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Summary Report
of a Consultation Workshop on:
**Critical Skills in
Strategic Industry
Sectors of the
Canadian Economy**

British Columbia – in Vancouver
April 27th and 28th, 1999

Secretariat of the Expert Panel on Skills

Canada

CONSULTATION WORKSHOP ON:

**CRITICAL SKILLS
IN STRATEGIC INDUSTRY SECTORS
OF THE CANADIAN ECONOMY**

BRITISH COLUMBIA – in VANCOUVER

APRIL 27th and 28th, 1999

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E-mail: publications@tc.gc.ca

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DEFINING THE ISSUES

Panel member Paul Gallagher told participants they had “an unprecedented opportunity to influence public policy.” He encouraged participants to “share their views on key issues, with an emphasis on good, hard, practical strategies emphasizing action.”

Initially, the participants identified 24 topics and split into groups to discuss the first four. After an hour of discussion, they regrouped, expressed some frustration with the process of identifying issues and a desire to get on with developing solutions. Ultimately, the areas within which the group decided to work were as follows:

MAIN TOPICS	SUB-TOPICS
“Roots”	Create a science & technology culture in Canada
	Perceptions and values related to learning
	Life-long learning
Life-long learning	School-to-work transitions
	Industry / Education linkages
	Education and training for women, immigrants and visible minorities, Aboriginals, and people with disabilities
Economic policy	Industry / Education linkages
	Taxation
	Education as economic development
	Immigration policy

Breakout Groups were formed to discuss key issues, and brought their conclusions back to the Plenary.

ROOTS

"If we don't address the way science and technology in the workplace are perceived, we will continue to have a problem," a participant told the workshop. The government needs to change perceptions by promoting science and math as skills essential to everyone's daily life, create linkages and enable collaboration between stakeholder groups, and improve understanding among educators of the way the content they teach is applied in the work place.

The breakout group on Valuing S&T defined the following key principle and four strategies for action:

The needs to foster a general awareness that science, math, and communication are fundamental skills that are part of every Canadian's daily life and that these skills should be valued and invested in. This must be recognized as a long-term commitment for long-term gain.

- The federal government should *coordinate a national media campaign* highlighting the role of science and technology in Canadian society in order to increase appreciation for the social and economic wealth generated by skills in these areas.
- The federal government should *identify key stakeholders*, such as itself, HRDC sector councils, provincial agencies and associations, and community groups. It should *create linkages* among the groups and *make funding available* to support collaboration.
- The Federal and Provincial governments should *form partnerships* to reach teachers through both pre-service and in-service training, to ensure that they have a minimum *recent* education in sciences and technologies and awareness of the way they are currently being used in the workplace. Although the initial focus should be two to five years, it should incorporate a long-term commitment.
- All stakeholders must *recognize the need for multi-disciplinary thinking*. This should start with government ministries and educators striving to fill gaps currently missing in core skills, such as critical thinking, problem-solving, attitude, and communication.

Key Messages

Science and technology need to be communicated from all sides

1. We need to invest more in people who have low basic skills
2. We need to make sure our children get the values and skills
3. We must create a culture of innovation

4. We need to ensure that poor economic conditions are not an excuse for not improving the environment, because environmental technology is itself a growth area

LIFE-LONG LEARNING

This breakout group had focussed on awareness issues, including awareness of:

- the teacher/student pipeline into skills pools
- disadvantaged groups
- career and labour-market issues
- awareness of the benefits of science and technology in a knowledge-based economy
- teacher awareness of current applications for science and technology
- awareness of a base need for funding.

“We approached this problem from a career-path perspective, including K-12 and post-secondary education as well as job-to-job training,” said the presenter. “It really is a life-long spectrum.” She commented on the need to acknowledge that it costs more to provide education in the knowledge-based sector. “A bums-in-seats attitude is not adequate because bums in technology seats are more expensive.”

Following is a list of recommended key actions:

- The federal government and Industry should establish a *joint hardware fund for education* (i.e. Canadian Foundation for Innovation for education).
- The should *implement some kind of savings plan* to help individuals finance life-long learning (i.e. RESP.)
- Teachers’ associations in partnership with industry and education ministries should *develop “show-me” opportunities for teachers* to experience industry applications of science first-hand and bring that awareness back to the classroom.
- The federal and provincial governments in partnership with industry should *develop ways to link labour-market information with career-awareness activities* and distribute information with career-planning tools.
- The federal and provincial governments in partnership with industry and S&T associations should *develop a program to promote the uses of S&T* in daily life.
- The provincial governments in partnership with industry and with funding from the should *develop and implement models for work-based education and training for SMEs.*

- The federal and provincial governments should **implement human resources planning for the S&T teacher pool** that would address quantity, pre-service and in-service training, and alternative qualifications.
- The federal and provincial governments and industry should **implement a national career-discovery program**, with sub-programs targeting identified groups.
- The and sector partnerships should **review technology sectors to minimize conflicts** in terms of skills needs and maximize complementary characteristics.

Key Messages

1. We need to promote choices of science and technology skills appropriate to industry needs
2. We need to increase awareness of teachers, counsellors, and parents
3. We need to organize workplaces to create a sense of inclusive community

ECONOMIC POLICY

The presenter said that a knowledge-based economy is based on skills and risk-taking, not only among entrepreneurs, but in the development of tax strategies that create an environment conducive to individual risk-taking. He stressed the importance of seeing training as an economic issue. "What do we mean by a skill anyway?" he asked. "Why don't we see a problem with training coal miners as the last coal mine is closing?" We also need to address that training can be acquired formally and informally. He then referred to regional issues. "IT is a means to achieve rational distribution of skills," he said. "There is a need for IT infrastructure to be funded as are other aspects of infrastructure."

The group produced the following recommendations for action:

- HRDC must **recognize the need to aggressively recruit skilled workers**. The immediate issues are recognition of professional credentials from other countries (this also applies to professional associations) and employment opportunities for spouses.
- The must **recognize that people need incentives to take risks**, that a knowledge-based economy is mobile, and that the bottom line is disposable income. Addressing this will require both tax strategies and a new policy environment.

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- ***Tax strategies*** (Department of Finance) should include lower marginal tax rates, capital-gains tax relief for employee-owned stocks, tax incentives for life-long learning, and tax credits for companies that invest in education for their employees.
 - The policy environment (Industry Canada) must acknowledge the ***need for interlocking tax, industrial, and venture-capital policies*** to stimulate the creation and growth of companies. Also mentioned in this context were: strategies to replace firms or sectors that die off with new firms or sectors; a focus on individual wealth creation as a means to stimulate risk-taking and investment in new companies; policies driven by the private sector; IT infrastructure to be recognized as central to the policy environment because it is central to most economic activities.

- HRDC must **recognize that training is an economic issue** by defining what skills are in a knowledge-based economy and where non-knowledge-based skills fit in; by connecting skills supplies with skills needs; by supplying market-specific skills training in a timely way; by finding ways to recognize skills obtained outside the formal education system; and by providing rewards and incentives based on outcomes rather specific, formal educational achievements.
- Regional development agencies and governments must **move toward decentralization of highly skilled employment** by underwriting telecommunications infrastructure in the same way that it traditionally has underwritten other forms of infrastructure. They should also work together to develop regionally tailored programs for skills development and engage the provinces in skills issues.

Key Messages

- Economic policy 90% of the issue: it will provide either the opportunities or the barriers
- We need to stop trying to fix economic policy problems with social policy tools, while also recognizing that many economic and social issues are related and cannot be addressed solely with blunt economic instruments
- Critical skills shortages exist outside high tech
- There is a need for sector-based policies that respect regional differences

Overall Key Messages from the Participants in the Vancouver Consultation Workshop to the Members of the Expert Panel on Skills:

- Stop talking and do something that will support those who are prepared to move forward with initiatives and projects; there is no need for another round of consultation
- Get community-based groups, industry, and education involved and working together
- Survey what is already happening, identify best practices and support them, and monitor them with an annual report card: avoid reinventing the wheel

Participants

Roxanne Ang, Tourism Training Institute

Kathryn Barker, President, FuturEd

Paul Barran, Program Head, Biotechnology Department / B.C. Institute of Technology

Marcia Braundy, Director / Kootenay Women in Trades & Technology

Hilda Ching, Hydra Enterprises Ltd.

Richard De Beck, Consultant, Labour Market Services / Human Resources Development
Canada

Ian Dowdeswell, Delian Consultants

Nolan Eddy, Training Coordinator / UCFW Local 2000 Training Centre

Ron Fontaine, National President & Director General Chairman / International Association of
Machinists and Aerospace Workers

Jim Gaskell, President / Confederation of University Faculty Associations of British Columbia

Gregory George, First Nations Program Coordinator / Simon Fraser University

Gillian Gerhard, BC Regional Coordinator / Let's Talk Science - BC Regional Office

Paul Gorton, Director of Engineering / MacDonald Dettwiler & Associates

Robert D. Grace, Director, Partnership Development & Marketing / Industry Training and
Apprenticeship Commission

David Hughes, Vice President / Sierra Systems Consultants Inc.

Kerry Jochen, Chief Executive Officer / Industry, Training and Apprenticeship Commission

Maria Klawe, Dean of Science / University of British Columbia

Uschi Koebberling, Manager of Planning and Research / The Science Council of British
Columbia

Ann Lévi-Lloyd, Facilitator, Advanced Skills Training / NRC Innovation Centre

Marilyn MacDonald, Department of Women's Studies

Ron Marteniuk, Dean, Applied Sciences/ SFU

Theresa E. McCurry, Executive Director / BC Biotechnology Alliance

Linda Mitchell, Executive Director / Literacy BC

Donna Palmer, Director of Special Projects / Centre for Applied Academics

Brent Sauder, Executive Director / BC Advanced Systems Institute

Glen Scobie, Sector Manager Information Technologies / Ministry of Employment & Investment

Bernard Sheehan, President / Technical University of British Columbia

Kelly Sinclair, Apprenticeship Training Coordinator / UCFW Local 2000 Training Centre

Jim Soles, Director / Post Secondary Education

Robert Stitt, TechWORKS! Program Manager / Applied Science Technologists and Technicians of BC

Paul Webb, Director, Idea Centre / Camosun College

Bob Woodham, Head, Computer Science / University of British Columbia

Hugh Wynn Edwards, President / BC Research