among the many venues for learning that they may encounter across the life-span
 - the recognition of skills acquired through experience, which may lead to some form of accreditation, is linked to empowerment
- utilizing **new learning technologies**.
 - many workplace education programs use computers as mediators of learning and many more would like to do so
 - new learning technologies have yet to be fully explored by workplace education programs

CMEC's Potential for Impact and Influence

CMEC is encouraged to launch a National Strategy for Developing and Strengthening Essential Skills throughout Life. Consideration should be given to enacting the idea of establishing a representational Steering Committee on Essential Skills, forwarded at the pan-Canadian discussion on the Essential Skills Research Project in March 1997. HRDC should be invited to sit as an ex-officio member.

The first task of the Steering Committee could be a policy audit. Policy tools have significant potential to support the capacity of adults to update and maintain essential skills in the face of unprecedented labour market changes.

The objectives of such a policy audit follow:

1. To develop a discussion paper describing policy practices which contribute to the development and strengthening of essential skills throughout life, drawing on the experiences of various Departments of Education in Canada.
2. To review the education and training policies of each provincial Department of Education in terms of their contribution to developing and strengthening essential skills throughout life.
3. To facilitate a pan-Canadian policy forum to:
 - a) report on the results of the policy reviews in each province.
 - b) collaboratively develop strategic plans to guide a process of continuous policy improvement.
4. To publish and widely circulate a report on the National Strategy for Developing and Strengthening Essential Skills throughout Life.

1. Introduction

1.1 New Title

In its Information for Partners, the Council of Ministers of Education, Canada (CMEC) advertised the topic of this paper as *Updating basic employability skills: literacy, numeracy and computer literacy*.

The paper was retitled as *Updating Essential Skills for the Workplace* to feature a broader range of skills known to be important in the world of work. This includes but is not limited to literacy, numeracy, computer competencies, problem solving and teamwork.

1.2 Purpose

Generally, the purpose of this paper is to initiate discussion among CMEC partners about updating essential skills for the workplace and related policy areas where pan-Canadian action would be desirable.

Adults face transitions at various times during their working lives which may trigger a need for essential skills updating. This may occur when they are:

- re-entering the labour market after an absence, participating in training activities informed by contemporary occupational essential skills requirements as preparation for obtaining and keeping a job.
- adjusting to job obsolescence or involuntary unemployment, participating in retraining programs to obtain and keep another job.
- adapting to workplace change, participating in training activities related to their current occupations, workplaces and industries.

Essential skills updating for the workplace is at the root of these transitions, regardless of an individual's present employment status. Accordingly, a distinction between workplace education (i.e., for the employed) and workforce education (i.e., for the unemployed) will not be made unless warranted by the topic at hand.

1.3 Structure

Three main sections follow the Introduction, each of which provides a focal point for discussion at the Third National Forum on Education.

2. *Setting the Stage: Background Information*

- This section establishes a conceptual framework for thinking about updating essential skills for the workplace.
- What requisite terms and concepts are associated with updating essential skills for the workplace? What are the essential skills updating needs of Canadian adults?

3. *Increasing Opportunities for Adults to Update Essential Skills for the World of Work*

- This section elaborates on the central tenets of a paradigm for workplace learning which has the capacity to meet the essential skills updating needs of Canadian adults.
- Is the workplace an effective venue for learning? What partnerships and linkages to policy support workplace learning? How can governments and the private sector work toward sustainability? What issues emerge from an adult education approach to workplace learning initiatives? How can prior learning assessment and recognition be enhanced? Are grade levels a valid measure of adult competencies? How can learning technologies support updating efforts?

4. *CMEC: Untapped Potential for Impact and Influence*

- This section outlines policy areas where pan-Canadian action would be desirable.
- How may CMEC, and others, act as catalysts to substantially increase opportunities for adults to update their essential skills for the world of work?

2. Setting the Stage: Background Information

2.1 Terms and Concepts Related to Updating Essential Skills for the Workplace

Over the past decade there has been a quantum increase in the body of Canadian research on the requirements for skills in today's world of work. Terms and concepts have evolved rapidly.

The construct of skills seen as essential to employability is richer now than in the past. In addition to a trilogy of literacy types (i.e., prose, document and quantitative) other dimensions, such as critical thinking, communication and computer competencies, are requirements in today's jobs.

The Employability Skills Profile published by The Conference Board of Canada (McLaughlin, 1992) drew public attention to academic, teamwork and personal management skills necessary for employability. It outlines a generic (i.e., applicable to all occupations) profile of employability skills that employers seek in new hires and that they develop among current employees through training programs.

The term basic skills has been used by many workplace partners instead of the term literacy to counter negative stereotypes which inhibit adults' participation in workplace updating programs. A public focus on deficiencies is only now yielding to an emphasis on opportunities and empowerment. Yet the term basic skills is often falsely interpreted to mean simple, belying the fact that the basic skills may take very complex forms in some occupations.

Human Resources Development Canada's (HRDC) Essential Skills Research Project, launched in 1994 by what is now the Human Resources Partnerships Directorate, is having a growing influence on the terms and concepts used in framing updating activities which promote employability.

Essential skills are enabling skills that (Mair, 1997):

- Help people perform the tasks required by their occupation.

- Provide workers with a foundation to learn skills that are more occupation-specific.
- Enhance people's ability to adapt to workplace change.

In the Essential Skills Research Project, HRDC has included the following skills dimensions known to be important in the world of work:

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

The Essential Skills Research Project brings the focus on essential skills to a new level of specificity. To describe essential skills requirements by occupation, measurement scales were developed to rate the complexity of the tasks found in the occupation that were related to selected essential skills dimensions. Where possible, existing scales, such as the International Adult Literacy Survey's (IALS) reading scales (Statistics Canada, 1995), were adapted to ensure compatibility.

Later this year the Essential Skills Research Project will provide an Essential Skills Profile for each of 151 occupations at Skill Levels C and D in the National Occupational Classification (NOC), providing a rich information source on how the essential skills are used in the workplace. The information reflects the actual requirements of the Canadian workplace as reported by job incumbents in 3,000 interviews conducted across Canada. Some Essential Skills

Profiles have already been posted on the HRDC web site (<http://www.globalx.net/hrd>) as well as a Readers' Guide which contains full explanations of all measurement scales used.

HRDC is also incorporating essential skills into occupational standards, reinforcing that essential skills enable individuals to acquire job-related technical skills. "Occupational standards are benchmarks or points of reference against which occupations and the proficiency of people in those occupations are measured or assessed." (Price Waterhouse, 1993, p. 3).

Hence, there will also be Essential Skills Profiles at NOC Skill Level B developed as part of: (i) national occupational standards by Sector Councils, with assistance from HRDC; or, (ii) national occupational analyses conducted by HRDC related to the Red Seal program for certain apprenticeable trades.

Another important concept is that each dimension of the essential skills is understood to be a skills continuum with levels of proficiency within each dimension. For example, an occupation may require the use of complex problem-solving skills yet require a low level of complexity for writing skills. On the home front, while parents may use complex money math to manage the family finances this may not be required at work.

Under the broad rubric of essential skills, a specific focus on the evolving concept of literacy merits attention in its own right. Literacy now refers to a set of information-processing skills beyond the rudimentary ability to read and write. Literacy Skills for the Knowledge Society – the second report from the IALS – refers to literacy as:

"the ability to understand and employ printed information in daily activities at home, at work and in the community – to achieve one's goals, and to develop one's knowledge and potential." (HRDC, 1997, p. 14).

Similar to the positioning of literacy in the IALS, essential skills are equally important in all domains of adults' lives (i.e., work, home, community) and in their roles within these domains (e.g., parents, citizens, volunteers, union members, consumers).

A focus on updating essential skills for the workplace does not downplay the importance of empowering adults in their lives beyond the workplace. There is a transferability of essential skills from one domain to another, such as from the world of work to home or vice versa. The question of which domain is the starting point for that transfer is determined by the goals and priorities of the workplace partners.

2.2 Essential Skills Updating Needs of Canadian Adults

2.2.1 Information from the IALS

The Canadian Report on the IALS -- Reading the Future: A Portrait of Literacy in Canada -- provides analyses of both the literacy skills of Canadian adults and related socio-economic linkages (HRDC et al., 1996, p. 12). Some highlights follow:

- Low literacy skill levels exist among large proportions of the Canadian adult population and not just among marginalized groups. The dilemma is that most adult education and training goes to those with high skills.
- There are large differences in literacy skills across demographic groups in Canada with corresponding social and economic impacts.
- Literacy is linked to economic opportunities, affecting factors such as income, employment stability and the incidence of unemployment.
- Canadian and American adults with low skills experience an income penalty while a large income bonus goes to those with the highest levels of literacy proficiency. This correlation is strongest when applied to quantitative literacy.
- The requirements to use literacy skills on the job vary by occupation and industry.
- Educational attainment does not guarantee literacy proficiency, although there is a strong association.
- Adults with low literacy skills, who perceive their skills as sufficient to meet their everyday needs, may occupy jobs that do not require the use of literacy or that require its use at a low level of proficiency. Changes at their workplaces may put them at risk.

- Literacy skills become stronger with regular use and weaker with lack of use. The workplace is a crucial venue for maintaining literacy proficiency across the life-span.

2.2.2 Information from Organizational Needs Assessments (ONA)

Statistics on the literacy skills of a nation or province cannot be extrapolated to the micro level of a single workplace. Organizational Needs Assessments (ONA) are conducted to zero in on the multiplicity of training needs related to the occupational essential skills requirements of a single workplace or industry and training needs related to the unique personal goals of the workforce. ONAs are the blueprint for program planning.

ONAs show that essential skills training needs vary by industry, workplace and occupation. Generally, the occupational essential skills most frequently identified for updating include: computer use; oral communication; problem solving; reading text; use of documents; numeracy and writing. Updating needs relating to an individual's personal goals and priorities often include the same list of essential skills.

From the perspective of individual skills capacities, ONAs frequently attribute essential skills updating needs to: rusty skills due to lack of use; English or French as a second language; and low levels of education.

From an organizational perspective, ONAs frequently point to the poor quality of materials provided to workers which may be written at an unnecessarily complex level, poorly formatted or of inferior translation. ONAs often recommend that workplace materials be revised in accordance with clear language principles.

From the perspective of occupational requirements, ONA's frequently attribute essential skills updating needs to changes in the occupation resulting in an increase in the scope and level of complexity of occupational essential skills requirements and their frequency of use. Some of the workplace changes which enhance the requirement to use essential skills at the workplace (MacLeod, 1996, pp. 27-29) relate to:

- computer-controlled equipment and processes, requiring not only enhanced computer use but also skills needed to participate in related training (e.g., textual and document reading, problem solving).
- new equipment design for multi-functionality, requiring enhanced textual and document reading skills to locate and interpret information in Operator's Manuals or other workplace documents.
- provincial and Red Seal certification systems, requiring workers to demonstrate mastery of the job through a paper-and-pencil test. The introduction of an occupational certification system creates a need for more complex information-processing skills and continuous learning skills, such as studying, note-taking and the skills required to challenge multiple-choice examinations.
- legal liability being pushed to the level of the worker and the resultant potential that workers may be held personally liable when accidents occur. This puts a new emphasis on writing skills to accurately maintain log books and draft reports which may be used in legal proceedings.
- management practices, especially those related to Total Quality, requiring enhanced teamwork and communication skills as well as more complex numeracy skills to deal with statistical process control.
- new environmental regulations, requiring enhanced problem solving as well as reading skills to reference and decipher rules and procedures which use scientific terms.

2.2.3 Information from Socio-Economic Analyses of Canada's Performance

The IALS's findings show that Canada, and other OECD countries, are experiencing a faster pace of globalization, demanding a shift towards learning societies and economies. The rate of structural adjustment in the economy is creating mismatches between workplace demands for enhanced competencies and the supply of skills available in the present workforce.

The importance of providing opportunities to update essential skills is also reinforced by how technology is altering the variety of jobs available and the essential skills required to perform them. Findings from the 1994 Adult Education and Training Survey (Statistics Canada, 1997, p. 6) show that:

- 26% of new jobs in 1995 required at least 17 years of education and training compared to the 40% projection for the year 2000.
- most of the workers for the year 2000 are already in the workforce – future jobs will not be filled by new entrants into the workforce due to demographic patterns.
- retraining the current workforce is critical.

Essential skills updating is necessary to provide workers with a foundation to successfully participate in retraining activities required by ongoing economic change. The IALS provides complementary information in that “rates of participation in adult education and training augment gradually with increasing levels of literacy skill.” (HRDC, 1997, p. 93).

Adult essential skills training will be an ongoing requirement due to continuous change in the labour market environment coupled with the fact that literacy skills acquired during childhood may not endure throughout adulthood. These socio-economic realities dispel the myth that improving the K-12 and Postsecondary education systems alone will eliminate the need for adult essential skills updating. In the new economy, there will be an ongoing need to update and maintain essential skills for the workplace.

In Performance and Potential 1997: Challenges and Choices for Canada's Future, The Conference Board of Canada (1997, p. 14) offers a useful framework for analyzing Canada's performance with respect to the goal of maintaining and sustaining a high quality of life. In particular, the report speaks of the potential role that government and business have in managing socio-economic transitions:

- Government has a critical role to play in re-engineering Canada's social policies (e.g., education and training) to maximize their effectiveness.

- Business must buy into the need for training in ever increasing numbers – an OECD survey of in-house training ranked Canada 37 out of 49. Also, business needs to link corporate interests with those of the community and the nation.

The conclusion to be drawn is that government and business have a stronger leadership role to play in a national strategy to develop and strengthen essential skills for the workplace. Evidence suggests that their efforts should be directed to increasing the opportunities for adults to participate in workplace education programs.

The effectiveness of essential skills updating programs has recently been demonstrated by both The Conference Board of Canada (Bloom et al., 1997, pp. 3-10) and ABC CANADA Literacy Foundation (Long, 1997, pp. 2-3). Essential skills programs benefit the workplace in many ways such as fostering: an increased ability of employees to handle training; higher levels of self-confidence among the program participants; more competent use of technology; and higher productivity.

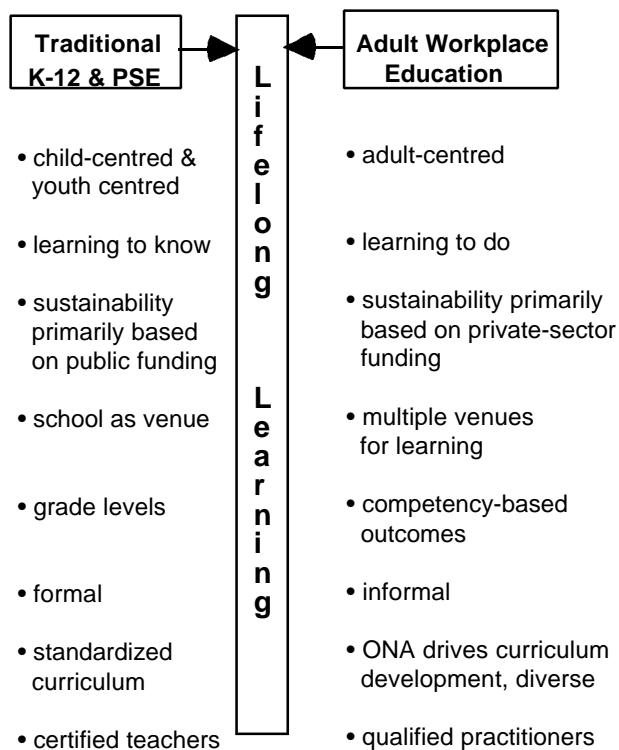
3. Increasing Opportunities for Adults to Update Essential Skills for the World of Work

3.1 Shifting Paradigms

The vigorous pursuit of new approaches to foster seamless and continuous learning throughout childhood, adolescence and adulthood demands a new paradigm for lifelong learning. The central tenets of this emerging paradigm are only beginning to be identified and understood.

The K-12 and Postsecondary education (PSE) system that many adult Canadians grew up with influences how many people think about learning in adulthood. Even though this system has evolved over time, its legacy remains. Contemporary workplace education systems for adults provide another way to think about learning. In practice, these two paradigms for learning are far from static – they have already impacted each other in innovative ways. Continuing the paradigm shift will promote the creation of a society in which lifelong learning is a reality.

Figure 1
Two Paradigms for Learning



Education initiatives for the world of work are outputs of the paradigm for Adult Workplace Education. They feature the critical importance of:

- identifying the **workplace as a venue for lifelong learning**.
- forging **partnerships** and building **linkages to policy** in a concerted effort to address the essential skills updating needs of the workforce.
- planning for **sustainability**, based on funding from both the public sector and private sector.
- valuing the **principles of adult education** and their implications for program planning, practitioner training and competency-based outcomes.
- enhancing **prior learning assessment and recognition**.
- utilizing **new learning technologies**.

This section elaborates on each of these points, weaving in the many ideas gathered through a national process of stakeholder consultation. This document is a stimulus for discussion and does not reflect a consensus on the ideas and concepts forwarded.

3.2 Workplace as a Venue for Learning

There are compelling reasons why the workplace is an integral part of a lifelong learning paradigm.

3.2.1 Daily Opportunities to Maintain Essential Skills through Use

Will a young person entering the workforce with proficient essential skills maintain that proficiency for life? The answer to that question reveals one of the many reasons why the workplace must be prominently positioned in the future as a venue for lifelong learning during adulthood.

The IALS's findings show that an individual's level of literacy is not fixed at the end of formal schooling. The use of literacy skills is analogous to the use of muscles – both become stronger

with use or atrophy without regular workouts (HRDC, 1997, p. 85). Workplace educators think that this is true of all essential skills, not just literacy. During adulthood individuals' experiences at work can improve their essential skills or cause them to deteriorate through lack of use.

Employers have a role to play in ensuring that workplaces are environments which enhance essential skills. This may be accomplished in many ways but organizing work and designing occupations so that they require the daily use of essential skills is the most promising.

It is possible for the same occupation in the same industry at two different workplaces to have very different requirements for essential skills. For example, in the apparel industry large companies typically require higher levels of occupational essential skills than their smaller counterparts. The use of technology and, the advantage that large companies have in financing ongoing employee training and development, account for the variation.

Job incumbents in occupations which require relatively low-level essential skills often have difficulty in adapting to workplace changes, such as the introduction of new equipment or technology. They face a higher risk of unemployment.

The benchmark occupational information that the Essential Skills Research Project provides, along with its methodology for profiling occupational essential skills requirements, will allow workplace stakeholders to track changes in skills requirements over time. This is greatly facilitated by the direct link between the Essential Skills Profiles and the National Occupational Classification.

One of the great advantages of the workplace as a venue for learning is that newly acquired skills may be immediately applied in performing daily work tasks.

3.2.2 A Locale for Planning the Start Up of Workplace Education Initiatives

The workplace provides a locale within which a discussion of workplace education initiatives is often an extension of the ongoing dialogue between workplace stakeholders (e.g., labour and management). This mobilizes strategic planning efforts to develop and sponsor workplace education programs, solely or jointly in partnership.

Workplace education programs may be delivered at various sites in addition to the workplace such as: union training centres; community colleges; community-based training centres; trades training schools, providing ongoing technical skills training; and, in Quebec, the public school infrastructure.

3.2.3 Integrate Essential Skills Enhancement into Overall Training Plans

One of the issues inherent in the notion of embedding essential skills training in an overall training plan is the presumption that there is one. Large organizations are in a better position to finance human resources activities than small businesses.

For example, the Effective Reading in Context (ERIC) program of Syncrude Canada Ltd. is offered as part of their annual training course calendar. ERIC is targeted to employees who generally read well but need higher-level reading skills to deal with increasing volumes and complexity of print materials (Campbell et al., 1997). It belies the myth that only those with low levels of literacy require upgrading.

To date over 800 people, including individuals working as engineers and technicians, have participated in the ERIC program on a volunteer basis. Syncrude Canada Ltd. is now developing a Working in Numbers (WIN) program.

The Operating Engineers Training Institute of Ontario provides another example, applying a model for integrating essential skills into trades training to revamp its 10-Day Mobile Crane Classroom Skills Updating Course. This involved integrating units of instruction on essential skills (e.g., foundation math skills for craning, test taking) into the existing curriculum and training the trades instructors to adapt their teaching strategies (MacLeod, 1994).

3.3 Partnerships and Linkages to Policy

The ability to forge partnerships and build linkages to policy is a critical success indicator of effective workplace education programs. It is an interesting and complex characteristic of adult workplace education.

For the purposes of this paper, partners will refer to workplace stakeholders who have made a strategic decision to work together in facilitating essential skills updating. Generally, linkages refer to a broad spectrum of supports (e.g., people, programs, resources, organizations); however, the linkage to policy will be addressed.

3.3.1 Partnerships

A think tank on best practices in workplace/workforce education sponsored by ABC CANADA Literacy Foundation and HRDC's National Literacy Secretariat (MacLeod, 1995) recognized two tiers of partnerships in workplace education, each with differing roles.

The primary partners are the major players in the workplace: employers; employees; and, in organized workplaces, unions. They have the ultimate decision-making power. Associate partners (e.g., practitioners, central labour bodies) are resources and supports to the primary partners and have no decision-making authority. Government may be viewed as either a primary or associate partner and this varies by province.

Forging partnerships begins with probing the different interests which each party brings to the table. The fragility and complexity of the partnership concept has much to do with the fact that each potential partner has unique philosophies and goals which motivate their involvement in workplace learning initiatives.

The goals of business and labour may be quite different, influencing whether a joint approach to essential skills updating is possible. The content of curricula is an outcome of these goals. A joint focus on adult education

principles and the transferability of essential skills has allowed many potential labour and management partners to bridge these differences.

Employers may be primarily motivated to support essential skills upgrading for economic reasons while appreciating the overall contributions to society. Increasingly, goals related to Total Quality and the attainment of International Standards Organization (ISO) certification are prompting involvement because they increase occupational essential skills requirements (Lewe, 1996).

The union approach is worker-centred in that workers' learning goals define the focus of the program. There is a strong alignment to adult education principles. Unions are committed to enhancing the lives of workers and this must be visible in their partnerships. They strategically link workplace education to issues of equity, accessibility, diversity, empowerment and the capacity of workers to fully participate in their unions.

Governments play different roles across Canada – some have arm's length relationships to the primary partners while others are more actively engaged as full partners. Illustrative examples of practice among governments highlight some of the strategies for success in forging partnerships.

At the national level, Human Resources Development Canada has been instrumental in mobilizing private-sector partners to focus on human resources issues. For example, HRDC's National Literacy Secretariat (NLS) and the Sectoral Partnership Initiative of its Human Resources Partnerships Directorate have consistently demonstrated success in engaging the interest of private-sector partners from business and labour. Often a catalyst in bringing primary partners to the table, HRDC's strategy is to coach private-sector partners to success by acting as a broker of information and resources.

At the provincial level, different strategies to form partnerships among private-sector stakeholders have been used with equal success. For example, Workplace Education Field Officers, coordinated through the Nova Scotia

Department of Education and Culture, are key to initiating and nurturing partnerships between business and labour to get workplace education programs up and running. At the initiating stage, the role of the Field Officers is to advise the other workplace partners and conduct the ONAs (Davison et al., 1997).

In Manitoba, the use of a tripartite labour-business-government committee, with government as facilitator, is the hallmark of their approach to partnership. Its Workplace Education Manitoba Steering Committee (WEMSC) came into being on the recommendation of a Skills Training Advisory Committee asked to identify ways in which the labour market partners could collaboratively develop the province's human resources (Despins et al., 1997).

The four-point mandate of the WEMSC involves: creating a workforce equipped to deal with workplace change; promoting awareness of essential skills issues; developing workplace education models and materials; and developing an instructor group.

3.3.2 Linkages to Policy

3.3.2.1 *Linkages to a National Industrial Strategy*

Partners in workplace education initiatives recognize the importance of strategically building linkages to public policy. They understand that public policy can help or hinder provincial and national efforts to provide opportunities to update and maintain essential skills for the workplace.

There is widespread concern that updating essential skills for the workplace is not linked to a national policy agenda that offers an integrated framework for concerted action. There is, however, a dilemma in moving forward on this issue.

The dilemma relates to the tension between the need for a concerted pan-Canadian effort, implying strong central leadership, and the current climate associated with devolving responsibility for training to the provinces and its implicit transfer of leadership.

A labour perspective, adhered to by the Canadian Labour Congress (CLC), sees an economic strategy for full-employment, as opposed to education and training, as the engine which will drive a better economy. The CLC values education and training, however, thinks that there has been public confusion over the fact that training doesn't create jobs. A robust and fully-industrialized economy is the engine that will drive a focus on education and training, not vice versa (Beckerman et al., 1992).

A business perspective views the absence of a national industrial training plan as detrimental to all workplace education and training, even when there is consensus on the need. Many in the business community think that the issue of adult lifelong learning should be integrated into the development of public policy for the broader socio-economic issues facing Canada.

The business view takes on a new significance when viewed against a perception which is widely held among other workplace education stakeholders. A lack of business buy in to education and training at large is seen to be an enormous barrier to increasing opportunities for adults to upgrade essential skills.

The connection between sound public policy – that which responds to socio-economic pressures in an integrated manner – and essential skills upgrading is seen, for example, in Manitoba. At the same time that Manitoba is facing severe skills shortages in technical occupations, there is widespread unemployment among Manitoba's

large Aboriginal population. The challenge of providing opportunities for Aboriginal people to participate in essential skills updating for employability is complex. Progress will only be made if a number of policies, at the national and provincial level, are harmonized to reach shared goals.

The provision of essential skills updating opportunities to other unique demographic groups may also be linked to public policy. More targeted programs, designed and delivered to meet the specific needs of special populations in a given province or region, would be useful. For example, education and training programs targeted to women have been successful in the past.

Nova Scotia offers an illustrative example of practice in the area of building linkages from workplace education to public policy. The Nova Scotia Department of Education and Culture explicitly establishes strategic linkages as a top priority, linking its Workplace Education Initiative to other economic human resources development plans and projects.

Additionally, in some provinces EI clients are permitted to receive income support while participating in upgrading programs, which increases their chances of permanent employment.

Nationally, HRDC is responsible for many initiatives which have natural links to essential skills updating (e.g., Essential Skills Research Project, Occupational Standards Development, Sector Councils, Adult Education and Training Survey and ongoing activities of the NLS).

3.3.2.2 *Linkages to Family Literacy*

One of the value-added outcomes of virtually all workplace education programs is that learning acquired by the participants is transferable to other aspects of their lives (e.g., social, health, political). Essential skills are portable, carried by individuals to all of their activities.

Of particular importance is the transferability of essential skills, acquired through updating programs, to children in the family and home setting. The impact of

skills transferability on family literacy is a powerful one that must be brought into any discussion of public policy.

For example, Syncrude Canada Ltd.'s ERIC program resulted in a transfer of reading and study strategies to the home. This positive outcome is highly valued by the course participants, their families and the company. Syncrude Canada Ltd. is considering making ERIC and WIN directly available to the families of employees.

There are also immense benefits to be gained from children seeing their parents participate in lifelong learning. Individuals with low levels of literacy proficiency are often motivated to participate in workplace education programs by a desire to enhance the lives of their children.

3.3.2.3 *Linkages to Policy for the Employed and Unemployed*

Some of those involved in workplace education programs for the employed think that Canada has placed an undue public policy emphasis on employability training for social assistance recipients. They perceive that this has resulted in a neglect of the employed and their need to adapt to workplace changes through updating programs. This perceived policy imbalance is seen to frustrate their efforts to foster a culture of learning in the workplace.

Those involved in not-for-profit community-based training programs, targeted to the unemployed, do not agree that there is such a policy imbalance. They are concerned about ensuring that services to the employment disadvantaged, particularly social assistance recipients and the disabled, do not fall through the cracks. Marginalized groups are seen as least able to advocate in the realm of public policy.

For example, the Canadian Coalition of Community-Based Training Inc. speaks of the difficulty that community-based training programs are having in weathering the transition associated with the devolution of training responsibility to the provinces and reductions in training dollars. Provincial governments are struggling to figure out how to do more with less while assuming a new mantle of responsibility and leadership.

3.3.2.4 *Linkages to the Essential Skills Research Project, HRDC*

In March 1997, a pan-Canadian discussion on the Essential Skills Research Project was held in Ottawa involving, among others, HRDC, CMEC, representatives of Ministries of Education and Sector Councils (Government of Alberta, 1997). One of the objectives was to identify common threads that could lead to collaborative projects among provinces and territories.

One of the areas identified by the participants was the establishment of a national Steering Committee on Essential Skills. This idea merits discussion at the Third National Forum on Education.

3.4 Sustainability

Historically, Canadians accepted the principle that public monies should flow to the formal school system. Learning became synonymous with schooling and was viewed as an activity that preceded full adulthood and entry into the world of work.

In a new paradigm for lifelong learning the funding traditions that seemingly served Canada in the past are woefully inadequate for the future. Sustainable funding is the life-support system of workplace learning initiatives and must be as well thought out and seamless as that of the K-12 and PSE system.

Over the past ten years many workplace education programs have come on stream, all with the intention of serving their learners over the long term. Some workplace education programs have flourished and are confident that they will continue to do so in the future.

Some workplace education programs are doomed to a hand-to-mouth existence, investing large amounts of energy into finding and maintaining funding. Others have had their life support system turned off and are struggling to continue providing workplace learning opportunities.

It is timely to analyze the experiences of programs which did and did not achieve sustainability from a policy perspective to identify the factors at play.

3.4.1 Government Levering of Private-Sector Funding

There is a message in the experience of some labour-sponsored workplace education programs in Ontario. In the wake of provincial funding cuts to workplace programs in 1997, they are coping with the task of reinventing themselves in sustainable ways. The message is that workplace education programs which primarily rely on public funding are subject to the policy shifts of governments and their sustainability will never be guaranteed.

Can policy intervention support sustainability for workplace education programs? The short answer is yes; however, a one-size-fits-all approach to policy development is not realistic.

The role of government policy is to create the circumstances which allow private-sector partners to invest in workplace education programs; thereby, achieving sustainability in their own right.

Each province has a different set of circumstances to consider in developing public policy which increases opportunities for essential skills updating. These may include: size of population; demographic profiles; rate of secondary education completion; socio-economic conditions; and, whether more or less government is seen as good government. Policies which are effective in increasing the opportunities for essential skills upgrading in one province may be ineffective in another.

For example, the Nova Scotia Workplace Education Initiative appears to be suited to the circumstances of Atlantic Canada. Nova Scotia has a small population and a unique funding partner in the Atlantic Canada Opportunities Agency (ACOA). PEI is adopting the Nova Scotia model and others in Atlantic Canada are monitoring it closely.

Nova Scotia's success shows that government policy can have a dramatic impact, not only in forming partnerships, but in moving the partners to sustainability. Their approach provides public funding, in decreasing amounts over a three-year period,

to lever in-kind contributions from the partners who ultimately take over full financial responsibility. Additionally, Nova Scotia's six Field Officers provide professional support services (e.g., conducting ONAs) which the workplace partners would otherwise have to purchase.

In publicly positioning the role of government, the Nova Scotia Department of Culture and Education stresses that their financial contribution is not a subsidy to business.

Human Resources Development Canada has also had success in leveraging private-sector funding for essential skills updating. For example, support for workplace education initiatives in many provinces has been carefully nurtured by the NLS yet it has never provided funding for ongoing programming. It provides "seed money" to initiate partnerships, develop learning materials and increase awareness of and access to workplace education programs for all Canadians in every region.

3.4.2 Other Policy Options

Governments have a variety of other policy tools available to provide sustainable funding for lifelong learning. At the provincial level, for example, Quebec requires that training be delivered through the public education system. At the federal level, the 1997 budget removed the GST on books purchased by literacy organizations.

The issue is not a lack of ideas but rather the difficulty in aligning policy to support adult lifelong learning and then winning public approval. Over the years, various federal government-sponsored advisory councils and commissions have made recommendations on human resources issues which were never enacted.

For example, the Advisory Council on Adjustment (de Grandpré, 1989) recommended a flexible tax liability that would be offset by a firm's expenditures for training, up to the full amount of the tax. The Royal Commission on the Economic Union and Development Prospects for Canada (Macdonald, 1985) recommended that a registered educational leave savings plan be authorized under the Income Tax Act.

3.4.3 Strategies for Sustainability from Business and Labour

The ways in which business and labour have found to sustain their joint or stand-alone workplace education programs require further exploration. The whole concept of government as a lever of private-sector funding hinges on the capacity of workplace partners to take over the financial responsibility after the seed funding has expired.

Positioning the locus of control for funding among the primary workplace partners leads to long-term sustainability without government funding.

Businesses large enough to mount workplace education programs often finance them through their overall training plans. They tend to benchmark their training budgets to a percentage of payroll. For example, Syncrude Canada Ltd. allocates 5-7% of its salary budget to employee development.

Small business is at a distinct disadvantage when it comes to financing workplace learning, although this is not insurmountable. HRDC should focus on ways to attract small business to collectively address their human resources needs through Sector Councils. To date, HRDC has been more successful in persuading large business, often operating in a unionized environment, to form Sector Councils. Sector Councils are effective vehicles to plan human resources strategies which address both technical and essential skills training needs.

In organized workplaces, unions have used the collective bargaining process to negotiate funding for workplace education programs. Some examples follow:

- allocating a percentage of payroll to the union to facilitate learning at a union training centre. This may be done through a master collective agreement covering multiple workplaces (the preferred approach for small businesses) or through a collective agreement for a single workplace;

- allocating funds to unions, based on a formula involving cents/hour worked for each employee, to facilitate learning at union training centres;
- allocating funds to be administered by a joint training trust fund committee, based on a formula involving cents/hour worked for each employee, deducted from employees' paychecks and matched by employers. (Adapted from the trades training trust fund model in the unionized construction industry.)

In the unionized construction industry, trades training trust funds – joint industry-union training funds for the delivery of technical skills training – have been widely used to integrate essential skills into trades training. The training trust fund model has provided sustainable funding to partners in the construction industry for over 100 years. The sophisticated training infrastructures that are in place lend themselves to linking essential skills to technical training.

In non-union construction settings, in which owner-operators are not signatory to a collective agreement, other ideas to fund training have been suggested. For example, one such suggestion is a requirement for contractors to pay a percentage of the value of each contract to a third party (e.g., via the building permit process) which would then be used for training.

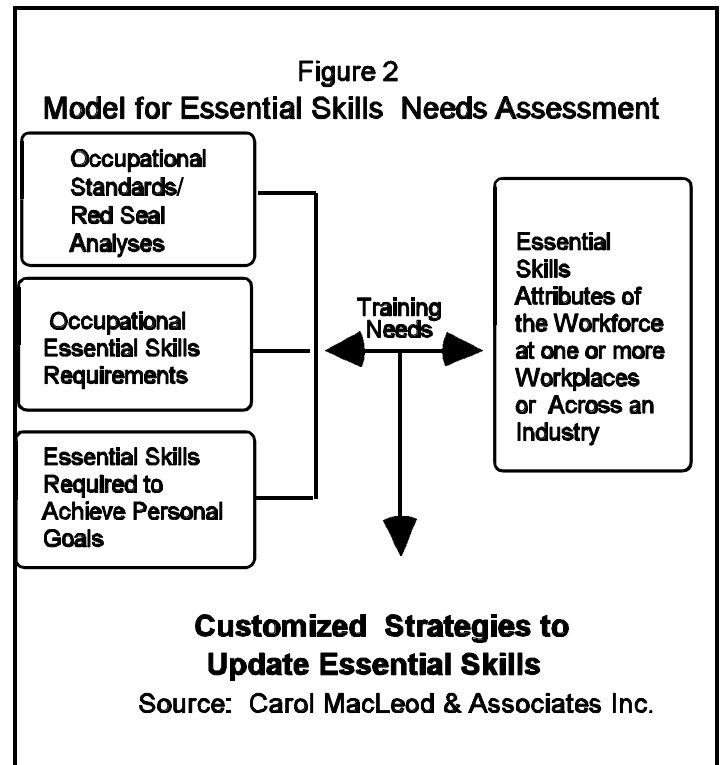
3.5 Principles of Adult Education

One of the critical features of adult workplace education across the life-span is that it must be organized along the principles of adult education.

3.5.1 Program Planning

Program planning involves decisions on matters such as program content and delivery; the choices made in this regard will impact the success of the program. Program planning is shaped by the findings of the ONA as well as the goals and priorities of the workplace partners.

Figure 2 outlines a model of needs assessment which builds on the work of the Essential Skills Research Project.



The International Union of Operating Engineers (IUOE), Local 904 in Newfoundland & Labrador was the first in Canada to use this model, utilizing the job-profiling methodology of the Essential Skills Research Project. They represent crane and heavy equipment operators who need skills updating to utilize new electronic digital equipment coming into the construction industry.

The IUOE's essential skills updating strategy uniquely fits the nature of the unionized construction industry (i.e., workers are dispatched to various contractors and work sites) and the specific needs of their members as identified in the ONA. Their approach is influenced by their members' low levels of formal education, high average age and geographic distribution throughout Newfoundland & Labrador.

“The Operating Engineer’s Essential Skills Program is an industry-driven, correspondence workplace education model designed around workers, family and friends helping one another to achieve educational and employment goals. There is a strong link to our ongoing technical skills training and, ultimately, to work in the construction industry.”

(Interview with Dermot Cain, Business Manager, IUOE, Local 904, March 1998).

Flexibility is essential in accommodating adults in their many roles and responsibilities. Programs must promote accessibility, equity and diversity.

In workplace education programs, the curricular content is never standardized. This differentiates it from the paradigm of the K-12 and PSE system. The curriculum is developed using authentic materials from the workers’ real-life settings – at home, at work and in the community. For example, a carpenter learns math in the context of the trade.

Government can play a role in enabling workplace partners to perform program planning tasks by either providing seed money to enhance their in-house capacity or the services of an experienced workplace adult educator.

3.5.2 Practitioner Training

The term practitioner refers to all those who facilitate learning in workplace education programs, such as workplace trainers, teachers, instructors, peer tutors, etc. Practitioners are an integral part of the partnership and should promote the program philosophy, working within its parameters.

There is no system of certification presently in place for practitioners. Practitioner training programs have been developed across Canada to varying degrees. There is a need for enhancement of ongoing professional development opportunities.

There appears to be a need for practitioner training related to interacting appropriately with adults to encourage learning and also regarding the use of learning technologies. Emerging learning issues, which are only now

being more fully understood in the workplace context, are another important area for training. For example, practitioners need training in identifying and teaching adults with learning disabilities.

3.5.3 Competency-Based Outcomes

Competency-based outcomes are associated with adult education principles and must be woven into all aspects of workplace education.

Competency-based principles should guide the development of curriculum design. Adult learning is supported by the use of modularized units of instruction which contain clear and measurable competency-based outcomes.

The use of competency-based outcomes accommodates the different learning needs and styles of adults, allowing them to plan customized learning paths at their own pace. Competency-based outcomes also assist practitioners to adapt their teaching styles in supporting individualized learning and the use of learning technologies.

In the context of assessment, more research is needed to advance criterion-referenced assessment approaches which are tied to an occupational, as opposed to academic, framework. To date, progress has been made in developing assessment tools based on the essential skills requirements of a specific occupation, or cluster of occupations, in the same industry.

More work needs to be done in developing generic assessment tools which, while linked to the world of work, are not occupation-specific. In this regard, there are several projects in progress across Canada which should offer the field some fresh approaches.

Finally, a focus on competency-based outcomes in the workplace at large would enhance the effectiveness of co-op education in which students gain workplace experience as part of their formal education. There are tremendous benefits to be gained by ensuring that on-the-job training is closely linked to the mastery of clearly-articulated competencies required in various jobs.

3.6 Prior Learning Assessment and Recognition

“Prior learning assessment and recognition (PLAR) is a process of identifying, assessing, and recognizing what a person knows and can do. The process can take various forms and the outcomes can be used for a large number of purposes relative to the goals of individuals, the labour market partners, and society at large.” (Canadian Labour Force Development Board, 1997, p. 1).

In the context of updating essential skills for the workplace, PLAR enables adults to move easily among the many venues for learning that they will encounter across the life-span. The recognition of skills acquired through experience, which may lead to some form of accreditation, is an empowering concept.

On other human resources fronts, many of those consulted have pointed out that there are problems associated with grade-based entry-level requirements which PLAR may help resolve. For example, screening out job applicants who don't meet entry-level educational requirements is sometimes a barrier to accessing employment opportunities. Education is only one of many ways in which adults acquire competencies.

3.7 Learning Technologies

The effective use of learning technologies contributes to the development of a lifelong learning culture. Learning technologies empower learners by providing multiple pathways which offer choices and channels for essential skills updating.

Many workplace education programs use computers as mediators of learning. Many more would like the opportunity to do so. How can the number of computers available for workplace learning be increased?

The Learning Centre of the Union of Needletrades, Industrial and Textile Employees (UNITE), Local 459 in Manitoba provides an illustrative example of practice in the use of computers. Their objective is primarily to mediate the acquisition of literacy and communication skills through computers while also fostering the development of computer skills in an integrated way.

For example, in teaching communication skills (99% of the participants have English as a second language) the instructor first gives a lesson. The participants then practice the skills by applying them, using the computers strictly as tools to support the learning process. In the process of doing so they also acquire valuable computer skills. The results have been exceptional.

The Learning Centre's Coordinator, Ann Haney, observed that their effort was less costly and easier to implement than she originally anticipated. At a cost of about \$30,000 they completely outfitted a classroom with tables and chairs, 12 computers, two printers and Microsoft Office software purchased from the University of Manitoba for educational purposes.

There are many learning technologies which have yet to be explored by those involved in designing and delivering workplace education programs. Learning tools such as compressed video, audiographic conferencing, interactive multimedia and others may be featured more prominently in future workplace education programs.

4. CMEC: Untapped Potential for Impact and Influence

A vision of learning across the life-span has not yet been brought into reality in the world of work. There is a need for enhanced supports to facilitate the passage of adults through the many transitions associated with their attachment to the workplace.

CMEC is encouraged to continue exploring its potential for greater impact and influence on pan-Canadian issues related to workplace education and adult learning. This involves scrutinizing the experience of the past in light of the requirements of the future on a number of fronts.

Attention must be directed to the development of policies which enhance opportunities to update essential skills for the workplace as this area is sensitive to policy intervention. The IALS draws that conclusion as does the Canadian experience of workplace education programs.

Policy tools have significant potential to ignite a powerful culture of workplace learning in Canada which supports the ability of adults to be employable in the face of unprecedented labour market changes.

A major policy audit in each province should be launched by CMEC as an outcome of the Third National Forum on Education.

A National Strategy for Developing and Strengthening Essential Skills throughout Life

CMEC should consider enacting the idea of establishing a national Steering Committee on Essential Skills which emerged from the pan-Canadian discussion on the Essential Skills Research Project in March 1997. (Refer to pg. 11.) It is timely for CMEC to organize and coordinate such a Steering Committee to facilitate the exchange of information and resources related to developing and strengthening essential skills throughout life.

The first task of the Steering Committee could be a policy audit. Possible objectives of such a policy audit initiative follow:

1. To develop a discussion paper describing policy practices which contribute to increased opportunities for adults to participate in workplace essential skills updating initiatives, drawing on the experiences of various Departments of Education in Canada.
2. To assess the education and training policies of each provincial Department of Education in terms of their contribution to developing and strengthening essential skills for the workplace throughout life.
3. To facilitate a national policy forum to:
 - a) report on the results of the policy reviews in each province.
 - b) collaboratively develop strategic plans to guide a process of continuous policy improvement.
4. To publish and widely circulate a report on the National Strategy for Developing and Strengthening Essential Skills throughout Life.

The administration of this initiative should be informed by a commitment to forming new partnerships and linkages and to the principles of adult education. Suggestions in this regard follow:

1. The Steering Committee should be comprised of representatives from provincial Departments of Education as well as selected stakeholders with interests in workplace education and should include HRDC as an ex-officio member.
2. The Steering Committee should build linkages to other complementary initiatives.
3. External stakeholders with interests in the world of work should be invited to participate in the forum.

References

- Beckerman, André; Davis, Julie; Jackson, Nancy (Editor); Martin, D'Arcy ; Olthius, Doug; Robertson, David; and Turk, Jim. (1992). Training for What? Labour Perspectives on Skill Training. Toronto, ON: Our Schools/Our Selves Education Foundation.
- Benezra, Esther; Crealock, Carol; and Fiedorowicz, Christina. (1993). Learning Disabilities and the Workplace. Ottawa, ON: Learning Disabilities Association of Canada.
- Bloom, Michael; Burrows, Marie; Lafleur, Brenda; and Squires, Robert. (1997). The Economic Benefits of Improving Literacy Skills in the Workplace. Canada: The Conference Board of Canada.
- Campbell, Lloyd and Dieleman, Carolyn. (1997). "Building Linkages in Large Organizations: The Syncrude Canada Ltd. Experience" in Taylor, Maurice (Editor), Workplace Education. Toronto, ON: Culture Concepts Inc.
- Canadian Labour Force Development Board. (1997). Prior Learning Assessment and Recognition. Canada: Author.
- The Conference Board of Canada. (1997). Performance and Potential 1997: Challenges and Choices for Canada's Future. Canada: Author.
- Davison, Marjorie and Temple, Paul. (1997). "Partnership Building in Nova Scotia" in Taylor, Maurice (Editor), Workplace Education. Toronto, ON: Culture Concepts Inc.
- Despins, Robert; Maruca, Greg; and Turner, Sue. (1997). "What Makes a Successful Workplace Education Partnership?" in Taylor, Maurice (Editor), Workplace Education. Toronto, ON: Culture Concepts Inc.
- Fownes, Lynda; Lewe, Glenda; MacLeod, Carol; and Mair, Debra (Editor). (1997). Readers' Guide to the Essential Skills Profiles. Ottawa, ON: Human Resources Development Canada.
- Government of Alberta. (1997). Proceedings Report: Essential Skills Research Project: Pan-Canadian Discussion. Author.
- Grandpré, A. Jean de. (1989). Adjusting to Win: Report of the Advisory Council on Adjustment. Ottawa, ON: Government of Canada.
- Human Resources Development Canada and Statistics Canada. (1996). Reading the Future: A Portrait of Literacy in Canada. Canada: Author.
- Human Resources Development Canada. (1997). Literacy Skills for the Knowledge Society. Canada: Author.
- Human Resources Development Canada. (1997). "Information Kit - Office of Learning Technologies." Ottawa, ON: Author.
- Human Resources Development Canada (1998). Pamphlet "Essential Skills: Helping You Better Understand the World of Work." Ottawa, ON: Author.
- Krahn, Harvey. (1998). "Workplace Literacy Issues in Canada." Paper presented in Ottawa, ON at the Breakfast on the Hill Seminar Series, Humanities and Social Sciences Federation of Canada.
- Lavine, Tamara. (1997). "A Discussion Paper on Unions and Literacy." Unpublished draft. Ottawa, ON: Canadian Labour Congress.
- Learning Disabilities Association of Canada. (1991). Bringing Literacy Within Reach: Identifying and Teaching Adults With Learning Disabilities. Ottawa, ON: Author.
- Learning Disabilities Association of Canada. (1996). Bringing Literacy Within Reach: Cue Cards for Learning. Ottawa, ON: Author.
- Levin, Benjamin. (1994). Assessment of Computer-Based Employment Skill Learning Systems for Adults, Summary Report. Winnipeg, MB: Employment Policies Branch, Human Resources Development Canada.

- Lewe, Glenda. (1994). The Total Quality Movement. Toronto, ON: ABC CANADA Literacy Foundation.
- Lewe, Glenda. (1996). Quicksands! Sidestepping the Quality Quicksands; Setting Continuous Improvement on Bedrock. Unpublished manuscript.
- Lewe, Glenda and MacLeod, Carol. (1996). A Methodology to Guide Research on Occupational Essential Skills as Applied to a Human Resource Study of Operating Engineers Trades and Occupations. Ottawa, ON: Canadian Operating Engineers Industrial Adjustment Services Committee.
- Long, Ellen. (1997). The Impact of Basic Skills Programs on Canadian Workplaces. Results of a National Study for ABC CANADA Literacy Foundation, Second Edition. Toronto, ON: ABC CANADA Literacy Foundation.
- Macdonald, Donald. (1985). Report Highlights - Royal Commission on the Economic Union and Development Prospects for Canada. Ottawa, ON: Government of Canada.
- MacLeod, Carol. (1994). Highlights of Federal Government Training & Literacy Initiatives (1966-94). Toronto, ON: ABC CANADA Literacy Foundation.
- MacLeod, Carol. (1994). Basic Skills Needs Assessment for Operating Engineers Training Institute of Ontario (OETIO). Ottawa, ON: OETIO.
- MacLeod, Carol. (1995) Principles of Good Practice in Workplace/Workforce Education: A Report on the Think Tank. Toronto, ON: ABC CANADA Literacy Foundation and the National Literacy Secretariat, HRDC.
- MacLeod, Carol. (1995) Final Report on an Essential Skills Needs Assessment Conducted for the Membership of the International Union of Operating Engineers (IUOE), Local 904. Mount Pearl, NF: IUOE, Local 904.
- MacLeod, Carol in consultation with Lewe, Glenda. (1996). A Report on Current and Emerging Essential Skills Requirements for Operating Engineers (OE) Trades and Occupations and Related Training Needs. Ottawa, ON: Canadian Operating Engineers Industrial Adjustment Services Committee.
- Mair, Debra. (1997). "The Development of Occupational Essential Skills Profiles" in Taylor, Maurice (Editor), Workplace Education. Toronto, ON: Culture Concepts Inc.
- McLaughlin, MaryAnn. (1992). Employability Skills Profile: What Are Employers Looking For? Canada: The Conference Board of Canada.
- Miller, Diane. (1996). The Use of Educational Software in Adult Literacy Programs: A Comparison of Integrated Learning Systems and Stand-alone Software. Winnipeg, MB: Author.
- Price Waterhouse. (1993). Occupational Standards and Certification. Overview: Issues and Trends. Canada: Employment and Immigration Canada.
- Statistics Canada. (1991). Adult Literacy in Canada: Results of a National Study. Ottawa, ON: Author.
- Statistics Canada. (1995). Literacy, Economy and Society: Results of the First International Adult Literacy Survey. Ottawa, ON: Author.
- Statistics Canada. (1997). Adult Education and Training in Canada. Canada: Human Resources Development Canada and Statistics Canada.

Appendix A: Acknowledgements

Human Resources Development Canada offers its sincere thanks to those who participated in the national process of consultation leading to the development of this paper. Their generosity with respect to sharing both ideas and time is appreciated.

Colleen Albiston
Executive Director
ABC CANADA Literacy Foundation
Toronto, Ontario

Kathryn Barker
President
FuturEd
Vancouver, British Columbia

Dermot Cain
Business Manager
International Union of Operating Engineers
(IUOE), Local 904
Mount Pearl, Newfoundland

Lloyd Campbell
Human Resources
Syncrude Canada Ltd.
Fort McMurray, Alberta

Janet Dassinger
National Training Co-ordinator
Workplace Training Project
Canadian Labour Congress
Ottawa, Ontario

Robert Despins
Co-chair
Workplace Education Manitoba Steering
Committee
(Standard Aero Ltd.)
Winnipeg, Manitoba

Carolyn Dieleman
Manager
Language Training Programs,
Community Programs
Alberta Advanced Education and Career
Development
Edmonton, Alberta

Julian Evetts
Training Consultant
Alberta Vocational College - Calgary
Calgary, Alberta

Elinore Frederickson
Former President
Learning Disabilities Association of Canada
Whitehorse, Yukon

Warren Gander
Co-Chair
Canadian Coalition of Community-Based Training
Inc.
Winnipeg, Manitoba

Ann Haney
Coordinator
Learning Centre
Union of Needletrades, Industrial and Textile
Employees (UNITE), Local 459
Winnipeg, Manitoba

Martin Hanratty
National Director
Department of Organization and Educational
Services
Canadian Labour Congress
Ottawa, Ontario

Brigid Hayes
Program Consultant
National Literacy Secretariat
Human Resources Development Canada
Ottawa, ON

Tamara Lavine
Co-ordinator
Workplace Literacy Project
Canadian Labour Congress
Ottawa, Ontario

Jim Lippert
Executive Director
British Columbia Construction Industry Skills
Improvement Council (SkillPlan)
Burnaby, British Columbia

Stephen Lloyd
Director
Office of Learning Technologies
Human Resources Development Canada
Ottawa, Ontario

John MacLaughlin
Program Coordinator
Metro Movement for Literacy
Toronto, Ontario

Debra Mair
Senior Researcher
Essential Skills Research Project
Human Resources Partnerships Directorate
Human Resources Development Canada
Ottawa, Ontario

Greg Maruca
Co-chair
Workplace Education Manitoba Steering
Committee
(Union of Needletrades, Industrial and Textile
Employees, Local 459)
Winnipeg, Manitoba

Sandra McKenzie
Manager,
Adult Education Initiatives
Nova Scotia Department of Education and
Culture
Halifax, Nova Scotia

Conrad Murphy
Dean
Business & Industry Training
Alberta Vocational College - Calgary
Calgary, Alberta

T. Scott Murray
International Study Director for the International
Adult Literacy Survey
Statistics Canada
Ottawa, Ontario

Seamus O'Shea
Vice President of Academics
University of Lethbridge
Lethbridge, Alberta

Eric Parisien
Acting Director
Standards, Planning and Analysis
Human Resources Partnerships Directorate
Human Resources Development Canada
Ottawa, Ontario

Jonas Sammons
Vice President
Alliance of Manufacturers and Exporters
Winnipeg, Manitoba

Linda Shohet
Director
The Centre for Literacy
Montreal, Quebec

Kelly Sinclair
Director
Training Centre
United Food and Commercial Workers
New Westminster, British Columbia

Diane Tommy
Senior Analyst
Office of Learning Technologies
Human Resources Development Canada
Ottawa, Ontario

Sue Turner
Coordinator,
Workplace Education Manitoba Steering
Committee
(Manitoba Education and Training)
Winnipeg, Manitoba

HRDC also wishes to acknowledge the support provided by Carol D. MacLeod, Carol MacLeod & Associates Inc., in managing the consultation process and drafting the paper.