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**LEARNING IN THE 21ST CENTURY: KEY ISSUES
AND QUESTIONS**

**Background Paper for the National Roundtable on Learning
19-20 March 2001, Telus Centre, Edmonton**

Prepared by
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Roundtable Objectives:

As never before, access to ongoing learning opportunities is crucial for a high quality of life, economic innovation, and vibrant communities. Throughout the industrialized world, economic and social policy has converged around the importance of learning and skills development. However, all OECD member nations' stated commitment to the goal of 'life-long learning for all' does not mean that each nation will define this goal in similar terms, achieve it at the same time, or through the same policy means. This makes it crucial for Canadians to craft their own strategy for learning and skills development, with all stakeholder communities taking part in that process.

To this end, the Canadian Policy Research Networks' National Roundtable on Learning is gathering stakeholders from across Canada to discuss the basis for a shared agenda on skills and learning. This is one of three national roundtables, sponsored by Human Resources Development Canada, on learning and skills issues. In February, the Centre for the Study of Living Standards held a very successful consultation in Ottawa, which focused on how to create a more efficient labour market. In April, the Conference Board of Canada will involve the private sector in a roundtable discussion on building and sustaining a culture of innovation and entrepreneurship.

This Background Paper is intended to stimulate discussion and debate by highlighting some issues and questions that are central to a learning and skills agenda. It outlines three themes – assessing learning and skills needs, removing barriers and accessing opportunities, and identifying learning outcomes – around which the Roundtable agenda is organized. Below, a selection of issues is raised under each theme, followed by a list of six discussion questions. *These issues and questions are intended to generate focused discussion at the Roundtable about the guiding principles for future actions to promote learning and skills development.* Participants will then explore these themes in smaller groups, within which they are invited to set priorities and incorporate other issues or questions that they consider relevant.

A useful starting point for a discussion of learning and skills is the report of the Expert Panel on Skills (Prime Minister's Advisory Council on Science and Technology), *Stepping Up – Skills and Opportunities in the Knowledge Economy* (<http://acst-ccst.gc.ca>). The Expert Panel focused on labour force skills in five strategic industries: aerospace, automotive, biotechnologies, environmental technologies, and information and

communications technologies. It also pointed to the larger challenges we face, as the Expert Panel observed:

Today, the 'supply' of learning must be continuously available and easily accessible to 'demands' by parents and families of very young children, and by older children and young adults, disadvantaged groups, and the incumbent work force. It needs to be delivered in a variety of modes and at times and locations that are convenient to learners, firms and other organizations.

In the language of the Expert Panel, then, the National Roundtable on Learning will examine the full range of supply and demand issues in learning, with each discussion group encouraged to establish its own priorities.

THEME 1: *Assessing Needs*

Skills, life-long learning, knowledge-based economy – these terms are now common parlance, but also widely debated and not easy to define. For example, few would dispute the point, made in the 2001 Speech from the Throne, that: “Canada will only realize its full potential by investing aggressively in the skills and talents of its people.” All the same, it still remains open for debate just what kinds of skills are most needed, as well as by whom they are needed.

The Expert Panel found no evidence of a generalized shortage of technical skills in the five sectors it examined. While acknowledging that the education and training system has produced as many or more technically skilled people as industry has been able to absorb, the Expert Panel concluded that a pressing need remains for individuals who combine these technical skills with management and essential skills – such as in literacy, numeracy, communication, teamwork, computers, thinking, analysis and problem-solving, as well as in positive work attitudes and behaviour.

The Panel also expressed more concern about a shortage of opportunities than about a shortage of skilled workers. This raises the general point that skills are characteristics of both individual workers and jobs. Thus, skills should be viewed from both the supply and the demand sides of the labour market. As a goal, Canada should aim to match highly skilled workers to equally skills-intensive jobs. Yet mismatches between workers skills and job requirements are still leading to under-utilized human capital.

All the same, areas of skills shortages remain. On the one hand, at an aggregate level Canadians' skills have risen to meet rising demand from industry. On the other, however, employers in specific industries, firms and regions continue to report shortages of certain types of occupational skills. Recent studies by the Conference Board of Canada and the Canadian Federation of Independent Business point to unfilled positions in small- and medium-sized businesses – a situation that could worsen as demographics create skills shortages in the next decade. Reconciling these disparate views of current and future skills needs requires common definitions and measurement tools.

A related issue is distinguishing between credentials – say, a diploma or degree from a specific post-secondary program, or a professional certification – and the specific skills, knowledge and abilities acquired through that program. Are the skills most needed in a knowledge-based economy and society those typically associated with a traditional vocational approach to training? Or in a future where life-long learning is expected to be the norm, does a broad ‘generalist’ education offer the most solid foundation?

The relative merits of vocational versus general education have been debated since the 1950s. Recent contributions to the debate suggest that, over time, social science and humanities graduates reap rates of return similar to those for science and engineering graduates. Furthermore, the demand for ‘soft’ skills can be expected to grow as the information technology revolution transforms business and government, creating even more complex human and social problems.

This debate aside, there is no doubt that Canada has failed to attract adequate numbers of young people into the skilled trades through apprenticeships. At issue, then, is finding the right balance of scientific, vocational and general academic skills that will build a knowledge-based economy and society. Canada needs well-trained engineers, computer scientists and construction trades people. But it also needs workers who can deal with the human, social and ethical sides of new technology, globalization, and a host of other powerful trends that will shape the future.

The Conference Board of Canada’s 1992 Employability Skills Profile has had an enormous impact on discussions about learning needs. Yet, as a recent Conference Board Employability Skills Forum concluded, it is difficult to measure employability skills (defined as academic, personal and team-work skills) with accuracy, since their very nature often depends on the unique contexts in which such skills will be used.

Life-long learning casts our minds into the future, away from the immediate skills that employers seek. Again, however, life-long learning can be an elusive notion. Depending on one’s perspective, its goals range from enabling workers to make certain industries more innovative and competitive, improving the quality of life and strengthening citizenship, to meeting more personal needs for human growth and fulfillment.

Since human talent is regarded as the key resource in a knowledge-based economy, inclusiveness in learning activities becomes a considerable policy challenge. Today, there are clear winners and losers in learning and skills development. Whether it is educational credentials, employer-provided training, or job-related informal learning, those who have the most get even more. Consequently, socially vulnerable or marginalized groups risk being left even further behind. Which groups are most at risk of being left out of this process, and how can we ensure that their needs are met? Strong and persistent links exist between a person’s social background and their educational pathways and attainment – making for a cycle that is very difficult to break.

Questions:

Questions that address this theme focus on defining and assessing the learning and skills needs of specific groups of individuals, sectors, and types of employers. The time frame stretches from the present to the medium- and long-term. After a preliminary discussion of the theme, each group should focus on the question(s) that it considers most important.

1. How are the terms ‘learning’ and ‘skills’ defined by different stakeholders? Can we create a common language for discussing these issues?
2. What are the most important learning and skills needs for disadvantaged groups, including: youth who have dropped out of high school; displaced older workers; children and adult members of poor families; adults with low literacy skills; Aboriginal persons; some recent immigrants and refugees; and persons with disabilities? Do we have the right tools to assess these diverse learning needs?
3. How can we assess employers’ current skills and knowledge requirements, capturing the needs of all sectors and types of organizations?
4. How are learning and skills needs of individuals and employers likely to change over the next decade?
5. What are the most effective ways to disseminate information on learning and skills needs?
6. How can we prepare for industry’s future skills needs, given the rapid and complex nature of economic change?

THEME 2: *Removing Barriers and Accessing Opportunities*

Learning is central to the renewed sense of citizenship that Canadians must forge for the 21st century. As Judith Maxwell observed in a recent CPRN report, *Toward a Common Citizenship*: “Learning is fast becoming the centerpiece of citizenship rights in Canada, from early childhood to retirement.” Accordingly, citizens’ rights to learning, education and skills development opportunities are paramount, and will be requisite for the achievement of social and economic goals. Yet many barriers must first be eradicated, and new opportunities created, if we are to put the ideal of ‘life-long learning for all’ into practice.

Many factors raise barriers that prevent specific groups from gaining full access to learning opportunities. Canada’s high overall post-secondary participation rate internationally contrasts with our persistent inequalities based on individuals’ socio-economic backgrounds. Despite remarkable post-secondary education gains by women in the past two decades, key fields – particularly science, engineering and technology – remain male-dominated. Literacy and numeracy skills vary significantly by province. Teens graduating from high school in rural areas are less likely than are urban graduates to participate in university education. Many Aboriginal children view high school graduation as unattainable. Newcomer youths face language and cultural barriers to participating in higher education.

For many adults, a scarcity of time is the main barrier to pursuing further education and training. Over half of employed Canadians feel time pressures, especially parents working full-time – pressures that increased during the 1990s. This results in higher stress levels and less time for learning activities. Among managers and professionals in particular, rising work hours and workloads have turned new training or learning initiatives into just another demand.

More generally, Canada's commitment to universal access to education needs to be adapted to a culture of life-long learning. Total government investments in higher education have declined steadily in real terms since 1980. Families and individuals are paying an increasing share of learning costs, from early childhood to post-secondary and adult education. This tacit shift in the balance of responsibility from governments to individuals and families creates potential economic barriers to learning for people with low and middle incomes.

The socio-economic barriers to learning are also evident in the 'digital divide.' Households in which computers and the Internet are used tend to be wealthier and better-educated. Clearly, this raises a barrier that future 'e-learning' strategies will need to overcome.

Similar patterns are found with respect to workplace training. Right across the industrialized world, the most educated and skilled workers tend to get the most additional job-related training.

Literacy is strongly related to economic opportunities in life and well being – making it imperative to 'raise the floor' for literacy. Individuals with weak literacy skills, however, seldom perceive them as a problem; as a result, they are hard to reach through typical adult education and training programs. At the same time, we must also recognize that literacy skills can be lost if they are not used.

Access to high-quality job-related training opportunities is also a central feature of life-long learning. However, a cluster of labour market trends raise concerns about future access to training for certain groups: own-account self-employed workers; home-based workers; workers in part-time jobs; and temporary and contract workers.

Full-time enrolment in vocational programs at public trade schools and community colleges dropped slightly from 1983-97. The very organization of apprenticeship systems acts as a barrier to vocational training, as does the low esteem in which manual trades are commonly held.

Canadians' overall educational attainments are generally the highest among OECD nations. This provides a solid foundation on which to build further learning and skills initiatives. However, existing human capital is far from being utilized. About one in four workers is overqualified due to a mismatch between their job's skill requirements and their education and skills. As the National Graduates Survey shows, this mismatch occurs across a range of core skills among highly educated young people – the 'knowledge workers' of tomorrow. This stems, in part, from credentialism, when employers artificially raise entry requirements; but it mostly reflects the low skill-content of jobs.

In terms of actual participation in post-secondary education, enrolment numbers have been stable for full-time students, and declining for part-time students, right across the post-secondary system. A complex set of social, demographic, economic, and political factors influenced post-secondary enrolment patterns in the 1990s. While their relative importance and interactions are not well understood, it is clear that creating greater access for a wider range of social groups will be indispensable for life-long learning. By international standards, Canada has a flexible and relatively accessible post-secondary educational system; it now needs to enhance both of these features.

We also have a solid foundation on which to build new forms of learning. Canada ranks second, behind Sweden, in Internet exposure by students in the K-to-12 system. The Advisory Committee for Online Learning (a collaboration between Industry Canada and the Council of Ministers of Education) recently articulated the importance of creating a culture of life-long learning as a foundation to building a civil and prosperous society. The Committee outlined the potential of new learning tools to expand access to educational and learning opportunities.

The learning process is basically embedded in social relationships. Research emanating from the National Longitudinal Survey of Children and Youth suggests that a spectrum of family, school and community factors makes for healthy behavioural and developmental childhood outcomes – the foundations for positive life-long learning. Learning draws on social capital while simultaneously building on it. People’s interactions in schools, workplaces, communities and families can foster learning. This informal learning is often overlooked as a source of job and life skills.

Questions:

The questions below address two related issues: the barriers that specific individuals or employers face in meeting their learning needs (Qs. 1 to 3), and actual or potential opportunities that can enhance an individual’s or organization’s capacity to meet learning needs (Qs. 4 to 6). When discussing one of more of these questions in break-out groups, participants may choose to limit their focus to one or several groups/ sectors/ firm types whose learning needs were identified under Theme 1.

1. What are the major barriers to meeting the learning needs of specific social groups and society as a whole?
2. What are the major barriers to meeting employers’ skills requirements?
3. What changes are required to make fuller use of existing skills and knowledge within workplaces?
4. What are the most effective ways to create accessible, inclusive learning opportunities for individuals at all stages of their adult lives?
5. What incentives, resources and actions are needed for employers to create ‘learning organizations’?
6. In order to expand learning opportunities, what is the ideal balance of roles and responsibilities among individuals and families, communities, learning institutions, employers and governments?

THEME 3: *Identifying Outcomes*

Moving from ideas to actions requires a comprehensive plan that spells out short-, medium- and long-term goals. When identifying the most important individual, organizational and societal outcomes, it is crucial to determine how responsibility for achieving these goals will be shared among individuals, governments, learning institutions, employers and other stakeholder communities.

Some outcomes are very concrete. For example, the Forum of Labour Market Ministers has identified four key learning-related policy outcomes: keep youth in school; improve the prospects for Aboriginal youth; more effectively prepare high school students who enter the workforce directly; and ensure continued access to post-secondary education for all youth.

Other outcomes are less tangible. Take, for instance, citizens' rights and entitlements to learning opportunities. If meaningful learning opportunities are embedded in our definition of citizenship, then surely a key learning outcome is to cultivate the requisite skills for active citizenship – the capacity to participate fully in all aspects of social and economic life. Once we accept that all citizens have the right to gain access to high-quality learning opportunities, it becomes incumbent on all stakeholders to devise effective ways to ensure quality outcomes.

Pushing this point further raises the issue of the minimum levels of education, training, and other forms of learning that we should set as goals. And how do we tackle educational disadvantages, underachievement and resulting social exclusion? Canada's commitment to the OECD goal of 'life-long learning for all' raises the bar in all these respects. Indeed, the greatest policy challenge may be to find ways to close the 'learning outcomes' gap reflected by those who have the best start to learning, from childhood, and who leverage their advantage for better learning opportunities through their adult lives.

The Council of Ministers of Education's September 1999 Declaration reiterates that education is a life-long process, and that we must "create a learning society in which the acquisition, renewal, and use of knowledge are cherished." Its future image of Canadian society is one that depends on "informed and educated citizens" who jointly fulfill their own goals while at the same time contributing to social and economic progress.

This is the broad view of learning and its outcomes which accepts that learning is a complex, evolving process that requires the support of many stakeholders. No single set of outcomes may suffice; interventions today may only pay off years or decades hence. For example, a healthy launch of the learning process is crucial, since active learning during the adult years depends on investments in early childhood education, in support for parents of young children, and even in certain pre-natal programs (e.g., fetal alcohol syndrome prevention) – all areas where many Canadians expect governments to undertake major initiatives.

It is thereby crucial for all stakeholder communities to agree on who will take the lead on specific actions and areas of shared responsibility. But, as the Expert Panel cautions, the tumultuous 'new economy' is blurring the once distinct roles and responsibilities of the public and private sectors. Furthermore, it has become more important for employers, workers, unions and professional associations to work together to create the conditions that will promote the most effective use of human resources through continuous learning and skills development. As steps are taken in this direction, successes and failures must be documented, and the lessons disseminated widely.

A final word on the future 'learning organizations.' While some employers already claim to have created true learning organizations, we must be careful to separate theory and rhetoric from actual practice. Lacking is a conceptual tool kit to enable us to assess how far an organization has moved along the 'learning' continuum. A high priority, then, is to emphasize measurement and accountability within organizations for meeting learning and skills development goals.

Questions:

Based on their discussions of Themes 1 and 2, break-out groups will now use the insights they have generated to identify specific outcomes that will enable us to design actions, measure progress, and determine roles and responsibilities.

1. What are the most important learning outcomes for specific groups discussed in earlier themes?
2. Should certain kinds of skills, abilities and knowledge be set as national, provincial or sectoral learning goals?
3. More generally, what are the key 'life-long learning' outcomes for all citizens?
4. Should specific learning outcomes be developed for young people making the transition from school to work?
5. What would be the key indicators for tracking the development of a 'learning culture' in Canada?
6. How do we use these outcomes to create action plans?