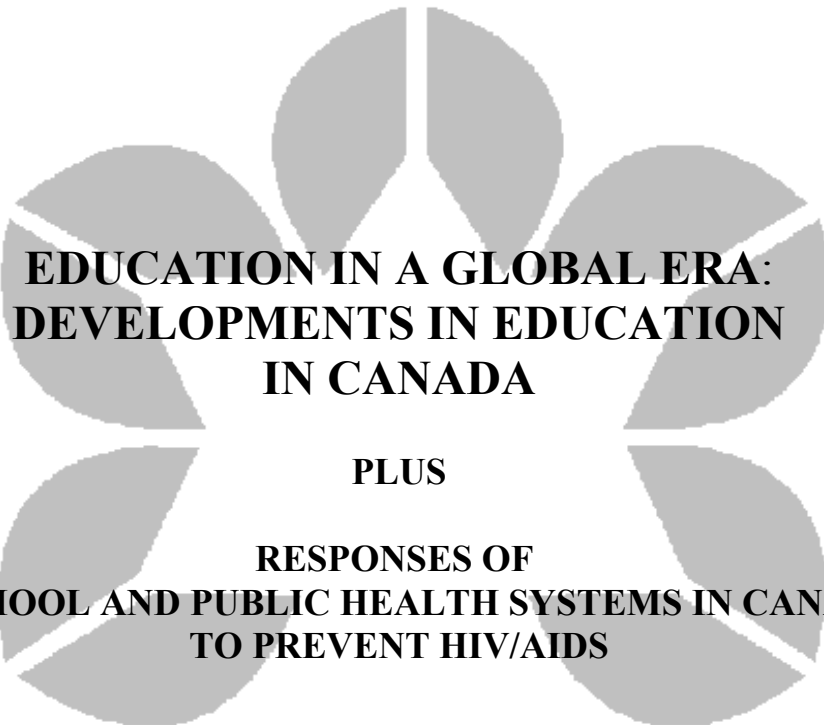


Council of Ministers of Education, Canada



report prepared for the

14th Conference of Commonwealth Education Ministers
Theme: Education in a Global Era – Challenges to Equity, Opportunities for Diversity

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EDUCATION IN A GLOBAL ERA: DEVELOPMENTS IN EDUCATION IN CANADA

EXECUTIVE SUMMARY

This country report has been prepared by the Council of Ministers of Education, Canada (CMEC) as a background paper to the 14th Conference of Commonwealth Education Ministers meeting in Halifax, Nova Scotia Canada in November 2000 on the theme “**Education in a Global Era: Challenges to Equity, Opportunities for Diversity**”. The report summarizes developments in education in the provinces and territories in Canada over the past five years with special emphasis on education strategies for the new millennium. The CMEC gratefully acknowledges the valuable input from the provinces, territories, federal government departments and NGOs so essential to a full description of the vast mosaic of Canadian education systems.

Canada is a northern country in the Western hemisphere that occupies the second-largest land mass in the world. Canada has a culturally diverse population totalling about 30,000,000, of which Aboriginal peoples represent about three percent, and two official languages - English and French. Politically, Canada is a federation of ten provinces and three territories, each of which, within the federative system of shared powers, is constitutionally responsible for education. Canada does not have a central ministry, department or office of education.

Information is one of the essential ingredients of lifelong learning. In today’s global village, technology is the tool that makes information available. Moreover, the needs of employers are changing faster than education and training systems can respond. Basic skills for the 21st century now go beyond reading, writing and numeracy to include information, media and technological literacy as well as critical thinking.

All provincial and territorial ministries plan to use new information and communications technology (ICT) to help students acquire the skills needed for full participation in an increasingly complex knowledge-based environment. In general, computers were more available to students in higher grades. In February 1999, there was one computer for every nine elementary students, compared with one for every eight lower secondary students, and one for every seven upper secondary students.

Geography still plays a large part in shaping the Canadian reality. Rapid advances in electronic communications mean that access to education is no longer limited by the requirement of being in a particular place at a set time. New information and communications technologies present their own challenges, however, in terms of cultural assimilation and the need for our teachers and young people to be increasingly literate in the computer-based technology area.

Children and youth attending school today will spend the major part of their lives in the 21st century. This new world will demand from our children an enormous ability to adapt, to

communicate, to solve problems and to create, from whence springs the need to update current programs and curricula as evidenced by the in-depth curriculum reforms currently under way in a number of jurisdictions in Canada.

Education levels in Canada, already high by international standards, continued to improve throughout the 1990s. More Canadians are graduating from high school and more graduates are going on to higher education. Many adults are also upgrading and updating their education. In 1998, approximately 1.4 million Canadians aged 25 and over were enrolled in formal education programs.

Education currently represents the second largest category of public expenditure in Canada, exceeded only by spending on health. Educational expenditure was estimated at C\$60.5 billion in 1998-99, or just under C\$2,000 per capita. In 1995, Canada ranked second among Group of Seven (G-7) countries in education expenditures per student behind only the United States. Expenditures from both public and private sources, were \$US 6,396 per student in Canada.

In Canada, education is meant to introduce students to the world of culture and prepare them for their roles in adult society. Education is expected to make students capable of making thoughtful judgments and taking responsible action. With such preparation, our future adults will be able to take up the global challenge with an openness of mind and an ability to adapt successfully to the changes they will meet along the way.

GLOSSARY OF TERMS

Aboriginal	refers to Canadian First Nations, Inuit, Métis and non-Status Indian individuals and groups
band	separate community occupying one or more reserves of land set aside for its use and benefit and usually sharing a common linguistic and cultural background
CEGEP	a college of general and vocational studies in the province of Quebec leading to university admission or employment
community college	a postsecondary institution offering diplomas and certificates with close ties to the community in which it is located
federal	refers to the central form of government in Canada
First Nations	the 626 communities recognized in the Indian Act
Mi'kmaq	a First Nation located in eastern Canada (Nova Scotia)
Nisga'a	a First Nation located in western Canada (British Columbia)
provincial	refers to the ten self-governing divisions of the Canadian federation
Registered Indian	persons who are registered or entitled to be registered as Indians under the Indian Act and whose recognition is referred to as Registered Indian Status (also see Status Indian)
reserve	land that has been set aside (or "reserved") for the use and benefit of a First Nation as a whole; members of First Nations do not have a right of individual possession except by application of the Indian Act
Status Indian	see Registered Indian
territory	three self-governing areas in Canada's far North (Yukon, Northwest Territories and Nunavut) with elected assemblies

INTRODUCTION TO AND OVERVIEW OF EDUCATION IN CANADA

Canada is a northern country in the Western hemisphere that occupies the second-largest land mass in the world. Canada has a culturally diverse population totalling about 30,000,000, of which Aboriginal peoples represent about three percent. Most Canadians live in urban areas near the southern Canada/United States of America border, while others inhabit a variety of regions stretching from sea to sea to sea. Canada uses two official languages - English and French - of which English is the mother tongue of approximately 61 percent of the population and French, the mother tongue of approximately 26 percent. Most Francophones live in the province of Quebec, where they make up 85 percent of the population, but there are also many French speakers in the provinces of New Brunswick, Ontario, and Manitoba. Education in Canada is available in both official languages to a greater or lesser degree, depending on the region.

Politically, Canada is a federation of ten provinces and three territories, each of which, within the federative system of shared powers, is responsible for education. The *Constitution Act, 1867*, provides in part that "in and for each province, the Legislature may exclusively make laws in relation to education." Canada does not, therefore, have a central ministry or office of education. The Council of Ministers of Education, Canada (CMEC) provides a forum for education ministers to discuss matters of common concern, share information and represent Canadian education internationally.

Economically, Canada is a strong and highly developed nation. It is a member of the Group of Eight (G-8) and of the Organization for Economic Cooperation and Development (OECD). The Canadian economy has matured over the decades from primarily agricultural and resource-based to industrialized and technologically advanced. A marked economic slowdown at the beginning of the 1990s resulted in heightened attention to deficit reduction and government cost-cutting, as well as pressures for more efficient and accountable program delivery mechanisms. Nevertheless, education has remained a priority as an investment for governments reflecting the high commitment of Canadians to learning. Educational spending at all levels represents seven percent of Canada's gross domestic product, the highest level of any G-8 country.

Education is considered a valuable asset for all Canadians. In a highly competitive Canadian society, secondary school graduation greatly enhances one's chances for employment, and further education at college or university is strongly desired. Attainment of degrees, diplomas, or certificates by 25- to 34-year-olds increased from 44 percent in 1981 to 59 percent in 1991. Median years of schooling for the population aged 15 years or over in Canada is now 12.5, up from 11.3 in 1976. It is estimated that about 40 percent of Canada's jobs now require 16 or more years of formal education.

Despite the fact that each of the provinces and territories has developed its own educational structures and institutions, reflecting the circumstances of regions separated by great distances and the diversity of the country's historical and cultural heritage, its thirteen educational systems are more alike than they are different. All systems maintain a three-tiered structure of

elementary, secondary and postsecondary schooling. All jurisdictions provide universal, free elementary and secondary schooling that is compulsory. Postsecondary education is provided by universities and colleges, community colleges, CEGEPs (collèges d'enseignement général et professionnel) or institutes of technology.

The three northern territories (Northwest Territories, Yukon and Nunavut) have been assigned responsibility for the delivery of educational services through federal statute. The Government of Canada provides funding for education in these territories, each of which has established its own department of education and manages the delivery of educational services. And although the provinces retain constitutional authority for education in all lands, the federal government provides for the education of registered Indians and Inuit people, with the exception of the Cree, Inuit and Naskapi of Quebec whose education is the responsibility of that province, as well as the education and training of individuals in the Armed Forces, Coast Guard, and Correctional (penitentiary) Services.

In all of the provinces and territories, members of school boards are elected by public ballot. The powers and duties of these boards are defined in provincial or territorial statutes and are, in general, consistent throughout Canada. School board authority generally includes implementing curriculum, operating and administering school systems, acquiring required financial resources, initiating proposals for new construction or other major capital expenditures, and staffing responsibilities.

Pre-elementary Education

Pre-school programs or kindergartens are operated by local education authorities and provide one year of education prior to grade one for five-year-old children.

Elementary and Secondary Education

In each province or territory, a ministry or department of education is responsible for elementary and secondary education. Public education is provided free to all Canadian citizens and permanent residents until the end of secondary school – normally age 18. The ages for compulsory schooling vary from one jurisdiction to another. Generally, youth are required to be in school from the ages of six or seven to age 16.

Private or independent schools, which provide an alternative to publicly-funded schools, may operate in any province or territory if they meet the general standards prescribed by that jurisdiction. Although in most cases private schools closely follow the curriculum and diploma requirements of the Department or Ministry of Education, they function independently of the public system and charge fees. Five provinces – Alberta, British Columbia, Manitoba, Quebec, and Saskatchewan – provide some form of financial assistance to these private schools.

Primary education in most jurisdictions covers the first six to eight years of compulsory schooling. Afterwards, children proceed to secondary education. A wide variety of programs – vocational (job training) as well as academic – are offered at the secondary level. The first years are devoted to compulsory subjects along with a few optional subjects. In the latter years, the

number of compulsory subjects is reduced, permitting students to spend more time on specialized programs that prepare them for the job market, or to take the specific courses they need to meet the entrance requirements of the community college or university of their choice. Secondary school diplomas are granted to students who pass a designated number of compulsory and optional courses.

The point of transition from elementary to secondary school may vary from jurisdiction to jurisdiction. Some school boards break up the elementary-secondary continuum into schools that group together, for example, kindergarten to grade six, grades seven to nine (junior high), and grades 10 to 12 (senior level) In Quebec, secondary schooling ends after 11 years of studies.

Postsecondary Education

Once secondary school has been successfully completed, students may apply to a community college or university, or other institution if they wish to further pursue their education.

Quebec students, having completed secondary schooling in 11 years, as contrasted with 12 years in other jurisdictions, must obtain a college diploma in order to be admitted to a university program. The colleges, called CÉGEP (collèges d'enseignement général et professionnel), offer both general programs that lead to university admission, and vocational programs whose graduates generally enter the labour force, the logical conclusion of this training. In 1997-98, however, 21.9 percent of vocational graduates entered university. In Ontario, students must currently complete six Ontario Academic Credit courses in order to be admitted to a university program. This can be accomplished by taking courses over an additional semester or a year after completion of grade 12. The phasing out of this additional year began in September 1999 with the introduction of a new four-year secondary school curriculum.

Postsecondary education is available in both government-supported and private institutions. Colleges such as technical and vocational institutions, community colleges, CÉGEPs, and other institutes of technology, offer programs for continuing education and for developing skills for careers in business, the applied arts, technology, social services and some health sciences. Programs vary in length from six months to three years. There are also private vocational or job training colleges in most provinces. In general, colleges award diplomas or certificates only; community colleges do not award academic degrees, a prerogative of the universities. In 1995-96, Alberta initiated a demonstration project allowing colleges and technical institutions to award applied degrees to enhance career preparation of students.

In cooperation with business, industry and labour, many community colleges offer professional development services or specialized programs in high-technology areas. Technical training and technology programs prepare students for employment in government, in the health and social sectors, in the trades, industry or agriculture, in marine and natural resource sectors, or for jobs as professional technicians or technologists. Certificates are granted for programs requiring one or two years of study (24 to 30 weeks). Two- or three-year programs lead to diplomas. In some provinces, four-year programs of an academic rather than a job-training nature are offered.

The British Columbia community college system enables students to complete two years of academic course work towards a bachelor's degree in some universities. Students who complete 60 semester credits in a clearly defined program of first and second year university transfer courses at colleges, university colleges and institutes are eligible to receive Associate of Arts and Associate of Science degrees from these institutions. Students who wish to pursue further studies can complete the third and fourth years of a degree program at a university college or university. A formal system of academic credit transfer has been established in British Columbia for many years to facilitate the transferability of postsecondary credit courses among the colleges, university colleges, institutes and universities in the province. Alberta's community colleges also offer university transfer programs. In many provinces, however, the transfer of credits between colleges and colleges, or between colleges and universities is not automatic. Students must apply for admission and have their previous studies evaluated before being granted credits for all or some of the courses they have completed. Many colleges now offer post-graduated diplomas in specialized fields that require a pre-requisite degree or diploma. For example, in 1998 in Ontario, 11,000 applicants to community colleges had university backgrounds.

Programs leading to degrees are offered by universities or other degree-granting institutions. Most Canadian universities, especially those in the larger cities, offer a comprehensive range of programs in many fields, up to and including the doctoral degree. Others universities are more specialized, and have developed specific areas of excellence. There are also some specialized institutions that are not campus-based and offer university programs through correspondence courses or other types of distance education.

Both undergraduate, leading to bachelor's and first professional degrees, and graduate, culminating in master's or doctoral degrees, studies are available in many Canadian universities. Not all universities, however, offer graduate programs (master's and doctoral degrees). In addition, most universities offer diploma and certificate programs at either the undergraduate or graduate level. Such programs range from one to three years' in duration.

Bachelor's degrees may require three or four years of study, depending on the program. Universities in some provinces grant general or pass degrees in three years and require a fourth year for an honours undergraduate degree, while other universities require four years of study whether for a general or honours degree. Professional degrees, for example in engineering or architecture, may take five years to complete.

Master's degrees require a minimum one or two years of study after completion of a bachelor's degree in the same or a related field. Some may require a thesis or professional internship. Doctoral degrees usually require at least three years of study after completion of a master's degree. Most students, however, need more time to complete a Ph.D., the average being about four or five years. Doctoral degrees involve researching, writing, presenting and defending a thesis, in addition to completion of specified courses.

Canada is officially bilingual – French and English – yet immigration has had an impact on and extended the Canadian cultural and social fabric beyond these two official languages. About 60 percent of recent immigrants under 18 entering Canada speak neither French nor English. The province of Ontario receives over 50 percent of immigrant children and youth. An increasing cultural and linguistic diversity has become most evident in many large Canadian urban centres such as Toronto, Vancouver, and Montreal. These students place special demands on school systems that must provide English- and French-as-a-second-language programs and enhanced support and guidance. English remains the predominant language of households of school-age Canadians outside of Quebec and New Brunswick. In Quebec, 85 percent of households speak French, and in New Brunswick, the proportion is about one-third.

Many other languages are also evident in Canada, especially since immigration has shifted from European to African and Asian origins. In several provinces (British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec), about five to ten percent of households speak a language other than English or French. It should be noted that in the Northwest Territories, almost 40 percent of households speak neither official language; rather, they speak a variety of native official languages of the territory.

In summary, Canada is a culturally diverse country whose people value education. As Canada moves into the 21st century, key challenges to be faced include public debt reduction, refocusing government spending, and adjustment to the implications of globalization. Canadian education systems must adapt to this contextual environment, as well as to the diverse needs of their students, parents, and community.

Council of Ministers of Education, Canada

The Council of Ministers of Education, Canada (CMEC) was established in 1967 by the provincial ministers, with the concurrence of their respective governments. In a context where each province and territory is responsible for its education system, CMEC is the unique instrument that allows ministries and departments to work collectively.

Through CMEC, cooperation among the provinces and territories is fostered through a broad range of activities at the elementary, secondary, and postsecondary levels. As an arm of provincial ministers of education, CMEC is the mechanism for consulting on matters of mutual interest; representing Canadian education internationally; providing liaison with various federal departments; and cooperating with other national education organizations.

Government of Canada

In Canada, the provinces and territories are responsible for education at every level. Since Confederation, however, and particularly since World War II, the Government of Canada (federal government) has been an important source of support of common federal-provincial/territorial objectives in human resource development. This support derives from a recognition of the crucial role played by colleges and universities in the creation of a highly-trained work force as an essential ingredient of a healthy national economy and from a desire to ensure that all Canadians in all regions have equivalent access to postsecondary education and

learning opportunities. This latter concern explains the interest of the federal government in facilitating accessibility to postsecondary education and the mobility of students both within Canada and abroad.

EDUCATION POLICIES FOR A NEW MILLENNIUM

Dene elders have said that the child is born grasping the drum. The child is holding in the palm of its hands the accumulated knowledge, skills and perspectives of the Dene. This drum ensures the continuation of the Dene as a people. The child becomes the community and the community is the future of the people. The child is therefore the future. Dene Kede Curriculum, Northwest Territories

As we begin the 21st century, technology and globalization are changing the structures of our homes, workplaces and communities. Parents are becoming more involved in the educational development of their children to help them become self-directed learners. Workers must adapt to new jobs that are technology-based and knowledge-driven. And citizens are faced with the task of decoding large amounts of information from various social institutions and experts in order to thrive and prosper in their communities.

With the shift to a knowledge-based global economy, human capital has become an increasingly valuable resource. In this environment, growing importance attaches to the mobility of highly educated segments of the population. Education plays a crucial role in the development of individuals and society to develop learning and research environments that are international in scope, inter-disciplinary in orientation and information-linked. An educated work force that can use knowledge to generate innovation is vital to a strong and prosperous economy.

Traditional views on the way Canadians live, work and learn are constantly being challenged by the rapid implementation of new technologies in every facet of life. Today, people face the reality of changing their jobs several times over the course of their working lives and adults everywhere are upgrading and expanding their skills in the workplace, in colleges and universities, in community courses and in their homes. Learning – be it upgrading work skills, preparing for a new career, developing a hobby or enriching one’s life – is a lifelong process.

The federal Department of Human Resources Development Canada (HRDC) is committed to ensuring that all Canadians have access to learning opportunities since education and learning equip Canadians with the necessary skills to participate fully in economic and social life. Literacy is an increasingly important issue that is being addressed at both the federal and provincial levels of government. The International Adult Literacy Survey indicated that 48 percent of Canadians aged 16 years and over have inadequate literacy skills to cope effectively in all aspects of their lives. The federal government, through the National Literacy Secretariat, works with a wide-ranging network of partners, including provincial and territorial governments,

the voluntary sector, business and labour, the literacy community and federal government departments, to help improve the literacy levels of Canadians. The delivery of literacy training programs is the responsibility of the provinces.

Recognizing that education empowers people to be involved in the issues and debates affecting them and society, Canada's Assembly of First Nations (AFN) advocates community-based and community-governed education systems. The AFN promotes national strategies for education based on local First Nations needs and goals and facilitates the development and implementation of a national strategy for jurisdiction over education at the community level. The AFN believes First Nations education should include instruction in the values held in esteem by First Nations communities, a focus on the preservation of First Nations languages and cultures, the active involvement of parents and community members in the education process and local jurisdiction over school management, curriculum standards, program quality and delivery of services.

Many jurisdictions are responding to the changes brought about by globalization by creating high standards of educational excellence and implementing strategies to ensure effectiveness, efficiency, transparency and accountability. In February 1999, the CMEC published *A Report on Public Expectations of Postsecondary Education* (available at the CMEC Web site <http://www.cmec.ca>) that was the culmination of the discussion of nine provinces and the Northwest Territories (with Quebec and Yukon as observers) about a range of issues in which quality and accountability were key themes.

The public has high expectations of public education at all levels. The Canadian School Boards Association brings together the locally-elected school boards from across Canada that are responsible for using provincial funding to deliver education programs. School boards are thus accountable for implementing provincial regulations and for the appropriate use of revenue. Because school boards are accountable to their communities for program delivery, they also have a strong influence on student-related outcome and achievement.

In Ontario, education reforms since 1995 have aimed at an emphasis on excellence, higher standards of student achievement, and greater accountability to parents and taxpayers for results. The Ontario Education Improvement Commission has been working with school boards on adapting to changing structures for the education system. An Education Quality and Accountability Office has been established to administer province-wide tests in core subjects and facilitate provincial participation in national and international student assessment, and to assist in the process of working toward higher system quality.

The introduction of the Key Performance Indicators program at the postsecondary level in Ontario is intended to measure the relationship between university and community college programs and job opportunities for graduates with enhanced funding for programs demonstrating high graduation and placement rates and student and employer satisfaction.

In accordance with direction from the Auditor General, key performance indicators have been developed in British Columbia to measure how well postsecondary institutions are meeting the

goals of relevance and quality, access, affordability, and accountability which were set out in 1996 in *Charting a New Course - A Strategic Plan for the Future of British Columbia's College, Institute and Agency System*. In the university sector of the province, work is continuing to develop an accountability framework which articulates the outcomes the government will expect from this sector.

Quebec recently adopted a new university policy reflecting major issues of current international discussion: accessibility, the quality of teaching, excellence in research, meeting the needs of society and an openness to the rest of the world. The allocation of public funds will take university efforts in these areas and be based on the sound management of resources and the services that universities provide.

In other policy-related initiatives, Yukon is about to begin the first ten-year review of its *Education Act*, which is a unique document both for the consultative process by which it came into being in which hundreds of Yukon residents participated and for the fact that Yukon was the first place in Canada to recognize minority rights enshrined in the Canadian Charter of Rights and Freedoms as well as clearly outlining provisions for special needs students.

Nova Scotia adopted a new *Education Act* in 1996. Education reforms include a restructuring process, amalgamation of school boards, and the introduction of school councils. Current amendments to the *Education Act* include a pilot project on a new governance model for one school board, and provision for the election of an African- Canadian representative to each of the province's six English school boards. The latter change is part of a strategy to ensure that African Nova Scotians benefit from a fully supportive learning environment.

To promote a focus on lifelong learning, the Alberta Ministry of Learning was created to bring together the former departments responsible for basic, postsecondary education and apprenticeship and industry training. Initiatives such as the introduction of K-12 information technology curricula, Campus Alberta and applied degrees respond to learner needs while postsecondary funding linked to key performance indicators ensures high quality and innovation.

The federal government has made a commitment to develop an action plan to implement the National Children's Agenda, a government policy that targets the elimination of child poverty. For the past three years, the Canadian School Boards Association has been exploring this question, examining ways in which local school boards can improve the educational outcomes of children living in poverty. The publication in 1999 of the *Poverty Interventions Profile* provided a model for school boards to develop intervention programs.

Human Resources Development Canada (HRDC) supports a number of initiatives of the Council of Ministers of Education, Canada (CMEC), including the accessibility and research components of the Public Expectations of Postsecondary Education project; the School Achievement Indicators Program (SAIP), and the Pan-Canadian Education Indicators Project (PCEIP). These projects support the strengthening of accountability and building of Canadian expertise in the development of education outcome indicators. Through a variety of funding programs, HRDC

supports these projects because of their value in helping to ensure that Canadians have the necessary knowledge and skills required to compete in the global economy and their contribution to Canada's knowledge base on human capital.

Specific policies relating to access, equity, diversity, technology, curriculum and teacher training are described in the following sections.

EVOLVING NEEDS OF LEARNERS

Access

An important concern for any education system is the extent to which it serves the entire student population. Disparities in educational attainment affect the ability of individuals to compete for jobs, to participate in debate around issues that affect them, and to function fully and effectively in society. Many types of barriers exist, some related to the economic status of individuals, others to family situations and some to disabilities.

Obstacles to education and learning are not, however, always financial. In an effort to learn more about how families prepare their children culturally, financially, and socially for postsecondary education, Canada conducted a survey on approaches to educational planning. The study aims to provide information on what factors determine whether or not a child will pursue higher education and help guide future policies towards increasing access to postsecondary education.

In its 1998 budget speech, the Government of Canada announced several new measures to encourage Canadians to save for postsecondary education. The Canadian Opportunity Strategy introduced several measures such as tax-free withdrawals from Registered Retirement Savings Plans (RRSP) of up to C\$10,000 per year to a maximum of C\$20,000 and a new Canada Education Savings Grant (CESG) to encourage families to save for the future postsecondary education of children. The Government of Canada offers a CESG of 20 percent for contributions made to a Registered Education Savings Plan up to C\$7,200 per child.

A 1997 Human Resources Development Canada report on adult education found, moreover, that the degree of attachment to the labour force as well as the availability of training programs can also be major impediments to learning. Our education systems are striving to support students who face additional challenges, through special needs programs, language programs and through an increased sensitivity to and awareness of how the cultural and linguistic characteristics of systems may affect students.

Ontario is increasing the number of spaces in colleges and universities through the Access to Opportunity Program that will create 23,000 new places for students in high technology programs. To provide increased access to degree programs, Ontario will allow private universities to operate within the province, while ensuring that students are protected from the risk of financial loss, and also ensuring that new degree programs are of the highest quality. A

Quality Assessment Board will be established to assess new degree programs offered by Ontario colleges, out-of-province institutions and private institutions located in Ontario. In addition, the introduction of the Ontario Student Opportunity Trust Fund will create a permanent endowment of C\$600 million which is expected to provide needs-based financial assistance to approximately 185,000 postsecondary students over the next 10 years.

Opening more doors to advanced education continues to be one of the highest priorities of the government in British Columbia. To significantly improve access to postsecondary education in British Columbia, a number of key strategies have been taken. Tuition fees have been frozen for five consecutive years; adult basic education is offered free of charge through the public school and postsecondary systems; almost 21,000 new student spaces have been created since 1995/96 at postsecondary institutions; three new universities have been established in the last decade; funding for student financial assistance has more than doubled since 1992; five university colleges have been created to improve regional access to undergraduate degrees; and increased core funding has been provided in 2000/01 to build and modernize postsecondary institutions in the province.

Emphasis is placed on identifying and addressing changing learner needs throughout Alberta's learning system. The Alberta Initiative on School Improvement works to improve students through identifying and implementing best practices in the K-12 sector. The Registered Apprenticeship Program enhances transitions from high school to work. Post secondary education accessibility will be enhanced through the Campus Alberta initiative, bringing together learning providers and government to delivery quality, relevant learning to anyone, anywhere at any time. The fall release of the report of the MLA committee in Lifelong Learning is expected to identify and help focus further priorities to develop a learning society.

Saskatchewan Education is a leader in the Community Access program that provides public access to the Internet in rural and northern Saskatchewan. The department maintains an extensive Web site (see the section on *Web Resources* for URL) and provides its entire curriculum online for the use of students, teachers and all members of the community. As well, a strategic plan for the postsecondary sector makes a commitment to increase access through alternate means of delivery that includes making greater use of technology-enhanced learning (TEL). Priorities include the development of a virtual campus for university and technical education opportunities and a network of TEL services in urban, rural and northern locations.

To increase accessibility to higher education, the Quebec government has voluntarily kept tuition fees at the lowest level in Canada, an average of C\$1,690 per academic year in 1998-99 compared to an average of C\$3,449 in the other provinces. A significant student aid program that includes both loans and bursaries has been in place in Quebec since 1966.

There is currently little formalized recognition of workplace training or experiential learning in Canada. HRDC believes that the lack of a prior learning assessment recognition program prevents Canadians from accessing appropriate education opportunities on account of perceived gaps in prerequisite studies and in undertaking supporting initiatives to address this issue.

Another key barrier to successful transition to postsecondary studies has been difficulty in accessing information about postsecondary education and other job-related training that has been created by “information scatter” and the complex range of learner needs in this area.

Nova Scotia aims to make education and training more accessible in communities through the effective use of technology and improving quality and efficiency by restructuring education systems. The development of a learning culture will enable all Nova Scotians to participate in the changing global economy.

The Northwest Territories also aims to use information networks to support personal development and learning as well as innovative approaches to program delivery. As part of this approach, the Department of Education plans to develop computer operating systems in Aboriginal languages and expects that people in all communities in the NWT will have access to information networks.

Equity

As globalization has increased, so too has the desire to acknowledge and value the contributions of different cultures. This is especially true of Aboriginal cultures. Aboriginal people have historically faced many challenges in the predominantly non-Aboriginal education systems. One difficulty is language; the first language of many Aboriginal people is not the language (English or French) in which they have been expected to study. Another has been the enforced separation of Aboriginal children from their families and cultures. The residential school era that began in 1892 with an Order-in-Council and ended in 1983 with the closure of the last residential school had a major adverse impact on Canada’s First Nations and left a long-lasting legacy.

Other difficulties stem from cultural differences, or from negative stereotyping. Because relatively few Aboriginal people have pursued postsecondary education in the past, particularly at the university level, Aboriginal students have fewer role models to encourage them to continue their schooling. In addition, many Aboriginal communities are geographically remote and have found it difficult to attract and retain well-qualified teachers for their schools.

Historically and still today, the federal government has developed education policies and programs for First Nations students living on reserves. Support has been provided for federal schools and arrangements made with provincial and territorial education authorities to integrate First Nations students into existing school systems. Support is also given to band-operated schools that are administered by band councils. Data show that in 1997 1.6 percent of First Nations students were enrolled in nine federal schools, 41.2 percent were enrolled in 1,822 regular provincial or territorial schools while 57.2 percent attended 446 band-controlled schools.

Many ministries of education are attempting to address some of the systemic issues, with a number of jurisdictions having introduced programs aimed specifically at assisting Aboriginal students. They are doing so in collaboration with Aboriginal leaders, organizations and communities to increase and enhance participation in education and training opportunities and to facilitate learner success. Some of the activities taking place include:

- a major public consultation in Alberta on Native Education Policy, underway since September 1999. Over 4,400 participants have taken part in this review that involves a partnership among Treaty groups, Métis organizations, government and school and postsecondary education officials. A report with recommendations is expected in the fall of 2000;
- a Memorandum of Understanding signed in British Columbia on February 2, 1999 by the Department of Indian Affairs and Northern Development, the provincial education ministry, the BC School Trustees Association, the College of Teachers, the Principals and Vice-Principals Association, the BC Teachers' Federation, the First Nations Schools Association and the Chiefs' Action Committee, committing signatories to work together to improve First Nation learner results;
- Manitoba education and training ministry officials working closely with the Assembly of Manitoba Chiefs, federal officials and other provincial departments to implement their Aboriginal Education and Training Framework;
- Saskatchewan education ministry officials participating in a treaty governance table on education with the Federation of Saskatchewan Indian Nations and the federal government.

In 1975, the Cree (Indian) and Kativik (Inuit) school boards were created in accordance with the James Bay and Northern Quebec Agreement. Under the provisions of the Northeastern Quebec Agreement, the Naskapi Education Committee was set up in 1978. These agreements entrusted education administration to the Cree, Inuit and Naskapi and allowed them to adapt their education programs to their language and cultures. The Quebec department of education has the same responsibilities with respect to the Cree and Inuit school boards and the Naskapi education committee as to any other school board in the province. Quebec has been a fore-runner since 1964 in encouraging First Nations to provide education in indigenous languages and in supporting the development of teaching resources adapted to the special characteristics of Native communities. Quebec has also made a major effort to help all students better understand the current way of life of Aboriginal people. Colleges and universities also have a variety of special reception or study programs designed for Aboriginal students.

Manitoba's Native Education Secretariat has a mandate to ensure a corporate approach to Aboriginal education and training within Manitoba Education and Training; to promote the removal of systemic barriers to Aboriginal student success in education and training; and, to oversee the implementation of the Department's Aboriginal Education and Training Strategy. Emphasis is placed on creating partnerships between government departments and with the Aboriginal people of Manitoba.

Ontario's Ministry of Training, Colleges and Universities funds a number of postsecondary initiatives through special-purpose operating grants for colleges and universities. In May 1991, the Aboriginal Education and Training Strategy (AETS) was approved by Cabinet to increase

Aboriginal participation and completion rates in universities and colleges, increase sensitivity to Aboriginal cultures and increase the participation of Aboriginal peoples in decisions affecting Aboriginal postsecondary education. Since 1994-95, Aboriginal institutions that have agreements with provincially-assisted colleges or universities have also been eligible for funding. The First Nationals technical Institute, Aboriginal teacher education at Brock, Lakehead and Nipissing universities and the Native Nurses Entry Program all receive funding under the AETS program.

Over the last decade, the social and political landscape in Canada with respect to First Nations, Métis and Inuit peoples has changed considerably. Self-government is an increasingly important issue for Aboriginal peoples in Canada. The creation of the new territory of Nunavut, the signing of the historic treaty with the Nisga'a and the passing in Nova Scotia of the *Mi'kmaq Education Act* are all examples of Aboriginal peoples' desire to take increasing control of their own affairs.

The *Mi'kmaq Education Act* signed in 1997 is a unique historic document. It transfers legislative and administrative jurisdiction to nine Mi'kmaq First Nations in Nova Scotia for elementary and secondary education and funding for the support of postsecondary students. In response to a request from the Mi'kmaq people in Nova Scotia in 1993, a task force was set up which in 1997 became the Council on Mi'kmaq Education. The Council provides guidance to the Minister of Education on programs and services. In the same year, the Mi'kmaq Services Division was established to provide the leadership, direction and planning required to ensure that Mi'kmaq Nova Scotians benefit from a fully supportive learning environment in the public schools.

In British Columbia, the government is committed to improving access to education for Aboriginal people to support capacity-building toward self-government. In the past five years, the government has developed an Aboriginal Post-Secondary Education and Training Policy Framework to increase the participation and success rates of Aboriginal people in postsecondary education and training. In addition, the government has established two Aboriginal public postsecondary education institutions, managed by Aboriginal people, to provide high quality postsecondary education relevant to the diverse and evolving needs of Aboriginal communities.

The Nisga'a Final Agreement was signed in British Columbia on May 4, 1999. It is a treaty and land claims agreement within which the Nisga'a may make laws with respect to pre-school to grade 12 education on Nisga'a lands, including teaching Nisga'a language and culture, certify teachers in Nisga'a language and culture, establish postsecondary institutions, and provide and coordinate all adult education programs.

First Nations, Métis and Inuit peoples in Canada are asking to be partners in the design and delivery of programs and services, input into curriculum and a say in governance. They also wish to be involved in the development of legislation or regulations that have an impact on Aboriginal people.

Across Canada, many First Nation, Métis and Inuit organizations are developing programs and curricula and operating their own educational institutions. The Saskatchewan Indian Federated College was founded in 1976 and is the only university-level institution in Canada controlled by First Nations that is accredited and is a full member of the Association of Universities and Colleges of Canada. A number of other postsecondary institutions in Canada are controlled by their Aboriginal communities. Among these are the Nicola Valley Institute of Technology in British Columbia, Muskawchees College in Alberta, Yellowquills College in Manitoba and the First Nations Technical Institute in Ontario.

The official languages of the Northwest Territories are Chipewyan, Cree, Dogrib, Gwich'in, Inuinnaqtun, Inuktitut, Inuvialuktun, North Slavey and South Slavey as well as English and French. Students in Nunavut, formerly the eastern part of the Northwest Territories, are taught in an Aboriginal language for the first few grades, before switching to instruction in English around grade four. Nunavut also provides financial support for postsecondary tuition costs for Aboriginal students.

Many programs also exist across Canada that help students with disabilities gain equitable access to educational services at all levels. In Ontario, for example, the government has recently allocated a major increase in support for postsecondary students with disabilities. This includes a program through the Learning Opportunities Task Force aimed at helping students with disabilities make the transition to college or university, funding to help colleges and universities make their programs and services accessible to students with disabilities, support for the provision of print-alternate materials for students who are blind, low-vision, learning disabled, or who are unable to use print text and the Bursary for Students with Disabilities (BSWD) program to which the federal government also contributes.

Ontario students who are deaf, deafened or hard-of-hearing also receive support from the Ontario government through the Canadian Hearing Society for interpreters, notetakers and amplification devices. In addition, Ontario supports a program at York University to train elementary and secondary teachers of the deaf and a similar program at the university of Ottawa to train French-language teachers of the deaf. Funding has also been increased to assist colleges and universities to cover the costs of providing sign-language interpreters and interveners.

Diversity

One feature of the global era is increased opportunity for interaction on an international level in many sectors (trade, tourism, diplomacy, etc.). Immigration to Canada and migration between Canadian jurisdictions affect education systems through their impact on enrolments. Immigration may also affect the system by creating a need for programs such as English or French as a Second Language.

Second language competencies also enhance the future success of high school graduates as they take their place as global citizens and contribute to the province's economic well-being. Although English is widely perceived to be the "language of business", the growing economic strength of non-English-speaking countries points to the need to do business in different

languages and to understand different cultures. Second language training can help meet both of these needs.

In February, 2000, Alberta announced its goal to increase the proportion of students studying a second language from 25 to 33 percent as part of the government's new economic strategy to prepare Albertans for the growing global economy. Strategies to increase both the numbers of students enrolled in second-language training (combined high school and postsecondary enrolments) and improve completion rates are being developed.

Saskatchewan sees the need for a change to language and culture learning so that its students may fully participate. For example, Saskatchewan Education has developed policies aimed at celebrating diversity while promoting equity on the basis of gender, race, ethnic background, ability and age. However, it still sees a lack of awareness among many educational administrators and teachers about equity concerns and how they can be addressed in instruction and school programs.

In Quebec, a new mainstreaming and intercultural education policy was implemented in 1998. The policy sets operational lines intended to guide schools in integrating immigrant students into their institutions and into Quebec society and in teaching all students how to live together. The three-pronged policy promotes equality of opportunity, mastery of French as the common language of public life and citizenship in a plural society. The policy also contains an action plan suggesting concrete measures for 1998-2000. The review of study programs in the light of reforms currently under way has helped to include diversity and civics in the curriculum. In 1999-2000, more than nine percent of all students in Quebec (kindergarten, elementary and secondary) had a mother tongue other than English or French.

A number of provinces across Canada, outside Quebec, promote and offer French language programming to elementary and secondary students. In 1994-95, Manitoba established the "Division Scolaire Franco-Manitobaine" which now oversees the operations of twenty-one of the twenty-eight French first-language schools across the province. Additionally, there are one hundred schools that offer French Immersion programs to Manitoba students.

In British Columbia, the Ministry of Education (MOE) currently invests C\$66 million annually on training in English as a Second Language (ESL) at the elementary and secondary levels, and the Ministry of Advanced Education, Training and Technology (MAETT) invests a further C\$19 million for ESL training at public postsecondary institutions to help adult learners develop language skills which will enable them to participate more fully in their communities and prepare for employment. As well, several public postsecondary institutions in the province receive over C\$4 million through funding that was realigned from the federal government to be administered on its behalf by the provincial Ministry of Multiculturalism and Immigration.

In British Columbia, MOE and MAETT also provide funding for foreign language training. Public schools in the province offer language training in a range of other languages including French, Spanish, German, Punjabi and Mandarin. Public postsecondary institutions also provide

a wide range of opportunities for studying languages through both credit and non-credit courses and programs.

The presence and participation of international students in British Columbia's classrooms helps to enrich the learning environment, enhances the educational experience of all students, and contributes to the social and economic development of the province's communities. In 1998/99, over 12,000 international students were studying at British Columbia's public postsecondary institutions. School districts in British Columbia also actively recruit international students and approximately 1,500 international students are currently studying in the K-12 system. British Columbia compares well with other areas of Canada regarding the number of international students who choose to study in the province. British Columbia's share of international students is currently approximately 26 percent, contributing to Canada's overall goal to promote postsecondary education across international borders and create far-reaching cultural and economic benefits for Canada, essential to compete successfully in a global society.

INFORMATION AND COMMUNICATION TECHNOLOGIES FOR EDUCATION

Information is one of the essential ingredients of lifelong learning. In today's global village, technology is the tool that makes information available. Moreover, the needs of employers are changing faster than education and training systems can respond. Basic skills for the 21st century now go beyond reading, writing and numeracy to include information, media and technological literacy as well as critical thinking.

Some cultural groups who are trying to maintain their language and culture feel threatened by the pervasive presence of English on the World Wide Web. On the other hand, the technology allows for distant access to learning opportunities for widely separated individuals and small groups, who may share a language and culture, but do not have direct access to classes where they live. Schools need to have technology in place to provide access to information and courses from a distance. Such access in a school environment can also help to overcome the disadvantages many children face as a result of poverty in the home.

The Canadian Teachers' Federation, however, cautions that access to technology alone is not enough. Resources must be provided to develop appropriate curriculum to help students use technological innovations such as the Internet wisely and critically. There are also serious questions that should be addressed about the benefits of computer education and access to the Internet for elementary school students. More research is required prior to making major investments in these areas.

The Northwest Territories is a region where geography has always presented a major challenge to program delivery. The NWT Government is working together with other partners across the north to pull together radio, television, computers, satellite technology, libraries and other services into a Pan-Northern System of Information Networks to meet this challenge.

Saskatchewan schools are connected to the Internet and school divisions, both in partnership with Saskatchewan Education and on their own, are developing Web-based student learning materials. In addition, the Saskatchewan Communications Network (SCN) has 20 years of experience in support of the televised delivery of university and technical/vocational courses to over 50 communities.

With Athabaska University as Canada's first university delivering services through distance education, Alberta has long been a leader in technology-mediated learning. Projects are currently in place to incorporate digital learning and other technologies into the education system. One such undertaking plans to connect all schools, universities, libraries, community centres, hospitals and municipalities across the province to a wide-area bandwidth within three years.

At the elementary and secondary levels, the British Columbia Ministry of Education recognizes that the Internet is a powerful tool for education in the global era. In April 1998, an investment of C\$123 million over six years was announced to connect BC's 1,800 public schools and 134 college campuses to the Provincial Learning Network. PLNet allows students and educators to use resources on the Internet, to enroll in courses not offered locally and to participate in virtual field trips without leaving their classrooms. PLNet is also available to independent schools, public libraries, museums, science and cultural organizations and 20 community skill centres. When it is finished this summer, PLNet will be the largest centrally managed educational network in North America, serving 400 communities throughout British Columbia. The PLN has received the first Information Technology Project of the Year Award from the Canadian Information Processing Society.

Educational technology has become an integral part of the teaching and learning processes at public postsecondary institutions in British Columbia to increase access to postsecondary education through distributed learning. The majority of institutions in the province offer courses that use educational technology to enhance delivery. Several hundred courses are available online to students who wish to pursue studies through distributed learning. British Columbia is considered to be one of the world leaders in distance education. For example, the Open Learning Agency offers open learning courses and programs through the Open College and Open University to learners throughout the world. In addition, the province continues to develop an Educational Technology Policy Framework which identifies key policy areas and measures to guide the postsecondary, university college and institute system in the strategic development of educational technology.

In April 1995, Manitoba created a special operating agency called the Manitoba Education Research and Information Network (MERLIN) to deliver, support and promote the use of those technology and technology infrastructures that enable the delivery of quality education and training for all Manitobans. The agency provides direction and management in the educational use of telecommunications networks, acting as a broker of services to meet customer needs. It provides service offerings that support educational institutions (elementary, secondary and postsecondary) in the application of technological tools to enhance and expand program

delivery, and it identifies, in partnership with the private sector and economic development agencies, economic development opportunities resulting from the use of technology in education and training applications.

In 1996-97, Quebec's ministry of education implemented an action plan in order to integrate information and communications technologies (ICT) in teaching and learning at the pre-school, elementary and secondary levels. ICT are considered to be inevitable tools and resources for learning in the province's new education program; they constitute the means of communication and production that will put young people in touch with the rest of the planet.

Quebec's Télé-Université has been providing distance university education since 1972 and initiated online teaching well in advance of other institutions. Quebec, Canadian and students from the world over are represented in its enrolment of 20,000 in 2000. It offers courses through the Internet and using other interactive technologies. Two other distance-learning institutions, the *Centre collégial de formation à distance* (distance learning college) and the *Société de formation à distance des commissions scolaires du Québec* (Quebec school boards distance training group) offer programs at the college and secondary levels respectively. The three institutions belong to a distance-learning liaison committee that promotes Quebec distance learning internationally.

The Information Economy Initiative was announced in Nova Scotia in May 1998 as a C\$65 million project involving public schools, universities and community access. By June 2001, a total of 6,136 computer systems will have been installed in schools across the province. As of February, 1999, all schools in Nova Scotia were connected to the Internet.

In addition, as part of a broader scheme called Connecting Canadians, the federal government has introduced initiatives that promote the development and use of information technology in education. These include HRDC's CanLearn Interactive Web site, the first pan-Canadian educational information resource created through the cooperation of the federal, provincial and territorial governments as well as Industry Canada's SchoolNet and Computers for Schools (CFS) programs. The latter program has delivered 180,000 refurbished computers donated from government and the private sector to schools and libraries. Young Canadians are employed to repair the computers in workshops across the country and by 1998, CFS computers accounted for almost 37 percent of all computers purchased or placed in Canadian schools.

In March 1999, Canada became the first major nation to connect its schools and libraries to the Internet through the efforts of SchoolNet and its partners in provincial and territorial departments of education. The SchoolNet Web site (see URL in the section on *Web Resources*) includes more than 5,000 Internet learning resources that are indexed for easy retrieval and maintained by a network of 30 school boards across Canada to ensure their relevance to curricula, their appropriateness and timeliness. SchoolNet aims to enhance connectivity through 250,000 connected computers in schools, the equivalent of one per classroom, by March 31, 2001, and extend connectivity to all 626 First Nations communities. This means approximately 6,000,000 students will have the opportunity to participate in this collaborative learning project.

SchoolNet also plans to help Canada's young people develop essential skills in ICT in order to succeed in the global, knowledge-based economy. Through the SchoolNet youth Employment initiative, more than 2,500 young Canadians have helped educators or librarians in Canada integrate information technology into their learning programs. Participants have an excellent rate of employment (83 percent) in their field of interest after their work terms, having gained multi-media and technology skills, as well as experience in training and education. In September 1998, SchoolNet was recognized by the Commonwealth Association for Public Administration and Management as one of the most innovative and relevant public sector initiatives internationally.

The CanLearn Interactive Web site is the first pan-Canadian educational information resource created through cooperation among the federal, provincial and territorial governments. Education is a provincial and territorial responsibility and through this collective effort Canadians have been provided with a truly comprehensive resource, one that brings all Canadian education and training information together under one umbrella for the benefit of all Canadian learners.

HRDC's collaboration with other levels of government, as well as non-governmental organizations and the private sector, toward a common goal of creating a single window resource has resulted in a more effective information product for Canadians than would be possible through isolated efforts. This has demonstrated the extent to which multiple stakeholders can successfully work in collaboration to develop programs and services that truly meet the needs of their constituents.

CanLearn Interactive is presently the most popular web site in Canada for information on the selection and financing of education. Since its launch in October 1999, the site has had over 300,000 user sessions and has grown to include 30 interactive products and 60,000 pages of information. CanLearn Interactive won the Impact Award 2000 for "Changing the Way People Learn". The Impact Award honours Canadian web sites that use innovation, imagination and determination to better the lives of Canadians.

Building on the CanLearn Interactive partnership model, HRDC plans to develop and launch an international gateway web site as a mechanism for further collaboration to promote Canada as a learning destination and leading edge innovator in providing educational services to foreign students.

The federal government's Office of Learning Technologies (OLT) was set up within Human Resources Development Canada to build a culture of lifelong learning in Canada. OLT acts as a catalyst for innovation in technology-enabled learning and skills development. Since 1996, the learning technologies initiative fund has supported 150 projects across Canada to test, research and assess innovative uses of technologies in learning for adult learners at home, at work and in their communities. Other project funding targets the use of learning technologies to reduce barriers to learning, assist workers in upgrading skills and expand opportunities for learning in the workplace and help communities offer multi-point access to a variety of learning resources.

The OLT has also hosted online conferences on learning technology themes, including a joint international online forum with UNESCO.

CURRICULUM CHANGES AND TEACHER TRAINING

Children and youth attending school today will spend the major part of their lives in the 21st century. Three major trends will shape their daily experiences: internationalization and globalization, the explosion of knowledge and increased pace of technological development, and the burgeoning complexity of life in organized society. This world will demand from our children an enormous ability to adapt, to communicate, to solve problems and to create, from whence springs the need to update current programs and curricula.

In 1997, Quebec began an in-depth process of education reform that will gradually be implemented between 2000 and 2006. After much thinking and public consultation (Estates General on Education) spread over an 18-month period, the reform, based on many experiments in Quebec schools over the last few years, is a response to the many proposals received during the consultations. Pre-school, elementary and secondary education will be revitalized to better prepare young people to meet the challenges of the future and to ensure that more of them succeed. The new program will ensure that students participate more actively in their own learning. New teaching approaches are based on developing skills that include knowledge (expertise), abilities (know-how) and attitudes (life skills). Collegial curricula have also been reviewed in light of the skills required in the new millennium. In addition, all vocational and technical training programs are developed or reviewed in light of technological advances and labour market requirements.

One of the most significant reforms in Ontario also relates to curriculum change, of which the most obvious feature was the reduction of five years of high school to four. All programs in all subjects - from kindergarten to the end of high school - have been rewritten to create a new, more rigorous, transparent curriculum aimed at raising standards and facilitating achievement. A teacher-advisor program, together with an individual student learning plan, will give students additional support. The curriculum includes mandatory testing and a forty-hour community service requirement.

The British Columbia curriculum is designed to reflect the province, the nation and the greater world. In the area of social studies, for example, Prescribed Learning Outcomes deal with global economic/citizenship issues throughout the K-12 years. Students in:

- grades 2-3 are expected to demonstrate understanding of their responsibility to local and global environments;
- grade 7 are expected to design, implement, and assess detailed courses of action to address global problems or issues; and

- grade 11 are expected to assess implications of industrial and technological development for societies and cultures.

A new initiative in Nunavut to prepare children for the challenges and demands of a highly technological future while retaining traditional values and knowledge will integrate traditional Aboriginal learning into a new science curriculum that is currently under review and development.

To ensure effective learning opportunities are available to all Yukon people so that they may achieve their personal potential, Yukon is planning, developing, implementing and evaluating its elementary and secondary education programs for all school-age children. Part of Yukon's recent educational achievements include the development of a First Nations' curriculum and support for Aboriginal language programs.

The Assembly of First Nations agrees that First Nations languages are a key education priority that requires action. First Nations languages education and training would include immersion and bilingual programs, mentoring programs, language authority councils, and the development of curriculum, courses, materials and instructional aids. The federal department of Canadian Heritage has agreed to provide C\$20 million over five years to revitalize and maintain Aboriginal languages for future generations by increasing the number of Aboriginal language speakers and expanding the domains in which Aboriginal languages are spoken.

However, the AFN also points out that the Canadian Auditor General reported in April 2000 that progress in closing the educational gap for First Nations students living on reserves was found to be unacceptably slow. The situation was described as urgent and complex and that this would increase as demands in terms of growing populations and changes in technology grew.

Schools need to be able to respond to the multicultural nature of their clientele in meaningful ways. This has implications for teacher training, leadership in education and relations between communities and schools. In Saskatchewan, diversity and equity have been addressed in each of the subject areas of its Core Curriculum, developed and implemented over the past fifteen years. Knowledge and values are linked in Core Curriculum objectives to deal with real-world problems.

In Alberta, students learn about citizenship and their Canadian heritage through the social studies curriculum. Canadian content comprises about 60 percent of the social studies program but students also learn about Canada's international connections as well as global issues, including the impact of technology. The program is compulsory from grades one to 12 and is being revised to ensure that students continue to develop the knowledge and skills required for responsible citizenship in the changing global environment. Aboriginal perspectives are being incorporated into social studies, science and other new programs as they are revised all instructional materials are reviewed to ensure they promote understanding and respect for people from diverse cultures. Increased emphasis is being placed on lifelong learning, applying learning to relevant contexts in daily life, cross-curricular connections and career-planning skills. Information and communication technology (ICT) skills are also being infused into new

programs. Alberta continues to have provincial testing in grades three, six, nine and 12 and these are also being revised to reflect changes in the curriculum.

Quebec's curriculum reform also aims to incorporate diversity throughout its education system, particularly with reference to social marginalization and developing the feeling of belonging and being part of society.

In Canada, the provinces are working together (through protocol agreements) to determine appropriate learning outcomes for K-12 curriculum development, and to establish common credit transfer criteria at the postsecondary levels. New initiatives among the western provinces and the Northwest Territories, Yukon and Nunavut will see the development of curricula on a cooperative basis over the next few years in order to reduce duplication and share expertise and resources.

There is a tremendous challenge at the postsecondary level, not only in Canada but worldwide, with retaining qualified staff in areas of high employment demand. This is of increasing concern since if it is not possible to retain highly skilled instructors and program heads, then the workers needed by business, industry and government cannot be trained at an appropriately professional level. While many partnerships exist that allow for joint staffing between industry and education institutions, the problem is growing.

Curriculum reform depends on teachers having strong pedagogical knowledge of the disciplines they teach, of the developmental levels of their students and of the availability of the resources and technology at their disposal. In a rapidly changing, information-based, intensely interactive global environment, teachers must be fully up-to-date in their skills, knowledge and training. Teachers are being required to learn new skills for accessing information using new technologies and digital and print materials for resource-based instruction. Teachers must be fully capable of giving students the knowledge and skills necessary for them to prosper in the evolving and highly competitive global economy and teacher training programs are being developed to address this need.

A College of Teachers at arm's length from the Ontario Ministry of Education was established in 1997 to regulate the teaching profession, set professional requirements, discipline member-teachers where necessary and ensure a consistent framework for the profession across the province. Minimum workload requirements for teachers have been defined to ensure appropriate classroom time for all students. A mandatory teacher testing program is under development to ensure that teachers are up-to-date.

The provisions of Alberta's practice review of teachers regulation, teacher growth, supervision and evaluation policy, teaching quality standard and *School Act* constitute the most comprehensive teacher evaluation and competency benchmarks in Canada. The Teaching Quality Standard ministerial order is the first of its kind in Canada. The Standard applies to teacher training and certification, professional development, supervision and evaluation. It describes the knowledge, skills and attributes or competencies required of Alberta teachers. All

teachers are expected to meet the Standard throughout their careers. The Teacher Growth, Supervision and Evaluation Policy requires that teachers pursue lifelong learning and develop an annual professional growth plan. The Policy also requires that principals evaluate any teacher who may not be meeting the teaching Quality Standard.

Established in 1988, the British Columbia College of Teachers is the professional regulatory body for teachers in British Columbia. The primary responsibilities include setting the standards for the certification of teachers, disciplining members where necessary and approving teacher education programs in the province. The standard of preparation for teachers has improved since the inception of the British Columbia College of Teachers.

In late 1998, Manitoba enhanced its teacher training programs by increasing the credit hour requirement for successful completion of a B.Ed. degree. The program went from a four-year concurrent model of 120 credit hours (i.e., Education and Arts & Science courses taken together) to a five-year consecutive model of 150 credit hours (i.e., three-year B.A. followed by a two-year B.Ed.).

In Quebec, professionalization is the hallmark of teacher training. The ministry of education has defined a universal set of 11 occupational skills for the teaching profession, including specific references to professional competence in information technologies and continuing professional development. ICT skills development focusses on helping future teachers integrate ICT into their teaching activities so that they can better prepare their students for the growing presence of technologies in all facets of life.

The Northwest Territories recognizes that teaching staff must be properly introduced to new curricula, and that they must receive the training and support they need to translate the curricula into learning experiences. Roles are changing for teachers as they must now work with other professionals in the community and use the land and the community as tools for learning and forge stronger relationships between the school and the community. Professional development on training, such as the training of principals (headmasters) must reflect these changing roles.

In Nova Scotia, the accelerated pace and degree of changes in curriculum, coupled with the challenge of designing effective learning experiences for diverse students and the opportunities promised by the potential for technology to enhance teaching and learning have highlighted the need for intensive, comprehensive, meaningful, high quality programs of professional development. This has created a challenge for the department of education as time and cost, availability of substitute teachers, access, resource and the availability of specially tailored programs become issues.

The British Columbia Ministry of Education has recently released new learning resources for grades 6 and 11 social studies teachers to help students learn about the Holocaust and its lessons for today's world. These resources help promote tolerance and understanding in schools, communities and the world beyond as well as critical reflection on these issues by helping students recognize the connections between the events of the Holocaust, their causes and

consequences, and the implications for society and social policies, past and present. Education, citizenship and social responsibility are addressed, and this knowledge will provide students with the tools and values necessary to help prevent societies from going down the same path taken during the Second World War in Europe. The ministry developed the learning resources in partnership with the Canadian Jewish Congress' Pacific region, the Vancouver Holocaust Education Centre and a team of highly qualified teachers.

CURRENT EDUCATION INDICATORS

The following general, pan-Canadian statistics and commentary have been drawn from *Education Indicators in Canada: Report of the Pan-Canadian Education Indicators Program 1999* published jointly by the Council of Ministers of Education, Canada and Statistics Canada. The full 256-page publication is available on-line in PDF format at <http://www.cmec.ca/stats/pceip/1999/>. It contains many more individual data with respect to specific jurisdictions.

General Context

The demand for education services, through schools, colleges, universities, and other training programs, is affected by a number of factors. One major consideration is the size of the population, especially for elementary-secondary programs, where enrolment rates are close to 100 percent of the population between the age of five and the age at the end of compulsory schooling. Canada's population aged 19 and under is projected to increase slightly over the next 15 years, although declines are projected in the Atlantic provinces, Quebec, Manitoba and Saskatchewan. The ratio of the population aged five to 24 to the working-age population is declining. Although historically the demand for postsecondary education has been on the rise, this demand levelled off in the 1990s. Reasons for this may include improved labour market conditions, rising tuition fees and stable family incomes.

Mobility and Immigration

Immigration has fluctuated a good deal over the years, falling during the 1970s and 1980s only to reach higher levels in the 1990s, peaking in 1992 at 0.9 percent of the total population. New immigrants in the 4 to 24 age group consistently form a higher percentage of their age cohort than the percentage of new immigrants as a percentage of the total population meaning that proportionately more young immigrants are entering Canada.

By far the largest number of new immigrants in 1996 went to Ontario, more than twice as many as did British Columbia, the next most popular destination. Quebec also received a large number of immigrants and this pattern reflects the most popular destination points (Toronto, Vancouver and Montreal).

Children in Low-Income Situations

In 1996, nearly 1.4 million children 15 years of age and under in Canada, almost one child in five, were living in low-income households. These students are more likely to face greater

difficulties in education and have lower levels of educational attainment than students from families with higher socio-economic status.

Educational Attainment

Canadian education levels, already high by international standards, continued to improve throughout the 1990s. More Canadians are graduating from high school and more graduates are going on to higher education. Many adults are also upgrading and updating their education. In 1998, approximately 1.4 million Canadians aged 25 and over were enrolled in formal education programs.

Institutional Data

In 1996-97, there were approximately 16,000 elementary and secondary schools in Canada. Over 95 percent had less than 1,000 students. The relationship between the number of small schools with less than 50 students and the geography and population dispersion within jurisdictions is evident from the higher percentage of small schools found in Newfoundland and Labrador, the Western provinces and the territories. The size of schools and the areas served have an impact on the costs of education delivery as well as the extent to which specialized instruction and services can be provided.

Of Canada's 204 colleges, 90 are located in Quebec reflecting the CEGEP system which provides pre-university programs as well as normal college curricula. About 90 percent of all colleges had a full-time enrolment of 5,000 or fewer.

One-third of Canada's 76 universities enrolled 10,000 or more students. Nova Scotia had the second highest number of universities in Canada after Ontario and one of the highest proportions of out-of-province students in contrast to their smaller enrolments. Quebec has the smallest number of universities - seven - of all the provinces but they enrol, with one exception, over 10,000 students each. Moreover, some larger institutions, like the Université du Québec, are comprised of a number of campuses located throughout the province.

Educators

There are 268,000 full-time elementary and secondary educators and more than 60,000 university and college faculty in Canada. Educators constitute the largest single distinctive category of professional and technical occupations in Canada. Their demographic composition, however, is quite different from the work force as a whole.

As a group, educators tend to be older than the rest of the work force. Nonetheless, while retirements will increase the demand for elementary and secondary school educators in the years to come, there appears to be a sufficient supply at the pan-Canadian level. Among the challenges to be faced by the Canadian education systems over the next decade, however, is the replacement of retiring postsecondary faculty. Close to one-half of full-time university faculty and almost 40 percent of college staff will become eligible for retirement over the next ten years.

Over the last ten years, while the percentage of female educators has risen at all levels of education, women are in the majority only at the elementary-secondary level, accounting for 63 percent of full-time educators in 1996-97. In universities, women comprised 25 percent of full-time faculty in 1996-97, up from 17 percent ten years earlier and in colleges, they made up 40 percent of full-time teaching staff, an increase of 7 percent from 1987-88.

Participation in Formal Education

The total number of youth between the ages of 5 and 19 in 1996 was estimated at 6,068,399. Enrolment in full-time education between the ages of 6 and 15 or 16 is almost 100 percent. The role of pre-elementary education is an issue of emerging importance in research that has shown advantages for children who participate in some form of education at an early age. Despite different policies, between one-third and one-half of all three- to five-year olds attended a pre-elementary program in most jurisdictions in 1996-97.

Enrolment figures at the elementary-secondary level tend to reflect demographic trends because of compulsory school attendance and are affected not only by birth rates but also by factors such as net in- or out-migration. Enrolment grew steadily by approximately 1 percent per year between 1986-87 and 1995-96, increasing or remaining stable in all jurisdictions except Newfoundland and Labrador, Nova Scotia and New Brunswick. Higher enrolment figures may reflect increases in high school completion as well. In 2002-03, Ontario will complete the shift from a five-year to a four-year high school program and will face lower secondary school enrolments in 2004 as a result of this program change.

Full-time enrolment in trade-vocational programs decreased by two percent between 1987-88 and 1995-96 across Canada although enrolments increased by almost 30 percent in the same period in Quebec. Women accounted for 41 percent of full-time enrolments, up three percentage points from 1987-88. Part-time enrolment increased by four percent across Canada.

The economic recession of the early 1990s may have contributed to increased college enrolments, as more people chose to stay in school rather than look for work. Full-time career technical enrolment rose by almost a third. Part-time enrolment grew in the early 1990s but has since declined. Female students accounted for more than 50 percent of enrolments in both career technical and university transfer programs although this represented a slight decrease since 1987-88. The decline in the percentage of women enrolled in college programs in some jurisdictions may be balanced by an increase in the percentage enrolled in university. This pattern is consistent with rising educational attainment described previously.

Between 1990 and 1998, the percentage of the population between the ages of 25 and 54 with a university education increased. All provinces reported increases in full-time enrolment but despite this growth, the participation rate showed little change. Part-time enrolment, on the other hand, has shown a significant decrease since 1992-93.

A key factor affecting enrolments is the mobility of university students. Canadian students are able to seek out the best program available, both in Canada and abroad. Likewise, students from

other countries can enrol at Canadian universities. Canadian university programs, therefore, must be internationally competitive, to attract foreign students and retain Canadian students, as well as equitable, to ensure that domestic access to higher education is not compromised.

Women have traditionally had higher participation rates than men in part-time undergraduate studies but are now also in the majority in full-time undergraduate studies, reaching 56 percent by 1997-98. At the graduate level, female enrolment almost equals that of males but significant gender differences still exist in certain fields of study.

In both the college and university sectors, the elimination of the fifth year of high school in Ontario will be a key concern for postsecondary planning in Ontario. This may also have an impact on the number of places available for foreign students.

In terms of adult education, over 1 million people between the ages of 25 and 54 participated in a formal education program in 1997. The majority of this participation was in postsecondary programs. With respect to job-related adult education and training, however, the participation rate in Canada is about average compared to the ten countries that took part in the 1994-95 International Adult Literacy Survey (OECD). Approximately 27 percent of people between the ages of 25 and 54 pursued some form of job-related adult education and training in 1997 and both men and women participated in equal proportions.

Educational Expenditures

Governments in Canada have always provided resources to ensure that citizens have educational services. Education currently represents the second largest category of public expenditure in Canada, exceeded only by spending on health. How much government invests in education depends on such factors as the demographic structure of the population, enrolment rates at various levels of education, national costs for educational resources, and the strength of the economy.

Educational expenditure was estimated at C\$60.5 billion in 1998-99, or just under C\$2,000 per capita. Ten years earlier, in 1988-89, expenditure on education stood at C\$53.7 billion (in constant 1998-99 dollars) representing an average increase of 1.3 percent per annum, keeping pace with the rate of population growth. Current per capita spending is thus about the same although there have been significant changes during this period. For example, the total estimated expenditure in 1998-99 was actually 3 percent lower than the peak of C\$62.3 billion spent in 1994-95.

In 1995, Canada ranked second among G-7 countries in education expenditures per student behind only the United States. Expenditures from both public and private sources, were \$US 6,396 per student in Canada. The total expenditures represented 7 percent of GDP, the highest level among G-7 countries. Almost two-thirds of public education expenditures in Canada were spent on elementary-secondary education, accounting for 8.4 percent of all public expenditures.

Spending on postsecondary education represented 4.8 percent of public expenditures reflecting the high priority given to postsecondary education relative to other sectors.

There is also the question of the appropriate mix of private and public funding, particularly at higher levels of education. In Canada, universities in the past few years have relied more on private funds from tuition fees and less on public funding from government. Between 1982-83 and 1998-99, government funding to universities has decreased as a percentage of operating revenue, from 74 percent to 55 percent. Over the same period, tuition fees have roughly doubled, increasing as a percentage of operating revenue, from eight percent to 17 percent.

Postsecondary Student Debt

As the cost of postsecondary education increased during the 1990s, so did public debate and concern about rising student indebtedness. In Canada, the fundamental principle that access to postsecondary education should be independent of an individual's financial situation underpins the student loan programs offered by provincial and federal governments. Rising debt levels among postsecondary graduates, together with a widening gap in participation between people from low and middle-high socio-economic backgrounds, raise concerns about access to postsecondary education. Provincial and federal governments have taken initiatives to improve the affordability of higher education, for example the Government of Canada's Millennium Scholarship initiative announced in 1998.

While the use of government student loan programs to help finance college and university education has held fairly steady at just under 50 percent of graduates in 1986, 1990 and 1995, the amounts owing at graduation and two years after graduation have increased over this period. Postsecondary graduates in 1995 who took out student loans owed an average of just over C\$11,000 at graduation, although this average debt is lower in Quebec (C\$8,289). Overall, however, this was 39 percent more debt for those graduating in 1990 and 59 percent more than the class of 1986. Graduates with master's and doctoral degrees had lower average debt on graduation and a faster rate of repayment than graduates with bachelor's degrees.

In part, higher debt levels on graduation reflect higher tuition fees and other costs at a time when family income in constant dollars was not changing very much. Changes in student aid policy with respect to grants and loans and loan repayment schedules have also had an impact. This is consistent with a slightly weaker labour market in the 1990s compared with the 1980s as evident in lower rates of full-time employment and lower median earnings among the full-time employed.

Information and Communications Technologies in Schools

All provincial and territorial ministries plan to use new information and communications technology (ICT) to help students acquire the skills needed for full participation in an increasingly complex knowledge-based environment. In general, computers were more available to students in higher grades. In February 1999, there was one computer for every nine elementary students, compared with one for every eight lower secondary students, and one for every seven upper secondary students.

At the same time, Canadian schools had wide access to the Internet for instructional purposes. Eighty-eight percent of elementary students attended a school that had Internet access, as did more than 97 percent of students in secondary schools. In Prince Edward Island and New Brunswick, all schools were connected. One-third of elementary and lower secondary students and one-half of upper secondary students had used electronic mail (e-mail) for different learning purposes.

Moreover, 76 percent of elementary students, 80 percent of lower secondary and 87 percent of upper secondary students had, as part of their activities at school, extracted information from Web sites. The percentage of students who had actually designed and maintained a Web site ranged from nine percent at the elementary level to 53 percent of upper secondary students.

Schools consistently reported the major obstacles to achieving computer-related goals to be an insufficient number of computers that affected over 60 percent of students, lack of teacher preparation time, lack of teacher ICT skills, and lack of training opportunities for teachers.

Education Outcomes

Pan-Canadian assessments in mathematics, science, reading and writing show a learning gain for students between the ages of 13 and 16. Lower performance in reading and writing of Francophone minorities and male students suggests that both these groups need particular attention. A higher percentage of females than males graduated from high school, and more females completed postsecondary education. Compared with other G-7 nations, however, Canada's ratio of graduates to population aged 18 was the second lowest in 1996.

The qualifications required for many jobs have increased, creating a corresponding need for more education. Graduation rates from postsecondary programs increased considerably between 1976 and 1997 for both males and females. The total number of postsecondary credentials granted increased 67 percent between 1976 and 1997. The largest proportion (50 percent) of postsecondary credentials in 1997 was for undergraduate degrees, followed by college diplomas (40 percent). Master's degrees and doctorates showed the highest rates of increase between 1976 and 1997. High graduation rates in Nova Scotia reflect the large capacity of its postsecondary system, which serves more than local needs.

Equity

An examination of equity issues reveals that the educational attainment of the Aboriginal population is lower than that of the non-Aboriginal population. A higher percentage of the Aboriginal population who do not complete high school and only a small percentage of Aboriginal people have obtained a university degree. In 1996, 42 percent of the Aboriginal working population had less than a high-school education, compared with 22 percent of the non-Aboriginal population. The figures for postsecondary qualifications were 35 percent and 52 percent respectively.

Among linguistic minorities, individuals whose mother tongue is other than French or English (including those whose first language is an Aboriginal language) are less likely than

Francophones or Anglophones to graduate from high school. In contrast, people in this group are also more likely to have a university degree, perhaps as a result of immigration policy rather than Canadian education.

There is also a relationship between an individual's educational attainment and the socio-economic status of his or her parents. Between 1986 and 1994, university participation rates increased, however, for students from all socio-economic backgrounds.

Labour Market Outcomes

From both an individual and societal perspective, good labour market outcomes are an important goal of education and training, especially in light of their impact on the current and future competitiveness of Canada's economy. In Canada's labour force, higher levels of education are associated with higher rates of employment and lower rates of unemployment.

In the 1990s, the largest premium was linked to high school graduation. In 1990, among men, the employment rate of high school graduates was about the same as that of university and college graduates, and well above the rate of men with less than high school education. Among women, the employment rate of high school graduates was somewhat less than among postsecondary graduates, but again this was well above the rate for those with less than high school education. Gender differences in labour market outcomes, however, lessen with increasing education levels.

The recession of the 1990s has had enduring effects as workplaces and industries restructured to take advantage of the new possibilities afforded by advanced communication technologies and to meet the constraints of the competitive nature of global markets. Employment in low-skill occupations tended to move downward during this period while job growth was concentrated in professional and managerial occupations requiring higher education and skill levels.

In 1998, among those with less than high school education, 50 percent of women aged 25 to 54 were employed, compared with 70 percent of men. The employment rate among university graduates in this age group was 86 percent for women and 93 percent for men. The highest percentages of full-time employment occurred among commerce, management and administration graduates, engineers and health professionals. The overall unemployment rate stood at just over 6 percent in April 2000.

Postsecondary graduates represent a large investment in the development of human capital. The transition from school to work today is long and complex. More youth aged 15 to 24 are full-time students, and as part of the transition, many are combining work with education. Among the 83 percent of 15- to 19-year-olds attending school in 1996 (up from 68 percent in 1976), the percentage working fell to 31 percent after peaking at 35 percent in 1986.

About eight percent of the 1986 and 1995 classes of university graduates had left their province of residence to study at a university in another jurisdiction. This was more than twice the rate of student mobility among college graduates and more than three times the rate among trade-

vocational graduates. The movement of graduates away from their province of study, on the other hand, is more likely tied to such considerations as labour market opportunities. Mobility of both students and graduates tends to be higher at the university than at other levels, perhaps an indication that community colleges often aim their programs at local employment needs.

NEW STRATEGIES

Recognizing that changes to educational systems are needed to be able to respond to the globalization of the world's economy, a number of programs are being reviewed and new directions are being considered. In the "global" era in which we now find ourselves, the international activities of Canadian educators and their institutions also take on more importance than ever. Far from being just another part of Canada's development assistance program directed to developing countries, these activities are a critical resource for strengthening education in Canada.

This is especially true in helping our schools deal with issues such as multiculturalism, the needs of other cultures and language groups, and, more broadly, the whole range of factors related to cross-cultural learning and sensitivity. In addition, international activities contribute to the education of Canadians so that they may understand the international contexts in which the current generation of students will need to compete.

International academic mobility in higher education is playing an increasingly important role in contributing to Canada's participation in the global era by allowing postsecondary students to acquire international skills required to succeed in a competitive global economy. There are currently two international mobility programs funded by the federal government, the Program for North American Mobility in Higher Education and the Canada-European Community Programme for Co-operation in Higher Education and Training, but there is a need to expand the size and the scope of international mobility initiatives to meet the growing requirements of the knowledge-based society."

As Canada positions itself to remain competitive in the emerging information-based global economy, employers are also requiring higher levels of credentials for jobs than in the past. Well-educated citizens are also better equipped to contribute to society and participate more effectively in the democratic process. New strategies are necessary to harness this investment in human capital.

New Lifelong Learning Initiatives

Lifelong learning has come to be seen in Canada as a strategy to equip Canadians with the skills they need to compete in a global economy. Youth and adult literacy are of increasing importance as a sound foundation for the training required for the knowledge-based jobs of the 21st century. Recognition of prior, sometimes less formal, learning is also of concern in order that training is as cost-effective as possible for both learners and educational institutions/employers.

The 1999 Speech from the Throne committed the Government of Canada to develop a National Action Plan on Skills and Learning. The National Action Plan will focus on the lifelong learning initiatives, literacy among adults and providing information to citizens about skill development. Key to this is the emphasis on enabling Canadians develop their skills in accordance with the evolving economy and making it easier for Canadians to finance lifelong learning.

A wide range of educational, government and private organizations in Canada have come to support lifelong learning as a strategic framework for their work. In this context, articulation agreements, primarily arrangements between education or training organizations about the relative value of each other's academic programs and credits, make it possible for people to move effectively and efficiently between educational programs while minimizing the amount of time and money an individual must invest. In short, articulation agreements have the potential to help make the prospect of lifelong learning – and associated moves to new jobs – more feasible. In the Canadian community college system, efforts continue under the leadership of the Association of Canadian Community Colleges to have colleges sign a Pan-Canadian Protocol for the Transferability of Learning (almost 100 colleges have signed the Protocol so far).

The Province of Nova Scotia supports a number of innovative initiatives and programs to support adult learners to develop their essential literacy skills for living in a continuously changing global era including community-based learning networks, correspondence study, an international high school equivalency testing program, a workplace education initiative and an adult basic education initiative. The goal of the latter program is to develop a recognized, portable and transferable credential that will increase accessibility, recognition and mobility.

A lifelong learning culture and a commitment to an individual and collective approach to professional development is the aim of teacher training in Quebec. An ability to continually renew one's knowledge and critical reflection are necessary to adapt to the changing realities of society. Quebec is also preparing to announce the direction it plans to take with respect to continuing education for all its adult learners. The government policy will put forward concrete government action to increase adult job-related skills and will emphasize collaboration with key adult training authorities.

Strengthening Training Programs

Changes in the economy and rapid advances in technology have created a new world of work. It is important that Canadians have access to training opportunities. A unique feature of Canada's community colleges is their linkage with business and industry to offer employment-related programs that include cooperative and continuing education courses.

For example, the Nova Scotia Community College and the University College of Cape Breton (UCCB) provide technical training that emphasizes quality, currency and relevancy. Apprenticeship curricula are being updated and revised continuously to meet the needs of industry. In addition, UCCB is working with the Nova Scotia Department of Education Apprenticeship Training Division to develop an accreditation model.

In Alberta, the Registered Apprentice Program (RAP) enables students to begin apprenticeship training while still in school. Innovative programs are also in place to recognize prior learning, enabling qualified individuals advanced placement in apprenticeship programs.

The Ontario Youth Apprenticeship Plan (OYAP) allows students to begin apprenticeships while earning high school diplomas. The government has expanded the program and more than doubled its funding since 1998. By thus broadening the apprenticeship system through the new *Apprenticeship and Certification Act*, the skills needs of industry and critical skills shortages experience in some industries will be addressed. Furthermore, the government has committed funding over the next three years for a new Apprenticeship Innovation Fund that will support updating classroom training for existing programs and introduce opportunities in new trades.

Student/Youth Employment Programs

The Association of Canadian Community Colleges is the national membership organization created to represent colleges and technical institutes to government, business and industry, both in Canada and internationally. Colleges are rooted in the communities they serve and are generally the primary vehicle for adult education and employment-related programs. Curricula are derived from industry-based sources and cooperative and in-industry training programs, in which students study at college and then work in industry in alternate semesters, are often available.

In order to support the transition from school to work, many provinces offer employment programs and services to students and youth. Manitoba has been extremely successful in placing large numbers of students in career-related positions that offer valuable work experience (e.g., CareerStart, a program that provides wage incentives to help private sector employers create new, career-related summer jobs for full-time students and unemployed youth aged 16-24). As a means of enhancing the accessibility of career information to young people, Manitoba provides an Internet-based Career Explorer Service to schools and employment and training agencies.

In Saskatchewan, the JobStart/Future Skills program links unemployed workers to jobs with Saskatchewan employers and assists industry in training workers in high demand occupations. In addition, the 20 career and employment service centres located across the province provide a wide variety of employment-related programs and services, including the most comprehensive provincial job-matching program in Canada.

The Quebec government has recently increased financial support for CEGEPs helping them provide a greater number of co-op technical programs. In addition, there are 23 centres of technology transfer linked to CEGEPs that can help businesses in various sectors of the economy to introduce technological innovation. The centres conduct applied research and technology transfer that allow students to take part in practical placements and help teachers to refresh their knowledge.

Private Postsecondary Provision

Postsecondary opportunities have long been offered by the private sector through career colleges and other education and training providers like industry-based or on-the-job trainers. New information and communication technologies provide an innovative platform for expanding access to these opportunities.

In Ontario, in addition to private universities being allowed by the government to operate within the province in order to expand access to degree programs for Ontarians, new combined college/university programs will be introduced to respond to changing market situations and the needs of an emerging economy. These innovative new programs will be geared to the unique needs of Ontario's evolving labour market. For example, Learnsoft Corporation, a management training business based in Kanata, Ontario announced on October 1, 1999 that it was establishing a new for-profit university, Unexus University.

International Activities

Canada is a trading nation in which one of every three jobs is linked to exports, once of natural resources but increasingly of knowledge-based products.

Canada's colleges and technical institutes provide leadership for future social and economic development through their joint work with national, provincial and territorial governments, with business, industry and labour organizations and with universities and other educational institutions. They share these approaches with partner institutions in over 60 countries, including many Commonwealth countries. In collaboration with the Council of Ministers of Education, Canada (CMEC), the Association of Canadian Community Colleges hosted the first World Congress of Colleges and Polytechnics in Quebec City in 1999.

The Canadian International Development Agency (CIDA) supports a number of international cooperation agreements between Canadian colleges and universities and institutions in other countries that are intended to strengthen institutional capacity and thus contribute to better educational opportunities.

CIDA also works with NGOs, such as the World University Service of Canada (WUSC), the Canadian University Service Overseas (CUSO), the Mennonite Central Committee, among others, as well as national associations like the Canadian Teachers' Federation (CTF) and provincial ministries of education to support opportunities for Canadian educators to be involved in cooperative activities with colleagues in other countries. The experiences gained by these teachers and administrators constitute, on their return to Canada, one of the most significant resources for addressing the domestic challenges of multicultural education and the needs of immigrant students.

It is also worth noting that the Government of Canada, through CIDA, has reoriented its international development priorities toward a greater focus on basic education which, along with health and nutrition, HIV-AIDS and child protection, form the four components of its social development agenda. This reflects Canada's commitment to the internationally agreed goals of achieving universal primary education by 2015 and eliminating gender inequalities in basic

education by 2005. Canada's commitment to these goals was given high visibility by its presence at the World Education Forum in Dakar in April 2000.

In addition, Human Resources Development Canada currently funds and manages two programs under the International Academic Mobility initiative that was launched in 1995. The Program for North American Mobility in Higher Education and the Canada-European Community Programme for Co-operation in Higher Education and Training are intended to help young Canadians acquire international skills to help them succeed in the global economy. Program funding enables up to 400 Canadian students to undertake part of their studies in another country for which they receive full recognition at their home university. It also supports collaborative efforts between partner institutions to develop joint curricula, courses and teaching materials.

Marketing Education Abroad

For a trading nation in a knowledge-based global economy, education itself becomes an exportable commodity. Moreover, the development of human resources and expert skills in other countries is one of the ways in which Canada can itself contribute to the growth of nations.

Education is thus one of Nova Scotia's strongest exportable resources. The province has created a unique alliance among universities, the Nova Scotia Community College, the private sector and provincial and federal governments to implement an international trade and marketing plan. The presence of international students not only creates a positive academic atmosphere but also helps to sustain the continued delivery of quality programs through the important revenue they generate, currently estimated at some C\$7.5 million annually.

International education has a substantial positive impact on British Columbia's economy by increasing the province's ability to compete in the global economy. The provincial government is committed to supporting international education through policies and funding for the British Columbia Centre for International Education (BCCIE). BCCIE was established in 1990 to foster international education in the public postsecondary education system of the province by developing educational, cultural and economic links with the global community. All public postsecondary institutions in British Columbia are members of BCCIE and offer programs and expertise in serving international students and clients from around the world. In addition, the government established the International Credential Evaluation Service in 1996 at the Open Learning Agency to provide a service for the assessment of education and training documents for professional occupations held by immigrants coming to Canada, and by Canadians who have completed studies abroad.

Alberta Learning's strategy for international education provides a framework to expand international marketing efforts and increase the internationalization of the Alberta population.

Manitoba also recruits foreign students for its secondary schools and postsecondary institutions, partially in response to declining demographics and hence enrolments and revenues. However, as a recent Association of Universities and Colleges of Canada report on the internationalization of Canadian universities points out, foreign students are also recruited to prepare graduates who

are internationally knowledgeable and interculturally competent, to recognize that knowledge systems are or should be more international in character and address, through scholarship, the increasingly interdependent nature of the world.

The Canadian Teachers' Federation (CTF) points out, however, that the phenomenon of marketing to children and young people and using the school as a vehicle for that purpose is of increasing concern. Initiatives such as the *Youth News Network* (YNN) and the recent *Kid Power Conference* in Toronto, which drew representatives from hundreds of companies in search of strategies and techniques to market goods and services to children in schools, are only two such examples.

CTF believes that enthusiasm for marketing education services should be tempered by concerns for the impact on developing countries that contract those services. It should be noted that CTF has an extensive international assistance program that provides support to teachers and their organizations in developing countries by meeting their needs as they define them.

Partnerships and Sharing

Saskatchewan's Sector Partnerships program provides funds for industry to set up partnerships with training providers and community stakeholders to develop human resource development plans for specific industry sectors. The Multi-Party Training Plan (MPTP) agreement between partners and stakeholders in the mining industry includes government, mining companies, training institutions and Aboriginal organizations and outlines expectations for training programs so that northerners are employed in the industry. The result of the MPTP partnership is that northern Saskatchewan has the highest Aboriginal employment rate in mining of any region in Canada. A similar plan is underway with respect to Saskatchewan's growing forestry industry.

The Nova Scotia Department of Education has been pursuing international partnerships for its Open for Business Program which provides storefront, walk-in centres for self-employment designed to inspire entrepreneurship through the sharing of information and solutions where youth can gain from the knowledge and experience of others. Attention has been attracted from Scotland, Zimbabwe, Trinidad and Tobago and a partnership agreement is pending with Sweden.

The Yukon Department of Education is actively strengthening its partnerships with teachers, parents, students, First Nation governments, the labour and business sectors and the wider community by ensuring that parents are actively engaged in the education decision-making process, implementing relevant obligations under the Land Claims settlement and continuing to support the site-based management of resources.

The Canadian School Boards Association encourages the development of partnerships beyond school walls, both as a teaching and learning resource but also as a model of the increasingly interdependent world in which students will be living. The variety of cooperative relationships which are strengthening schools and school systems across Canada range from inter-governmental initiatives to school-college joint ventures, from business partnerships to joint undertakings with other school boards. For example, Carleton University in Ottawa provides its

22 high school partners from the local area with special library privileges for students and teachers, “head start” enrolment for final year high school students, curriculum advice and classroom visits by senior faculty.

The Canadian Teachers’ Federation (CTF) has been working for the past 36 years on international cooperation programs with national teachers’ organizations in Africa, Asia, the South Pacific, the Caribbean and Latin America. Its partnership program addresses sustainable development through professional development like in-service training, women’s bursaries in education, resource centre development and networking as well as organizational development, leadership training and institutional support. The CTF also works with other NGOs to provide opportunities to advance the cause of education and the status of the teaching profession in an international context.

The new emphasis on basic education within Canada’s development priorities will very likely open up new opportunities for international cooperation involving ministries of education, schools and teachers and points toward greater involvement and partnering by Canadian educators, particularly those at the primary, secondary and teacher-training levels, of their colleagues in developing countries.

Human Resource Development Canada’s (HRDC) collaboration with other levels of government, as well as non-governmental organizations and the private sector, toward the common goal of creating a “single-window” resource has resulted in a more effective information product for Canadians than would be possible through isolated efforts. This has demonstrated the extent to which multiple stakeholders can successfully cooperate to develop programs and services that truly meet the needs of stakeholders. Building on this partnership model, HRDC plans to develop and launch an international gateway Web site as a mechanism for further collaboration to promote Canada as a learning destination and leading-edge innovator in the provision of educational services to foreign students.

Canada does not have a national body that oversees all occupational standards, as do Australia, South Africa and the United Kingdom. Where national occupational standards do exist or are emerging, they tend to be concentrated in federally regulated fields such as aviation. Occupational standards represent the work of provincial and territorial apprenticeship units in partnership with the business, labour and education sectors. Of increasing significance is the work of industry sector councils where business and labour representatives together with education groups, especially colleges and technical institutes, and governments are able to identify and address their human resource needs, including training and the development of occupational standards.

FUTURE OPPORTUNITIES AND CHALLENGES

Prime Minister Mackenzie King said of Canada in 1936 that “if some countries have too much history, we have too much geography...”. Indeed, the major challenges of the 19th and 20th

centuries for Canada have been to tie its sprawling land mass and scattered populations into a whole, first through transportation networks, rail and road links and then through communications technologies, radio and telephone. Geography still plays a large part in shaping the Canadian reality.

Rapid advances in electronic communications mean that access to education is no longer limited by the requirement of being in a particular place at a set time. New information and communications technologies present their own challenges, however, in terms of cultural assimilation and the need for our teachers and young people to be increasingly literate in the computer-based technology area.

Distance

The large geographic distribution of Saskatchewan and Manitoba's relatively small populations, the population shift from rural to urban areas, and the severe climate cause some critical funding needs. For example, rural areas experience greater costs and more difficulty in ensuring students' safety than do areas that are more densely populated or that have more moderate climates.

Technology

In his response to the Speech from the Throne in October 1999, the Prime Minister confirmed that the plan of the federal government over the next two to five years is to build strengthened learning opportunities through an expanded SchoolNet and a modern communications infrastructure to link all Canadian schools and libraries to the Internet. In the future, "virtual programs" offered over the Internet may also have a significant impact on student mobility and on the delivery of postsecondary education in general as more institutions in Canada and abroad offer programs students can take without leaving home.

Brain Drain

An Expert Panel on Skills was established in 1998 by the Prime Minister's Advisory Council on Science and Technology (ACST). Its recently published report found no evidence of a current, generalized shortage of technical and scientific skills in the Canadian industry sectors the Panel examined in detail (aerospace, automotive, bio-technologies, environmental technologies and information and communications technologies). Nor was there any evidence of a massive "brain drain", although the Panel was concerned about the loss of some high-performing, highly skilled individuals in some fields. Of more concern was a failure to take full advantage of the potential contribution that new immigrants can make to Canada's prosperity and to the shortage in both technically and managerially qualified individuals.

Education can provide training in essential and managerial as well as technical skills and can also be a cornerstone in protecting and sustaining local communities. In Manitoba, programs are being initiated which link education to community-based needs and opportunities are being explored to encourage secondary and postsecondary graduates to stay in their home communities. Saskatchewan postsecondary graduates who locate in the province are eligible for a graduate tax credit that helps to offset training and education-related debt.

Funding

The erosion of traditional economic sectors has exacerbated complex demands on limited resources. Schools must still provide safe and adequate infrastructure in which costs are mostly fixed, balance appropriate teacher/student ratios with diminishing operating resources and provide for increased special and technological needs.

One of the major initiatives Ontario is taking to address the increased numbers of postsecondary students expected in the near future is the creation of 73,000 new student spaces in new facilities at provincial colleges and universities through the SuperBuild program. Ontario's C\$1 billion investment, combined with partner contributions, will result in a total of C\$1.8 billion in capital construction at colleges and universities across the province, the largest capital program in more than 30 years.

Technology and infrastructure shortages continue to be a major concern for postsecondary institutions. The extent of the shortages coupled with the need in many programs to be constantly on the leading edge of technology is a major challenge. Even with recent initiatives like the SuperBuild program, the need is growing exponentially. In addition, the generation just entering postsecondary education is highly computer literate. These young people bring with them a different leaning style and a high level of comfort with technology, often better developed than many of their instructors. Professional development to facilitate technology-enhanced learning is an urgent need at the postsecondary level just as it is at the elementary and secondary levels.

The federally-supported Canada Student Loan Program (CSLP) has been in place since 1964. The program is delivered in partnership with participating provinces although Quebec, the Northwest Territories and Nunavut do not participate in the CSLP but receive compensation to operate their own student financial assistance plans. The CSLP supplements students' own resources and is provided to eligible students enrolled in postsecondary programs of study who demonstrate need regardless of discipline. Over 3.4 million full-time students have been assisted by the CSLP since its inception.

Despite funding available through the CSLP and provincial assistance plans, postsecondary students are facing increasing debt loads to finance their studies. A national task group of the Association of Canadian Community Colleges is examining the breadth and depth of postsecondary student debt and financial need in Canada. It is very concerned about the increasing debt loads of those able to access government loan instruments and even more so about those unable to participate in postsecondary education as a result of financial need as those who receive government loans do not represent all students who may be in need of financial assistance. The notion that one family member may accumulate a debt that in some cases might exceed the value of the family home is unacceptable to many families, especially where there may be more than one family member who wishes to access postsecondary education. In addition, the impact of the cost of postsecondary education on the broader family situation for those who do not qualify for students loans, especially those in middle income categories, could be significant as older generations retire without adequate financial resources.

The C\$2.5 billion Canada Millennium Scholarship initiative announced by the Government of Canada in 1998 to help Canadians gain access to postsecondary education and also help to reduce student debt. Some 100,000 scholarships averaging C\$3,000 each will be awarded to students across Canada every year for the next ten years.

Cultural Identity

It is estimated that by 2010, one of every three Saskatchewan and Manitoba youth will be of Aboriginal ancestry. In order to meet the unique needs of this increasingly large proportion of the population, both provinces have developed a number of unique institutions controlled by Aboriginal people. In Manitoba, for example, many Aboriginal language programs are being offered to students and a number of Aboriginal elementary-secondary schools have been opened.

For example, the Saskatchewan Urban Native Teacher Program provides teacher training for Aboriginal people in the southern part of the province, while the Northern Teacher Education Program provides teacher training to the residents of northern Saskatchewan, where Aboriginal peoples represent approximately 80 percent of the overall population. Both programs lead to a Bachelor of Education degree. As well, the Northern Professional Access College program provides the first two years of liberal Arts programs to residents of northern Saskatchewan. These programs have been used as models in the Northwest Territories and elsewhere.

New Partnerships for New Skills

Canada expects to build on the strategy that has given it the advantage of having the most highly educated workforce in the world. The Government of Canada through the National Action plan on Skills and Learning will forge partnerships with other governments, public- and private-sector organizations and Canadian men and women. Sector councils will play an important role in this initiative, bringing together representatives from business, labour, education and other professional groups to address human resource issues in important areas of the Canadian economy.

CONCLUSION

The internationalization and globalization of human and economic activities will expose Canadian society to competition from other countries. It is clear that the quality of the education we provide our young people will help Canada face the challenges of the 21st century. This is why many jurisdictions are establishing new education programs focussing more on the basic knowledge and intellectual development of students.

The knowledge available through university and college programs contributes significantly to creating a work force capable of succeeding in and adapting to a climate of change. Canadian universities have a long tradition of international cooperation. But as the Association of Universities and Colleges of Canada points out, the internationalization of the university means a transformation of how teaching and learning is carried on, a transformation that is essential to the future quality of higher education in Canada.

In Canada, education is intended to be stimulating and to instil a desire and ability to learn.

Education is meant to introduce students to the world of culture and prepare them for their roles in adult society. Education is expected to make students capable of making thoughtful judgments and taking responsible action. With such preparation, our future adults will be able to take up the global challenge with an openness of mind and an ability to adapt successfully to the changes they will meet along the way.

WEB RESOURCES

The following Web sites of education-related federal, provincial and territorial education authorities and organizations provide further information on education in Canada:

Council of Ministers of Education, Canada (CMEC)

www.cmec.ca

British Columbia Ministry of Education

www.bced.gov.bc.ca

British Columbia Ministry of Advanced Education, Training and Technology

www.aett.gov.bc.ca

Alberta Department of Learning

www.learning.gov.ab.ca

Saskatchewan Department of Education/Department of Postsecondary Education and Skills Training

www.sasked.gov.sk.ca

Manitoba Department of Education and Training

www.gov.mb.ca/educate

Ontario Ministry of Education / Ministry of Training, Colleges and Universities

www.edu.gov.on.ca

Ministère de l'Éducation du Québec

www.meq.gouv.qc.ca

New Brunswick Department of Education

www.gov.nb.ca/education

Nova Scotia Department of Education

www.ednet.ns.ca

Prince Edward Island Department of Education

www.gov.pe.ca/education

Newfoundland Department of Education

www.nf.ca/edu

Yukon Department of Education

www.yk.ca/depts/education

Northwest Territories Department of Education, Culture and Employment

www.siksik.learnnet.nt.ca

Nunavut Department of Education

www.nunavut.com/education/english

Human Resources Development Canada

www.hrdc-drhc.gc.ca

CanLearn

www.canlearn.ca/www.cibletudes.ca

Industry Canada (SchoolNet) www.schoolnet.ca

Statistics Canada

www.statcan.ca

Advisory Council on Science and Technology

<http://acst-ccst.gc.ca>

Canadian Association of School Boards

www.cdnsba.org

Canadian Teachers' Federation

www.ctf-fce.ca

Canadian Education Association

www.acea.ca

Association of Universities and Colleges of Canada

www.aucc.ca

Association of Canadian Community Colleges
www.accc.ca

The following Web site has links to many other
useful education sites:

Ontario Institute for Studies in Education (OISE)
www.oise.utoronto.ca