

ED 369 660

SO 022 909

TITLE Province of British Columbia Ministry of Education
Annual Report. July 1, 1990 to June 30, 1991.

INSTITUTION British Columbia Dept. of Education, Victoria.

REPORT NO ISSN-0711-9410

PUB DATE 91

NOTE 82p.

PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC04 Plus Postage.

DESCRIPTORS Academic Achievement; Access to Education;
Accountability; Annual Reports; Career Development;
*Educational Objectives; Educational Quality;
Elementary Secondary Education; Equal Education;
Foreign Countries; Intellectual Development;
Relevance (Education); *School Role; Social
Development

IDENTIFIERS *British Columbia; *British Columbia Ministry of
Education

ABSTRACT

This Ministry of Education report describes the effectiveness of the British Columbian school system in educating learners. A picture of the school system as seen in the performance of students and schools in 1990-1991 is presented. The report focuses on results that are representative of the province-wide performance of students and schools and contains descriptions, anecdotes, and photographs of schools and school districts of British Columbia. The first section describes the performance of British Columbia learners in achieving the three educational goals of the school system in student development: (1) intellectual; (2) human and social; and (3) career. The second section details the extent to which the school system demonstrates five attributes: (1) accessibility; (2) relevance; (3) equity; (4) quality; and (5) accountability. The two initial appendices list sources of information and key Ministry publications. The third appendix presents 13 detailed tables of data. (Author/CK)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

Annual Report

July 1, 1990 to June 30, 1991



U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

R. N. GREE R

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."



Province of
British Columbia

Ministry of Education

606-200-05
50 022 909

Annual Report

**July 1, 1990 to
June 30, 1991**



**Province of
British Columbia**

Ministry of Education

British Columbia Cataloguing in Publication Data

British Columbia. Ministry of Education
[Annual Report (1980)]
Annual Report - 109th (1979/80) -

Cover title: Report on Education
1979/80 - 1980/81.

Report year ends June 30.

Continues in part: British Columbia.

Ministry of Education, Science and Technology.

Annual Report.

ISSN 0711-9151

ISSN 0711-9410 = Annual Report -

Ministry of Education (Victoria. 1980)

1. British Columbia. Ministry of Education - Periodicals. 2.
Education - British Columbia - Periodicals. I. British
Columbia. Ministry of Education. Report on Education. II.
Title: Report on Education

L222.B7A22
Rev. Oct 1987

354.7110685'I



To The Honourable David C. Lam
Lieutenant Governor of the Province of British Columbia

MAY IT PLEASE YOUR HONOUR:

I have the honour and duty to present the One Hundred and Twentieth Annual Report of the Ministry of Education, covering the period from July 1, 1990 to June 30, 1991 presided over by another Member of the Legislature.

Anita Hagen
*Minister of Education and Minister Responsible
for Multiculturalism and Human Rights*



To The Honourable Anita Hagen

*Minister of Education and Minister Responsible for Multiculturalism
and Human Rights, Province of British Columbia*

DEAR MINISTER:

*I take pleasure in submitting, for your approval and transmittal to
the Lieutenant Governor, the One Hundred and Twentieth Annual
Report of the Ministry of Education, covering the period from July 1,
1990 to June 30, 1991.*

Valerie Mitchell

*Acting Deputy Minister of Education and Acting Deputy Minister
Responsible for Multiculturalism and Human Rights*

INTRODUCTION

Message from the Minister 9
 The Annual Report of the Ministry of Education 12
 Education in a Changing World 13

THE PROGRESS OF LEARNERS

Intellectual Development 17

Learners' Basic Skills 17
 Beyond the Basics: Knowledge and Thinking Skills..... 20
 Curiosity, Creativity and Appreciation of Learning..... 23

Human and Social Development 25

Self-Esteem and Personal Initiative 25
 Physical Health and Well-Being 27
 Social Responsibility 28
 Understanding of Cultural Heritage 29
 Appreciation of Fine Arts 30

Career Development 31

School Completion: The Door to Career Choices..... 31
 Preparation for Post-Secondary Activities 33
 Students' Work Habits..... 34
 Preparation for the Changing Workplace..... 35

ENABLING LEARNERS

Accessibility 39

Meeting Learners' Needs 39
 Choice of Schooling 43

Relevance 45

Relevance to Individual Needs..... 45
 Relevance to the Real World..... 47

Quality 50

The Quality of Teaching and Administration 50
 Professional Development 53

Equity 56

Funding Education 56
 Funding School Building and Improvements 58

Accountability 60

Accounting for the Use of Resources 60
 Accountability at the School Level 61
 Accountability at the School District Level 62
 Accountability at the Provincial Level 63

CONCLUSION: CHALLENGE AND CHANGE 65

APPENDICES

Appendix I: Sources of Information 69
 Appendix II: Key Ministry Publications..... 71
 Appendix III: Statistical Supplement 73

Index 82

Introduction

- Message from the Minister
- The Annual Report of the Ministry of Education
- Education in a Changing World



MESSAGE FROM THE MINISTER

I am pleased to provide some opening comments and observations to this Annual Report for the 1990/91 school year. Although I was not Minister of Education during that year, it was with great interest that I served as the official education critic during the tabling and subsequent discussions of the 1988 Royal Commission on Education. And it is with considerable optimism that I regard our collective ability to realize the "Legacy for Learners" towards which that Commission directed us.

The 1990/91 school year was a time of great change for the world. Major political and economic events during that year heightened our awareness that British Columbia is a participant in a changing national and global situation, and that our future prosperity depends on how well we prepare our young people to meet the challenges that accompany change.

Last year was also a time of great change for the schools of British Columbia. Efforts to reform our schools, and the methods by which we enable our learners, began to take shape. *Year 2000: A Framework For Learning*, the broad plan for a new education philosophy, was introduced in our schools. At its foundation is the belief that the purpose of learning is to prepare young people to live productive, satisfying lives and to contribute to the continued well-being of our society.

In elementary classrooms across the province last year, teachers welcomed the Primary Program and its new approach to learning in the early years, when experiences at school count so much. It is during those years that formal education begins to shape the attitudes and the base of skills and knowledge upon which a child's later life will depend.

Last year also saw a comprehensive review of the draft Intermedi-





ate and Graduation Programs. Because of the intense debate and interest in the content and philosophies of the new programs, the consultation process was extended, and final drafts will be distributed in 1991/92 for further review and discussion. These reviews were two of the many consultative processes initiated and enhanced during the year. A key component of this work was an effort to canvass parents and the community at large for their expectations of schools and the experiences they should provide children.

This Annual Report presents a picture of education in British Columbia. It demonstrates that many good things are happening in our schools, that progress is being made to focus on each learner and to foster cooperation among all partners in education. However, it also presents evidence that our schools are not yet all they could be for our learners.

The number of students who leave school without graduating continues to be a problem. Statistics show an increase in the percentage of students choosing to stay in school until Grade 12, but not in the percentage that complete their educational program. The report also shows that while students are generally happy with the intellectual experiences they receive in schools, they feel unprepared to take their place in the workforce.

On the other hand, employers and post-secondary instructors are concerned with the intellectual background of the young people they receive in their businesses and classrooms. They expect graduates to have stronger reading, writing and mathematics skills. They are very satisfied, however, with graduates' social skills, teamwork and willingness to learn. It is contrasts and differing perspectives like these that show the range of expectations society holds for our schools.

At least one thing is apparent. There is still much to do in order to create an environment in which cooperation and collaboration are paramount, in which a desire for the best possible school system will direct the actions of each individual and agency, and in which the purpose of enabling every learner to reach her or his individual potential is a goal shared by all. It is this change of attitude that fundamental education reform is really about.

I hope this report provides you with an objective picture of the state of education in British Columbia, and that the many successes and shortcomings of our schools and processes will be evident.

My thanks to my staff at the Ministry of Education, to the many employees — administrators, educators and support staff — who make our schools what they are, and to the many parents, community members and individuals who have supported our efforts to change the way we deal with children in the classroom. It is our children who will make this province all it can be.



THE ANNUAL REPORT OF THE MINISTRY OF EDUCATION

The Ministry of Education's Annual Report describes the effectiveness of the B.C. school system in educating learners. The report presents a picture of the school system as seen in the performance of students and schools in 1990/91.

The central objective of the school system, which guides all activities and decisions, is captured in its mission statement:

The purpose of the British Columbia school system is to enable learners to develop their individual potential and to acquire the knowledge, skills, and attitudes needed to contribute to a healthy society and a prosperous and sustainable economy.

The school system accomplishes this mission through the achievement of three principal goals: the intellectual, human and social, and career development of students. In addition, the school system is expected to demonstrate five attributes: accessibility, relevance, equity, quality and accountability. Knowing the extent to which these objectives are reached provides a baseline for evaluating the system and planning improvements.

The first section of this report, *The Progress of Learners*, describes the performance of B.C. learners in achieving the three goals of education. The second section, *Enabling Learners*, details the extent to which the school system demonstrates the five system attributes. The *Appendices* present a more detailed version of the data referred to in the report, as well as a description of the data sources and a list of publications about the provincial education system.

This year's report, in keeping with the trend of recent years, focuses on results that are representative of the province-wide performance of students and schools. At the same time, the report contains descriptions, anecdotes and photographs that reflect the spirit of education found throughout the schools and school districts of British Columbia.

EDUCATION IN A CHANGING WORLD

Major economic and social changes are reshaping society in British Columbia. The new circumstances of today's world demand new attitudes towards learning to successfully prepare all young people for the future they face in a changing world.

Changes in Public Expectations

Parents, businesses and the public have asked for a school system that is relevant to today's world, that is representative of the interests of all members of society and that allows more choice in schooling. British Columbians also expect a greater role in shaping the outcomes of education and greater accountability for the resources they commit to education.

Changes in Society

Changing family and social structures are redefining the way we live. Women are entering the work force in ever greater numbers. Families are more diverse, as is the cultural, linguistic and racial make-up of our society. Health and lifestyle choices, and the protection of the environment have become important social concerns. The potential for our society to benefit from these changes will depend on healthy individuals who can make decisions that benefit themselves and others, who are cooperative and principled in their outlook, and respectful of the differences among people.

Changes in the Economy

The global economy has increased competition for trade and changed long-standing trading patterns. Increasingly, high-wage economies will depend on highly-skilled workers. As British Columbia shifts away from a resource-based economy, it will need a better skilled and educated work force, able to bring expertise and innovation to new information-based industries and to B.C.'s new trading relationships

The changing world demands that young people develop flexibility, motivation and the capacity to learn throughout their lives.



with the countries of the Pacific Rim and the United States.

Changes in the Workplace

In the workplace, these economic changes mean fewer traditional jobs and fewer opportunities for unskilled workers. The growth in communication and information technologies is transforming existing jobs and creating a greater demand for technological literacy. To meet changing job market conditions, workers will require more versatile skills, including strong basic skills, good interpersonal skills and the ability to work as part of a team. Most of all, workers will need the motivation and ability to continue learning throughout their lives.

How The School System is Responding

These new social and economic realities have led to major changes in the school system, starting with a change of attitude towards learning — both what its outcomes should be and how it should take place. This change is exemplified in a shift towards a learner-focused system in which students can become active participants in their learning, care more about what they are doing in school and take greater advantage of learning opportunities.

To accomplish this, the school system has begun the transformation to a more personalized ap-

proach to schooling. The new system is designed to reduce failure and make learning a more positive experience for every student. It will encourage more active and cooperative learning, and allow students to direct and evaluate their own progress. The new system will also shape learning activities so that they are relevant to each student's personal needs as well as to the world beyond the classroom.

The current changes in education are not limited to students or the school system. Their success depends on the participation and leadership of educators, parents, business and the public in setting education targets and priorities. Stronger collaboration and communication between the school system and these groups will result in greater accountability for the way resources are used and greater understanding of the challenges facing schools.

The education reforms taking place in British Columbia are the product of extensive public consultation on how best to prepare students for a future very different from the present. Over the next ten years these reforms will touch every aspect of the school system.

A list of publications describing the major changes is presented in *Appendix II: Key Ministry Publications* on page 71.

The Progress of Learners

- Intellectual Development
- Human and Social Development
- Career Development



INTELLECTUAL DEVELOPMENT

The goal of Intellectual Development is to develop the ability of individuals to analyze critically, reason and think independently, and acquire basic learning skills and bodies of knowledge; to develop in students a lifelong appreciation of learning, a curiosity about the world around them and a capacity for creative thought and expression.

B.C. learners perform well intellectually in comparison with students from other provinces and countries. Their basic skills are improving, and most students successfully meet the standards of knowledge and skills set in provincial assessments and examinations. Many students go far beyond these levels, demonstrating the highest level of excellence in a wide range of academic and creative endeavours.

In addition to student performance data, this section presents results from recent provincial surveys of students, the public, employers and post-secondary instructors. While the perceptions of these groups often differ — reflecting, in part, different expectations of what the outcomes of intellectual development should be — they all convey the important message that B.C. students must continue to strengthen their basic skills, including their communication and problem-solving skills, if they are to be well prepared for the intellectual challenges of the future.

The importance of reading doesn't change even if classroom technology does. Every group surveyed in 1991 ranked reading as the most important skill a student can learn.

LEARNERS' BASIC SKILLS

The traditional three Rs are still fundamental to successful intellectual development, according to recent surveys of British Columbians. Graduates, students, the public, employers and post-secondary instructors agree that schools must first of all ensure that every student learns to read, write and use basic mathematics.

How sound are the basic skills of B.C. learners? One source of evidence is a 1989 Statistics Canada Survey which tested the ability of Canadian adults to deal with the



British Columbians in the 16 to 24-year age group perform above the Canadian average in reading, writing and arithmetic skills used in daily activities.

literacy and numeracy demands of everyday life. The findings reveal that British Columbians in the 16 to 24-year age group perform above the Canadian average in reading, writing and arithmetic skills used in daily activities.

Last year's annual report described the performance of young British Columbians on the reading and numeracy components of the Statistics Canada Survey. The description of the writing tasks (see facing page) completes the picture of the basic literacy and numeracy skills of 16 to 24-year-olds.

The strength of learners' basic skills influences more than their ability to deal with everyday demands. These skills are the ones B.C. employers say they value most in employees. They are also the

learning tools students need in order to acquire advanced knowledge and skills, during their school years and in their post-secondary activities.

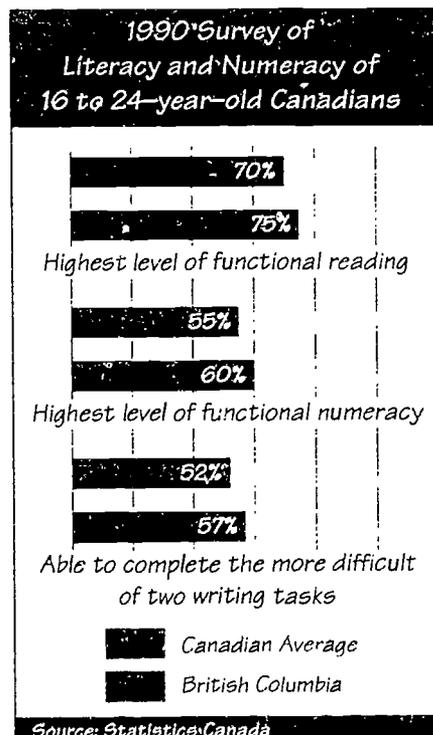
Students themselves are generally satisfied with their basic skills. About 70 percent of the 1991 Grade 12 students thought schools did a good job of helping them develop strong knowledge and skills in reading, writing and basic mathematics. On the other hand, B.C. employers and post-secondary instructors surveyed in 1991 felt that student performance, particularly in writing, was not as strong as it should be. Post-secondary instructors identified reading and writing as the weakest basic skills of students.

In spite of these concerns, evidence over time suggests that students' basic skills are improving. For example:

- The Statistics Canada Survey found that the writing skills of B.C. 16 to 24-year-olds were better than those of the B.C. adult population as a whole.

- According to the 1988 Provincial Reading and Writing Assessment, student writing had improved significantly compared with ten years earlier. In 1988, 95 percent of students were found to be able to write at a satisfactory level.

- One of the major findings of the 1990 Mathematics Assessment was that student performance in mathematics had improved over the previous 15 years.



Writing Tasks: 1990 Statistics Canada Survey of Literacy Skills

Ninety-two percent of British Columbians in the 16 to 24-year age group — the same rate as the national average — successfully completed Task 1 below. On the second task, 57 percent of young British Columbians were successful, a higher percentage than for any other region. However, this still indicates that two out of five British Columbians in this age group do not have the ability to meet everyday writing demands.

Task 1: You have to do some errands this afternoon. You leave a note asking a member of your household to turn on the oven at 5:30 to pre-heat it to 230°C (450°F). Write the note in the space below.

Task 2: The switch on the hand mixer you bought at Cray's Hardware Store last month is broken and the appliance will not turn on. It is still under warranty. In the list of procedures for returning the appliance for repair you find this instruction:

Enclose a letter explaining the nature of your problem, the service or repair desired, the date and place of purchase, and your name and address.

Write the letter you will include when you send the mixer to the service centre you chose from the list below (list of addresses provided).

■ According to the 1991 Communications 12 marking committee, which includes teachers with years of experience marking provincial exams, the general reading level of students has improved. Students are now dealing well with longer, more difficult non-fiction passages and short stories than the ones used in previous examinations. The committee also noted that the length of students' written responses has improved considerably.

After reading, writing and arithmetic, the ability to communicate

well in spoken language was most likely to be named by survey respondents as fundamental to student's intellectual development. In fact, employers and graduates ranked good spoken communication as more important than basic mathematics.

Employers were generally satisfied with students' spoken communication and rated it higher than their performance in other basic skills. Post-secondary instructors agreed that this is one of students' strengths, but felt their speaking could benefit from better organization.

**BEYOND THE BASICS:
KNOWLEDGE AND
THINKING SKILLS**

As they progress through school, students build on their basic skills, reaching increasingly advanced levels of knowledge and thinking skills. Because these two components of intellectual development evolve together, evaluations of student performance generally cover both.

Provincial Learning Assessments

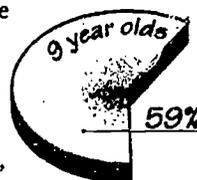
Province-wide assessments, which in recent years have assessed students of 9, 12 and 15 years of age, examine both the knowledge and thinking skills of students and are an important source of information about students' specific strengths and weaknesses. Results from learning assessments over the past nine years indicate that the performance of students at the intermediate level (ages 9 to 15) has generally improved.

The most recent assessment results available are from the 1990 Mathematics Assessment. These indicate that students' overall performance in mathematics has improved over the past 15 years. In fact, in some areas, student performance exceeded assessment expectations. Performance was classified into four levels (level four being the highest), the second of which is described in the box at the left.

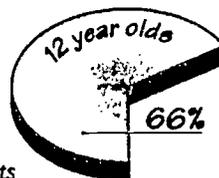
In spite of the general improvement in mathematics, the assessment panel noted a weakness in students' thinking skills, particularly in understanding and applying certain math concepts. They also pointed out that students found problem solving the most difficult topic in mathematics. Students' interest in and enjoyment of problem solving also appears to decline as they get older: by the age of 15, only one-third of students enjoy applying problem-solving strategies, compared with two-thirds of 9-year-olds. Weakness in student problem-solving performance was also noted by B.C. employers and post-secondary instructors.

Second of four levels of student performance on the 1990 Mathematics Assessment

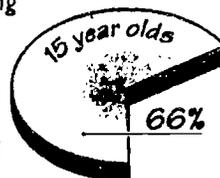
59% of 9-year-olds have a knowledge of place value to 99,999, can read and interpret graphs and solve multi-step problems; are able to read, write and order decimals to hundredths and recognize common fractions. They can identify labelled line segments, cylinders, congruent figures, line of symmetry, and can tile a region using one shape. They can determine volume when given a pictorial representation and solve problems involving capacity.



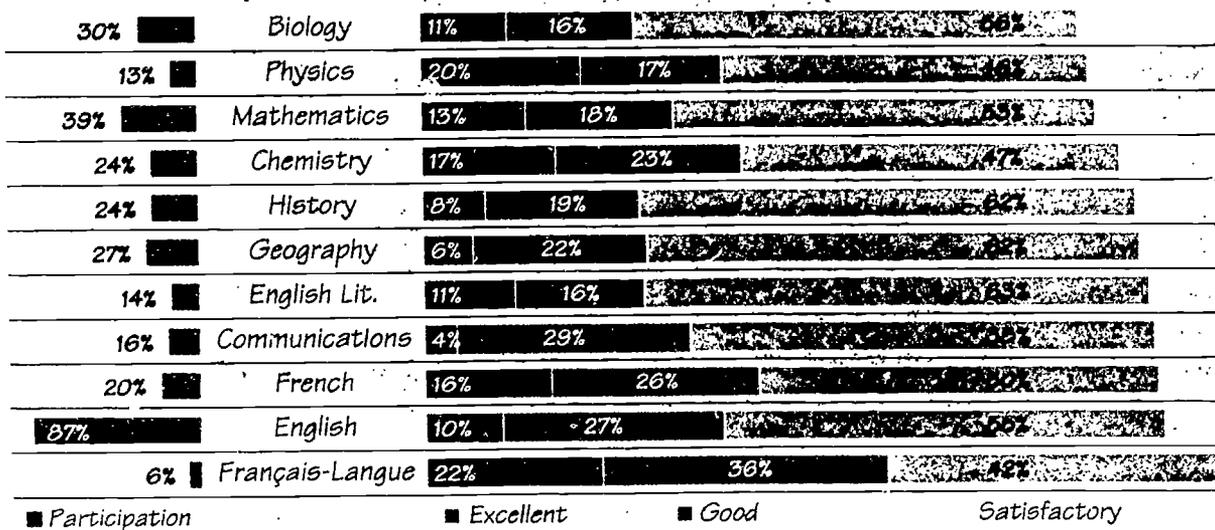
66% of 12-year-olds can perform simple operations with proper fractions and sight multiplication with powers of ten. They can rename percentages as fractions or decimals and can use percent in problem-solving. They can display and interpret data using graphs. They apply geometric terms, can estimate area and mass, and rename metric units. They can change written statements into algebraic expressions and solve whole number algebraic equations.



66% of 15-year-olds are able to do consumer-related questions and measurement problems, to read tables, evaluate algebraic expressions and solve open, linear sentences involving negatives and brackets. They can find the area and volume of prisms and the length of sides in similar triangles. They can apply the Pythagorean Theorem, recognize the graph of simple linear inequalities and change word statements into algebraic expressions.



1991 Grade 12 Provincial Examination Results and Participation Rate for Selected Subjects



Source: Information Management Branch

Provincial Examinations

The knowledge and thinking skills of senior students are evaluated through provincial examinations. Exams are a combination of multiple choice and open-ended questions that test students' recall of knowledge, their application of that knowledge to solve problems and their ability to analyze and synthesize information at an advanced level. The mark students receive on the provincial exam is worth 40 percent of their final grade; the remaining 60 percent is assigned according to the professional judgement of classroom teachers.

Most senior students pass their provincial exams at the satisfactory level. The percentage of students achieving excellent marks in 1991 ranged from 4 percent in Communications to 35 percent in Spanish; the highest failure rate — 18 percent — was on the Biology exam.

The following are descriptions of student performance on the 1991

English 12 and Biology 12 provincial exams, two of the most popular courses among senior students.

English 12 results are the most representative of Grade 12 student performance. Every graduating student must write either this exam

As students mature they develop higher-order skills, including the ability to reason and analyze critically, think creatively and communicate at an advanced level.



or the Communications 12 exam. In 1991, the participation rate of Grade 12 students in the English exam was 87 percent. Ninety-two percent of students who wrote the exam were successful.

The English 12 marking committee found that students who achieved a satisfactory level of success on this exam (55 percent of those who wrote the exam) could understand expository purposes and had satisfactory organizational skills and knowledge of symbolism and plot sequence. However, these students had limited skills in punctuation, spelling, idiom and diction.

Ten percent of students who wrote the English 12 exam achieved an excellent level of success. These students demonstrated originality and creativity, precise vocabulary, and good sentence structure and variety. A weakness of students at this level was their tendency to over-

answer questions, discussing rather than explaining their answers.

Commenting on performance over time, the English 12 marking committee said that students take the exam more seriously now than in the past and are capable of more complete, better organized and more thoughtful answers.

Biology 12, though a non-mandatory subject, is the most popular of the science courses studied by Grade 12 students. The marking committee noted that the growing popularity of this course has meant a greater range of ability among students, and consequently a greater number of students at both high (A, B) and low (Pass, Fail) achievement levels.

The participation rate in the 1991 Biology 12 exam was 30 percent. Of the students who wrote the exam, 82 percent were successful. The marking committee found that students at a satisfactory level of success (56 percent) were able to memorize specific pieces of information and correctly spell technical words. However, they used incorrect terminology, had a poor background in basic chemistry and tended to have difficulty putting their knowledge into sentences and paragraphs.

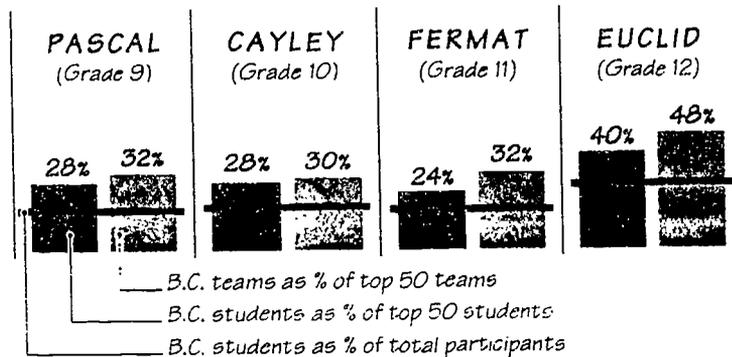
Students who achieved an excellent level of success on the Biology 12 exam (11 percent) demonstrated careful reading and precise interpretation of the exam questions and were able both to interpret and synthesize data. Students at this level had few deficiencies except for some weakness in their analytical skills.

In province-wide learning assessments conducted over the past nine years, intermediate level students (ages 9 to 15) have improved their performance in reading, writing, science and mathematics.



Canadian Mathematics Competition

The Canadian Mathematics Competition is one of several national and international competitions in which B.C. students demonstrate their knowledge, problem-solving abilities and thinking skills. In 1991, the 19,000 B.C. secondary students who took part in this competition, organized annually by the University of Waterloo, achieved outstanding results on each of four challenging tests.



CURIOSITY, CREATIVITY AND APPRECIATION OF LEARNING

The motivation to ask questions, to look for creative solutions and to learn are as important to students' intellectual growth as knowledge and thinking skills. These are the attitudes that, in combination with basic and advanced knowledge and skills, give students the potential to meet intellectual challenges throughout their lives.

Grade 12 students and recent graduates ranked intellectual curiosity near the top of the list of attitudes promoted by schools. They also agreed that schools did a good job of encouraging creativity, although they didn't feel schools assigned this aspect of intellectual development the importance it deserved. B.C. post-secondary instructors, on the other hand, felt

that intellectual curiosity and creativity were generally lacking in first-year students. Their estimation of students' enjoyment of learning was more positive: fewer than one in five said students did not enjoy learning.

The level to which students demonstrate curiosity, creativity and an appreciation of learning is not easily measured. Evidence comes largely from the projects and activities to which students throughout B.C. commit their interest and imagination. Among the most popular of these, and most representative of students' interest in learning, are academic fairs and competitions at the school, district, provincial and national levels.

Science fairs, for example, are now a feature of almost every B.C. school. Of the thousands of students who took part in school-level science fairs last year, about 2000

About a quarter of recent graduates said they had taken part in literary competitions during their secondary years, and almost a third had participated in mathematics or computer programming contests.

Odyssey of the Mind

Designing a lightweight, battery-powered vehicle and recreating a scene from the ancient city of Pompeii — on a budget of under \$100 — were two of the challenges B.C. students mastered in the Odyssey of the Mind finals in 1991. The largest international academic competition in the world, Odyssey of the Mind emphasizes creative thinking and participation over getting the right answer.

About 3000 B.C. students, the highest participation of any Canadian province, work in teams of up to 20, designing creative solutions to a set of problems sent out to each team around the world. The best entries from B.C. regional competitions are selected for the international finals.

In 1991, two B.C. teams attended the final competition in Kentucky, where they competed against 50 teams from Asia, the United States, Europe and other Canadian provinces. Each of the B.C. teams finished seventh in its category.

took their projects to 13 B.C. regional competitions, where 42 were chosen for the Canada-Wide Science Fair. The 15 winning entries from B.C. at the 1991 national competition included a method for cleaning up oil-spills, a system of artificially intelligent solar tracking and a study of the strength of plastic bags.

Students pursue their intellectual interests in many other fields as well. The B.C. English Teachers' Association Writing Contest, for example, received over 1100 prose and poetry entries from secondary students. About a quarter of recent graduates said they had taken part in literary competitions during their secondary years, and almost a third had participated in mathematics or computer programming contests. Fine arts festivals and competitions are also a source of creative challenge for students. In 1991, 75,000 students participated in performing arts festivals, and 50,000 took part in regional band competitions.



"Intellectual curiosity can't be taught to students when they reach university. It has to be encouraged when children are young."

POST-SECONDARY
INSTRUCTOR COMMENT

HUMAN AND SOCIAL DEVELOPMENT

The goal of Human and Social Development is to develop in students a sense of self-worth and personal initiative; an appreciation of fine arts and an understanding of cultural heritage; an understanding of the importance of physical health and well-being; a sense of social responsibility, and a tolerance and respect for the ideas and beliefs of others.

Most B.C. students are healthy, active individuals who understand themselves and the world around them. They take part in a wide range of activities — both in pursuit of their own interests and as part of cooperative efforts of their schools and communities — and are aware of their responsibilities in a society characterized by diversity and faced with complex problems.

The outcomes of successful human and social development, while valuable in their own right, also have a direct influence on a student's intellectual achievement and career prospects. A student who fails to develop a sense of self-worth, who can't work cooperatively or assume responsibility is more likely to have problems connecting with the purpose of school, and consequently is more likely to drop out.

The support and guidance children need to develop their full potential as individuals and community members cannot be provided by schools alone. The success of this goal is the shared responsibility of families, students, the community and the school system.

SELF-ESTEEM AND PERSONAL INITIATIVE

In a 1991 survey, British Columbians ranked the development of self-esteem second only to teaching the basics as the most important task for schools. Their view is well-supported by recent education and health research confirming the link between self-esteem and the likelihood of living a healthy, happy life. A British Columbia Ministry of Health study reports that young people who have a well-developed sense of self-worth are

likely to be interested and active in pursuing their goals. They are also less likely than students with low self-esteem to be engaged in "risk-taking behaviours," many of which are connected to a student's decision to drop out of school.

In a 1991 survey, virtually all recent graduates agreed that it was important for schools to help students develop self-esteem, and the majority felt that schools were successful. Studies from the past few years show that, in comparison with students in previous years,

Community Activities

Fundraising, volunteering and environmental awareness campaigns are typical of the community projects to which thousands of B.C. students commit their skills, energy and imagination — projects they often create and direct themselves.

Many of these activities produce direct benefits for the community. Jump Rope for Heart — a fundraising campaign of the B.C. Heart and Stroke Foundation — is one example of a project that involves students from around the province. In 1991, 30,000 students from 69 school districts skipped up a total of \$636,000 in pledges.

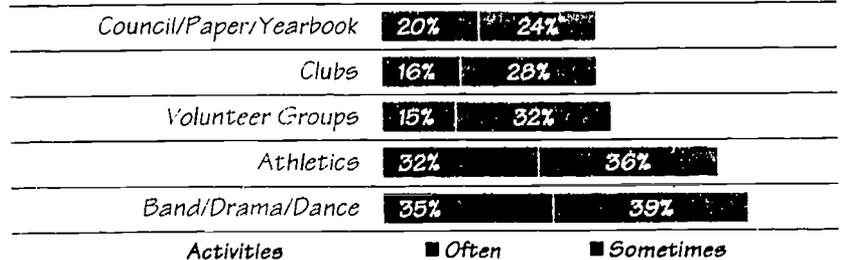
Closely linked to a sense of self-esteem is the development of personal initiative. Together they play a prominent role in determining whether students become active learners, capable of realizing their potential. Half of recent graduates and Grade 12 students thought schools did a good job of encouraging initiative. At the same time, "setting long-term goals," a closely-related ability, was identified by graduates as a serious problem for many students.

An important measure of students' personal initiative is their participation in extra-curricular activities. Through their involvement in school clubs, sports teams, theatre productions, bands and community groups, B.C. students pursue their personal interests, develop skills and become more involved in their schools and communities. Almost all of the 1990 graduates said they had participated in one or more extra-curricular activities during their secondary years.

Young people who have a well-developed sense of self-worth are likely to be interested and active in pursuing their goals, and are less likely than students with low self-esteem to be engaged in "risk-taking behaviours."

today's students are more self-confident and feel more secure about their ability to make sound decisions. For example, students surveyed as part of the 1989 Social Studies Assessment were more likely than those surveyed in 1977 to say that their understanding of themselves, rather than the opinion of others, would be the most important influence in their future decisions.

Student Participation in Extra-Curricular Activities



Source: Information Management Branch

PHYSICAL HEALTH AND WELL-BEING

An active and healthy lifestyle is recognized as contributing in many ways to a productive, fulfilling life. Recent studies indicate that most B.C. students are physically active and are familiar with many lifestyle-related health issues, including sexually transmitted diseases and substance abuse. About half of Grade 12 students and recent graduates surveyed in 1991 said schools had helped them become aware of the benefits of healthful living, though neither group saw this as an important concern of schools.

Athletic Activities

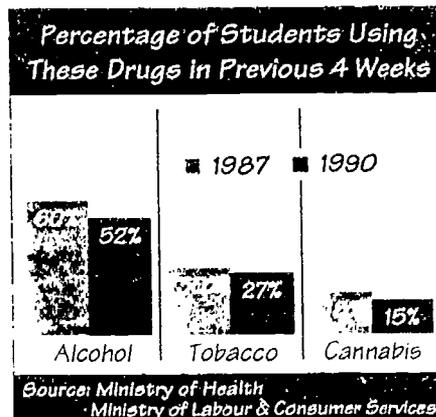
Sports and other athletic activities are among the most popular interests of B.C. students, both in and out of school. Two out of three recent graduates said they had participated in extra-curricular athletic activities during their secondary years, one out of three on a regular basis. In 1990/91, 30 percent of Grade 11 students and 21 percent of Grade 12 students were enrolled in physical education, a non-mandatory course at the senior level.

Almost 100,000 B.C. students at all grade levels — 15 percent of the Canadian total — took part in the 1991 Canada Fitness Award program. This program includes a series of challenging tests in which the performance of B.C. students is compared against national fitness standards. About 87 percent of the B.C. participants — a rate slightly higher than the national average — received excellent, gold, silver or bronze crests.

Drug and Alcohol Use

According to the British Columbia Ministry of Health, the most threatening health problems are primarily related to lifestyle. And the lifestyle choices — drugs, alcohol and cigarettes — that lead to preventable illness are almost always made during the school years.

In a recent national survey, British Columbians, like people from all regions of Canada, identified drug and alcohol abuse as the



Health research shows that decision-making and independent thinking begin early in life and influence a child's future lifestyle choices.



number one problem facing schools. Recent graduates named alcohol abuse as the most serious problem for secondary students.

Over the past five years, alcohol consumption, especially heavy or frequent drinking, has decreased among Canadian adolescents in general. A 1990 Ministry of Labour and Consumer Services survey of drug and alcohol use found the same trend among B.C. students. The percentage of students who said they had used alcohol in the previous month had declined since the previous survey in 1987. However, one in six teenage students reported drinking at least weekly. Drug use also showed an overall decline between 1987 and 1990. Marijuana, the most frequently used drug, had been used in the previous month by 15 percent of secondary students, down from 18 percent three years earlier.

Cigarette smoking, though decreasing among students, has still not disappeared. In 1990, 18 percent of secondary students said they smoked at least once a week. The percentage of smokers increased with grade level, from 8 percent of Grade 8 students to 25 percent of Grade 12s. A 1990 study by the B.C. Lung Association estimated that 28 percent of students in Grades 5 to 7 had smoked before; if only the area outside the Lower Mainland is considered, that figure jumps to 42 percent. Two percent of these students said they smoked on a daily basis.

SOCIAL RESPONSIBILITY

School is where many students receive their grounding in citizenship. As members of the school community, students learn to work cooperatively towards shared goals and to value common interests as well as their own. These experiences help prepare them to exercise their responsibilities as individuals, both in their communities and in the world.

Ninety-six percent of the 1990 graduates said it was important for schools to encourage social responsibility, and more than half agreed that schools were successful. B.C. post-secondary instructors offered a similar assessment, with over 40 percent agreeing that students have a strong sense of social responsibility.

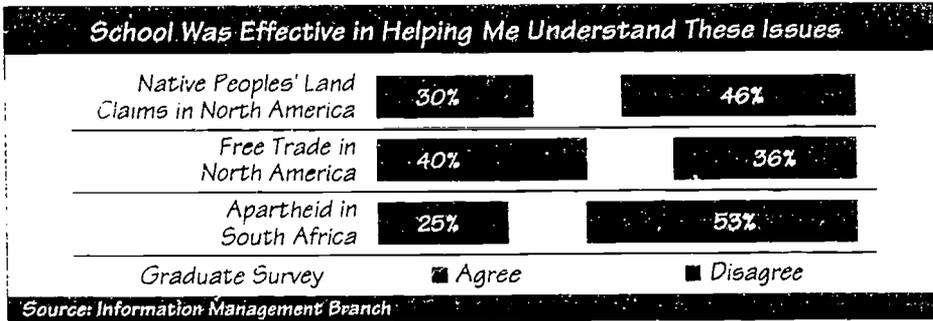
As part of the 1989 Social Studies Assessment, students were asked about their participation in activities that would make Canada "a

Science and Social Responsibility

New assessment techniques go beyond simply testing students' knowledge of a subject. They also examine students' ability to think independently and to apply their knowledge to real-life situations. The 1991 Science Assessment, for example, gathered students' thoughts on a number of current social concerns related to science, such as pollution and the use of animals in laboratory experiments.

On one question students were asked to take the role of an elected official in a town divided over whether environmental or economic considerations should guide the use of its forest resource. Students were presented with both arguments and were asked how, as a member of the local government, they would vote. In their answers, most students were able to give reasons for their decision, like this explanation given by a Grade 7 student.

"I would vote to cut down on logging and put more money into reforestation. The reforestation would provide jobs for people in the summer while adding more trees to be logged in later years."



better place." The results show that student interest in these activities tends to decline as students progress through school. At the same time the assessment found that 84 percent of 15-year-olds were very willing to help in the community, to do their part for the environment and to practise good citizenship activities. Among the 1990 graduates, 70 percent said they intended to do something to help reduce environmental problems such as tropical deforestation, waste disposal and global warming.

As part of their social development, students are encouraged to take an interest in political events and current world affairs. Schools are one source of information on these issues. As shown above, the 1990 graduates were not satisfied with the performance of schools in helping them understand several major issues of current interest. However, on a separate question, half of the graduates said schools had helped them form their own opinions on environmental issues.

■ UNDERSTANDING OF CULTURAL HERITAGE

Student exchange programs and study tours — to destinations from Thailand to Quebec — give thousands of B.C. students a first-hand look at other cultures. Closer to home, students all over B.C. take part in multicultural festivals and classroom activities that introduce them to the languages and traditions of the world's and Canada's many cultures.

First Nations culture has a special significance for Canadians, and students' interest in this part of our national heritage is growing. In 1990/91, 31 B.C. school districts offered courses in native cultural awareness, involving 11,500 students, half of whom were not of aboriginal ancestry. Over 3000 students — including more than 800 non-native students, were enrolled in native language courses in 1990/91.

Today's students generally accept cultural diversity as a benefit to British Columbia. Two out of three 1990 graduates felt that ethnic lifestyles and values add to our society. Three out of four said they enjoyed working with students from other ethnic or cultural groups.

Two out of three of the 1990 graduates felt that ethnic lifestyles and values add to our society, and three out of four said they enjoyed working with students from other ethnic or cultural groups.

Pacific Rim Education Initiatives Program

In trade, tourism and immigration, B.C.'s relationship with the countries of the Asia Pacific region is growing. To encourage friendship and understanding between British Columbia and its Asian neighbours, the Pacific Rim Education Initiatives Program brings Asian cultures and languages into B.C. schools and takes B.C. students and teachers to Asian countries for language training and cultural experience.

In 1990/91, over 600 B.C. students participated in short-term study tours in Asia as part of this program, and 19 students were selected for a year of study in a Pacific Rim country. Enrolment in Asian second language programs in B.C. schools has grown dramatically. In 1987, 242 students were studying Japanese and 8 studying Mandarin. In 1990/91, there were over 3000 students studying Japanese and 1500 learning Mandarin.

Grade 12 students and recent graduates ranked tolerance and respect for the beliefs of others among the most important attitudes for schools to encourage, and felt that this was among the areas in which schools were most successful. Still, 42 percent of graduates said racial discrimination was a serious problem for students; among minority students that figure rose to 48 percent.

APPRECIATION OF FINE ARTS

Finally, human and social development includes an appreciation of the creative endeavours that have shaped our cultural identity and contributed to our quality of life.

Enrolment in secondary fine arts courses, including art, drama and

music, has remained constant, at about 8 percent, for the past five years. Senior secondary participation is slightly lower, but has also stayed constant in spite of changes to graduation requirements that have reduced the opportunity for senior students to take these courses.

About three quarters of recent graduates said they had taken part in extra-curricular band, drama or dance activities during their secondary years, and a quarter said they had competed in music festivals. Fine arts festivals and competitions are one of the most popular involvements of B.C. students at all levels and in all parts of the province. In 1990/1991:

- About 50,000 students took part in 17 regional band competitions.
- 5000 students competed in 14 regional drama festivals.
- 75,000 students participated in regional performing arts festivals.
- 1000 students took part in the B.C. Film and Video festival.
- Over 1500 students attended the provincial Festival of the Arts.

CAREER DEVELOPMENT

The goal of Career Development is to prepare students to attain their career and occupational objectives; to assist in the development of effective work habits and the flexibility to deal with change in the workplace.

B.C. students recognize that the changing economy demands a higher level of education and better technological skills. Almost all Grade 12 students surveyed in 1991 expected to continue their education or training either immediately after graduation or in the future.

However, career development still means more than having the right educational background. To be prepared for the job market, students need the work skills and attitudes that employers expect. B.C. graduates and employers surveyed in 1991 agreed that schools need to do a better job of preparing young people for the workplace.

More troubling is the number of B.C. students who do not complete school. In a demanding job market, these young people are poorly prepared to work or to acquire the specialized skills today's jobs require. Ensuring that all students are adequately prepared for the workplace is a shared goal that depends on the cooperation of parents, employers and the community.

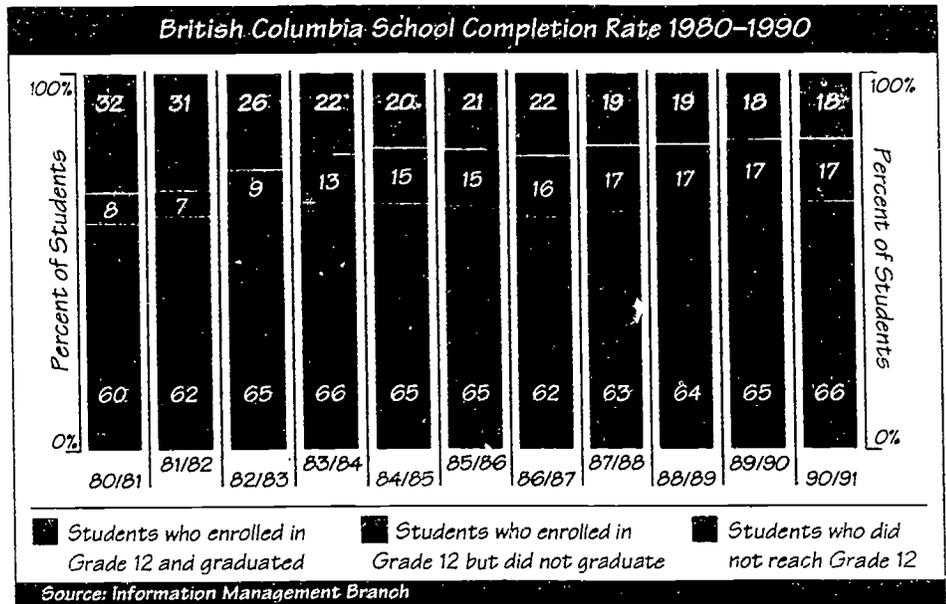
Career preparation courses offer students the chance to gain hands-on work experience and useful skills.

SCHOOL COMPLETION: THE DOOR TO CAREER CHOICES

Most employers surveyed in 1991 said even entry-level jobs require more education and better skills today than five to ten years ago. Young people who leave school without graduating run a greater risk than ever of finding themselves at a career dead-end.

A look at B.C.'s school completion rates from the past ten years reveals both good and bad news. The good news is that more students are reaching Grade 12. In 1990, 82 percent of the students who had entered Grade 8 four





Jobs that require skills in technology, science and math are growing in number, while traditional resource-based jobs are disappearing.

years earlier registered in Grade 12, compared with 68 percent in 1980. On the other hand, only 66 percent of those same Grade 8 students successfully completed their Grade 12, a figure that has remained relatively constant for several years and that continues to be lower than the Canadian average.

While these statistics might suggest a low Grade 12 graduation rate, they do not present the complete picture. In 1991, 87 percent of those Grade 12 students who were enrolled in sufficient courses to allow them to graduate did complete their final year. And, of those students who leave school without graduating, many eventually enrol in school or community college programs to complete their schooling.

A summary of the efforts of the B.C. school system to help students stay in school is presented in the *Relevance* section of this report (page 45).

Preparing for Post-Secondary Studies

Not only are students more ambitious about the level of education they expect to attain, they are targeting ever higher levels of achievement and taking greater advantage of the opportunities available to help them reach their goals. In 1991:

- More than 2000 students met the standard of excellence in their provincial scholarship exams that entitled them to awards of up to \$2000.
- Over \$9.7 million worth of stamps were given out around the province as part of the Passport to Education program. Grade 9 through 12 students in the top third of their school receive stamps which they can redeem once they enter a post-secondary institution.
- More than 2000 B.C. students wrote advanced placement exams for credit towards university courses and, in some cases, for admission directly into a second-year university program. B.C. students now account for over 70 percent of the advanced placement exams written in Canada.

PREPARATION FOR POST-SECONDARY ACTIVITIES

Among students who complete their secondary education, almost all have career plans that include post-secondary education. Ninety-eight percent of the 1991 Grade 12 students said they expect to further their education or training either immediately or in the future.

Most recent graduates and Grade 12 students said they felt well-prepared for their post-secondary studies, a view they share with the B.C. public. On a 1990 survey, 4 out of 5 British Columbians gave a grade of C or better to this aspect of students' career preparation. Post-secondary instructors, on the other hand, were far tougher in their appraisal of students' readiness for post-secondary studies. They judged students to be particularly unprepared in writing, problem solving and organizing their time and workloads.

Students who didn't expect to continue their studies right after

graduation viewed their post-secondary preparation differently from students who planned to do so. While almost all of the first group said they wanted to continue their education in the future, they were less satisfied than the second group with their preparation for post-secondary studies. Moreover, about thirty percent of these students, compared with three percent of the second group, said they had no definite goals at all.

Direct Career Preparation

An increasing number of students get started on their careers before graduation. In 1990/91, nearly 7000 senior secondary students were enrolled in locally developed career preparation or apprenticeship programs offered by 61 of 75 school districts. These programs provide students with the opportunity to develop skills in a wide range of occupational areas, including the traditional trades, new information technologies and service industries. With the help of local business and

Ninety-eight percent of the 1991 Grade 12 students said they expect to further their education or training either immediately or in the future.

Partnerships with Industry

Project Heavy Duty, a career exploration and training program for students in the central interior, is typical of many work experience partnerships between B.C. school districts and local industry. Students who hope to work as heavy equipment operators spend a week learning about career opportunities in the field and getting hands-on experience in operating heavy equipment.

The project is "100 percent a joint endeavour" says the course instructor. Local equipment owners supply over \$5 million worth of equipment as well as instructional time. Students make contact with local employers, and employers get the chance to see students as prospective employees.

Partnerships like these are one of the best ways to design career preparation programs that suit the needs of students, businesses and local communities.

ticeships and employers interested in training young people. A 1989 pilot study found that over a third of students who took part in the program went into full-time apprenticeships in industry following graduation.

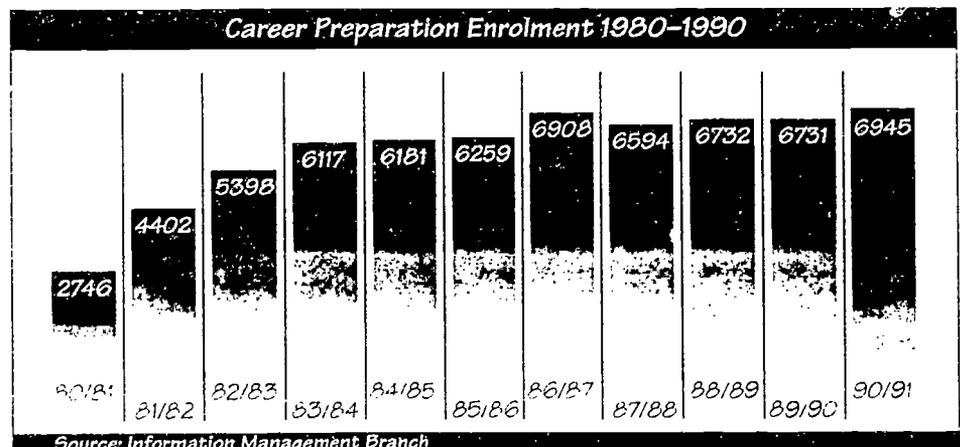
STUDENTS' WORK HABITS

Students' chances of reaching their career goals don't depend only on post-secondary training. Employers in B.C. say that the most important asset students can bring to a job, after strong basic skills, is good work habits. Expressing a concern mentioned by many B.C. employers surveyed in 1991, one respondent wrote, "Academics are great, but students have to know how to work."

Do students have the work habits they need? Employers offered a more mixed reaction to this question than other groups surveyed. They judged students' work habits and related attitudes and skills more severely than the public, parents, educators or students themselves. Employers were most satis-

community involvement, the number and variety of career preparation programs have increased steadily in the last decade; as a result, student enrolment has more than doubled in the same period.

Ninety students took part in the Passport to Apprenticeship program in 1990/91. The program serves as a bridge between students who want to begin appren-



fied with students' willingness to learn, their ability to work well with others, and their honesty and reliability. They were least satisfied with students' ability to work under pressure, and to organize time and workloads. Post-secondary instructors identified the same weaknesses in first-year students.

In contrast to these groups, the B.C. public doesn't view students' work habits as a major concern. An emphasis on discipline and a work ethic ranked among the lowest of the educational reforms they would most like to see. Nor are students concerned; the majority said they were satisfied with the work habits they had developed in school.

The gap between the perceptions of students and employers on this question may come down to a difference between what is encouraged in school and what is expected in the workplace. Students seem to understand this difference: in spite of their satisfaction with the work habits they had developed in school, they agreed with B.C. employers that they were not adequately prepared for the job market. In fact, they said they were better prepared for further studies and for their everyday lives than for the work force.

The solution most B.C. employers recommend is to give students more first-hand experience in the workplace. This proposal seems to suit students: two out of three agreed that work experience should be a graduation requirement.

PREPARATION FOR THE CHANGING WORKPLACE

Students' willingness to learn is one of their strongest qualities, according to B.C. employers. This outcome promises to be more significant in determining students' career prospects than it once was. Projections about the workplace of the future indicate that the best-placed workers will be those who can continue to adapt and upgrade their skills as job market demands change.

Among the new situations students are likely to encounter in their careers, many will arise from



"Students are very willing to learn, but they would do better with more first-hand job experience. Work experience is great for helping kids figure out what they want to do. It also gives them an idea of what employers expect."

EMPLOYER COMMENT

Preparation of Female Students in Math, Science and Technology

Young women have traditionally been poorly prepared for careers requiring a background in science or technology. By the time they reach secondary school, female students are under-represented in all mathematics and sciences courses except biology.

Over the past five years, the proportion of female students in many of these subjects has slowly grown, with the greatest increases found in Geometry 12, Computer Studies 11 and Physics 11. Female enrolment has declined over the same period in Computer Studies 12 and Consumer Math.

A recent national survey found that, while Canadians in general were satisfied with the preparation of young women in science, math and technology, British Columbians were less likely than people from any other part of Canada to assign their schools an A for this effort.

A 1990 survey of B.C.'s advanced technology industries found that this sector expects rapid growth and a persistent shortfall in qualified workers.

the growth of industries that require not only strong basic skills but also the ability to acquire new knowledge in the areas of technology, science and math.

A 1990 survey of B.C.'s advanced technology industries found that this sector expects rapid growth and a persistent shortfall in qualified workers. Over 40 percent of these companies said it was difficult to find technicians, technologists and skilled tradespeople. More than a third report a present shortage of engineers, scientists and computer specialists.

Still, students seem reluctant to acquire the mathematics skills many of these occupations require. The 1990 Mathematics Assessment found that, while most students acknowledge that mathematics is needed for and used in a good job, their interest in pursuing math-related careers diminishes as they

move through school. The decline in interest among female students is particularly steep.

Students also acknowledge the role science and technology will play in their working lives. The majority of survey respondents agreed that knowledge and skills in these areas should be among the requirements for graduation. The use of computers was one area, however, in which students said they felt underprepared.

Enrolment in non-mandatory math and science courses is one indicator of student interest in these fields, and statistics show that it is slowly increasing. Thirty two percent of the 1990/91 Grade 12 students studied mathematics, compared with 29.3 percent five years ago. Over the same period the percentage of students taking Computer Studies 12 increased from 4.8 to 5.9 percent.

Enabling Learners

- Accessibility ■ Relevance
- Quality ■ Equity
- Accountability



A C C E S S I B I L I T Y

A variety of programs is available in the province to meet the full range of learner needs.

The B.C. school system is changing and expanding to include and represent all learners. The wider range of programs now available reflects the diverse abilities and needs of learners, some of whom have traditionally received their schooling outside of regular classrooms. As well, more choice of schooling is available for those who prefer alternatives to the public school system. In spite of these efforts, many students continue to face obstacles — both visible and invisible — that limit their access to opportunities enjoyed by others.

MEETING LEARNERS' NEEDS

Barriers, whether of circumstance or stereotype, separate many children from the full benefits of schooling. The challenge to the school system is to remove or reduce these barriers so that every student has access to a quality education.

Ability

The school system is committed to integrating students with special needs wherever possible into the mainstream of school life. To help school districts meet the extra demands that accompany integration, the Ministry of Education has:

- Increased the funding available to make school buildings fully accessible to students with physical handicaps.
- Made arrangements with other government ministries to provide specialized services

to students with special needs. These include mental health services, physiotherapy, specialized health services, speech and language therapy, specialized equipment for use at home, psychological

The opportunity to learn in a regular classroom is now a reality for 3000 students with physical disabilities, including students with hearing or visual impairments and students with both physical and mental disabilities.



Special Education Technology Centres

Writing devices, voice output aids, specially adapted computer hardware and software that bring images and sounds to children who are visually or hearing impaired — these are some of the tools made available to students with physical disabilities through special education technology centres (SET-BC).

Eight SET-BC centres help school districts identify ways to use technology to improve access to regular classroom experiences for students with physical handicaps. The centres help assess students and recommend the appropriate equipment, loan the equipment through the provincial loan bank and provide training for staff and parents. SET-BC centres are regionally based and encourage direct service, wherever possible, in a student's own community. In 1990/91, 452 students in 68 districts received service through SET-BC.

The use of SET-BC shows there are many students who require special technologies; many educators who require support in accommodating these students; and many communities very willing to meet this challenge. The number of referrals exceeds the original annual projections and indicates that SET-BC is well-utilized by school districts.
SET-BC Status Report 1991

counselling and support services to students and their families.

- Increased the provision of special education technology and training.

Over 44,000 students now receive some form of special education service, an increase of 5000 since 1989/90, and an increase of more than 11,000 students over the past five years.

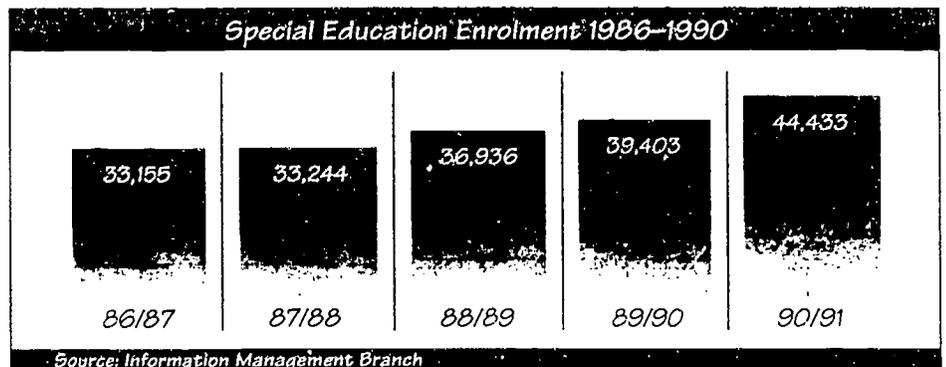
Almost 16,000 gifted students also receive some form of special service. This includes in-class enrichment, resource room programs, mentoring programs, advanced placement and special classes.

Gender

Even though the student population is made up of even numbers of females and males, student outcomes indicate that gender stereotypes still influence the choices students make and the opportunities they pursue.

Female students, for example, are under-represented in most secondary science and math courses. University program enrolments show that, in comparison to male students, female students are much more likely to enrol in the Arts and much less likely to enrol in Sciences, Engineering or Business.

In 1991, the Gender Equity Advisory Committee prepared a draft paper outlining ways the school system can help ensure that female and male students are equally prepared by the education system for their adult lives. Materials to encourage girls in science and mathematics are being developed and



distributed. A number of school districts have begun joint projects with Employment and Immigration Canada to provide young women with career training in non-traditional areas.

Race and Culture

In a recent public survey, three out of four British Columbians said they were satisfied with the performance of their local school in ensuring that students accept people of different races and cultures. Among those of non-European ethnicity, however, only one in two were satisfied. Half of the recent graduates who identified themselves as members of an ethnic or cultural minority said racial discrimination was a serious problem for students; only a third agreed that secondary schools were doing all they could to promote multiculturalism or eliminate racial and cultural intolerance.

Aboriginal learners are one minority group that has traditionally had much less success in school than other groups. National graduation statistics reveal, for example, that the likelihood of a native student to complete school is between 10 and 40 percent lower than that of students as a whole.

Following the recommendation of the 1988 Royal Commission on Education, the Ministry is working with local bands and school boards to improve access for aboriginal learners. The following are some recent changes:

- The Ministry of Education is providing additional funding for native language and culture pro-

grams, support services and alternative programs.

- 31 school districts now offer locally developed courses in native language and culture.

- Native elders and other members of native communities are helping to develop native education programs.

- Many school boards have established First Nations Education Advisory Committees to provide advice on education issues.

- The Education Secretariat of the First Nations Congress sits on the Provincial Advisory Committee on Native Education which advises the Ministry of Education on broad policy matters.

- The Ministry provides scholarships to senior native students to attend a transition program from secondary school to university.

Intellectual ability ranges greatly among students. About 20,000 B.C. students have some form of learning disability; 16,000 are classified as "gifted."



Language

The school system provides language instruction for the growing number of students who do not speak English as a first language. Language programs are also available to help students preserve their cultural heritage through instruction in their traditional or home language.

■ About 34,000 B.C. students received instruction in English as a Second Language in 1990/91.

■ For 2200 B.C. francophone students who choose to study in their first language, Programme Cadre de Français offers instruction primarily in French. Enrolment in the program has increased by almost 50 percent in the past five years.

■ Locally developed heritage language courses encourage an ability in a student's home language. At present heritage language courses include Cantonese, Russian, Italian, German and Spanish.

■ 23 school districts offer instruction in native languages. With the B.C. Education Technology Centre as technical advisors, and funding from the Ministry, the Nak'azdli Tl'azt'en Nations piloted a videodisc project for teaching Carrier, a language of the B.C. central interior.

Location

The extra costs required to provide quality programs and services to students in small or remote school districts are considered in the funding of these districts. Part of this extra cost provides transportation to school for more than 100,000 students. Transportation services include buses, boats, ferries, taxis and specific vehicles for special needs students. Thirty-two districts also receive funding to provide accommodation for students who must live away from home to attend school.

Location can influence more than students' physical access to school. Graduates from rural areas, surveyed in 1990, were less satisfied than urban graduates with the choice of courses offered by their schools. They were also less likely to meet the entrance requirements of B.C. post-secondary institutions, though a student's ineligibility for post-secondary studies may be due to personal choice rather than the unavailability of required courses.

The New Experience of Integration

The opportunity to learn in a regular classroom is a new experience for many students with special needs. This 17 year-old student, interviewed in sign-language, is one of many former Jericho Hill students who are now attending regular schools.

“I'm comfortable being in class with hearing students. I communicate with them by teaching them how to sign, or they write on paper. I have hearing friends now — some use alphabet finger spelling, some sign and some write notes to me. I missed my family when I lived over there, so I like it here because I can be with them.

They have more good courses in regular school and higher standards. I work harder here and I'm learning more — especially English. I learn in the same way as hearing students, but because I'm deaf, I need more help.

Here you get to meet hearing people instead of being just with other deaf people. I like to make friends with both hearing and deaf people. It's important to me because the real world is full of hearing people.”

CHOICE OF SCHOOLING

To most people "the school system" means the nearly 1600 public schools attended by over 93 percent of B.C. students. Today the term also includes alternatives ranging from independent schools and distance learning to home schooling and alternate schools.

Independent Schools

Over 40,000 students attend the 278 independent schools in British Columbia. Most of these schools are denominational; the remainder are either modelled on the British public school or follow a particular education philosophy. A small group of schools for foreign and out-of-province students are covered by the regulations governing independent schools, but do not receive provincial funding.

The *Independent School Act* covers the certification of teachers and the classification, evaluation and funding of independent schools. It also covers schools which do not apply to the Ministry of Education for funding. The Act sets basic requirements for independent schools, including the statistical information they must provide to the Province. Independent schools must also meet local and regional by-laws and regulations. They cannot promote racial or ethnic superiority or persecution, religious intolerance or persecution, social change through violent action, or sedition.

Correspondence Education

Learning by correspondence provides an alternative for students who prefer this way of learning or who don't have access to a school. It is also an option for students who want to take a course not offered



in their school or who need to resolve a time-table conflict. Instruction — from primary level to graduation — is provided through individualized learning packages. New courses using video and computer technology are expanding the range of available courses.

In 1990/91, the Ministry completed the regionalization of correspondence education. There are now nine regional correspondence schools, an increase of three since 1989/90. An estimated 28,000 students took distance education

Students today have more choice of schooling than ever before. Alternatives like independent schools, home schooling, correspondence education and alternate schools respond to individual student needs and to the desire of British Columbians for a broader school system.

An estimated 28,000 students took distance education courses last year, an increase of about 30 percent from 1989/90.

courses last year, an increase of about 30 percent from 1989/90. This growth is the result of procedural changes and the expansion of regional centres which together allow students greater access to correspondence courses. In a 1990 survey of graduates, over 80 percent of those who had taken all their courses by correspondence, and about 50 percent of students who had done a combination of regular and correspondence courses, said correspondence courses were easy to understand and instructors were helpful.

Home Schooling

Twenty-five hundred B.C. students receive their schooling at home. Under the *School Act*, these students must be registered with a

public, independent or regional correspondence school. The school system assists home-schoolers by providing evaluation and assessment services, and loaning resource materials.

Provincial Resource Programs

Almost 1000 students attend 51 Provincial Resource Programs. These programs, operated in cooperation with other government ministries, enable students to keep learning while in treatment centres, containment centres or hospitals. Other centres provide educational services to students with severe physical or mental handicaps or other special needs that make it extremely difficult to provide them with appropriate education programs in regular schools.



This hearing impaired student is one of over 44,000 B.C. learners who receive some form of special education service.

RELEVANCE

Programs are current and relevant to the needs of the learner.

Too many B.C. students lose interest in learning, largely because they find school irrelevant to their personal needs. Many of these students leave school without graduating; others stay until graduation but look on the experience as meaningless.

B.C. school districts are working to keep students in school by offering alternative programs that lead to graduation and by giving senior students more opportunity to choose what they want to learn. At all levels, integrated learning experiences, locally designed programs and access to new technologies are helping students connect their learning to the world outside the classroom.

RELEVANCE TO INDIVIDUAL NEEDS

A recent study of dropouts in B.C. concluded that "schools value a certain type of student ... characterized by good academic and social skills and a positive and cooperative disposition." Students who don't fit this profile often fail to identify with the purpose of schooling and lose interest in being in school at all. As one student put it, "I didn't drop out, I faded out."

B.C.'s school completion rate reveals that many students are discouraged or disinterested enough to leave school without graduating. About 66 percent of 1986/87 Grade 8 students completed Grade 12 in 1991. However, it's difficult to say exactly how many of the remaining 34 percent were dropouts, since this figure includes students who transferred out of the B.C. public school system, withdrew and then returned to school or are taking



Most students enter school eager to learn. Yet, at present, many lose interest in school before they reach graduation.



Students can have a positive influence on one another's choices, including the decision to stay in school.

more than five years to graduate. A new data collection system, begun in 1990, will provide a more accurate baseline for monitoring changes to the school completion rate.

Research shows that schools that accommodate the different learning styles, abilities and preferences of their students are most successful at keeping students in school. In a survey of public support for education reforms, British Columbians said that making schools more responsive to the needs of all students and not just those going on to post-secondary education should be the first priority of any change in education.

To reduce the dropout rate, 26 B.C. school districts, in cooperation with Employment and Immigration Canada, began over 100 "Stay-In-School" projects in 1990. The following are typical of what these and other B.C. school districts are

doing to make school more relevant to individual students.

Alternative Programs

For many "at-risk" students, alternatives to regular classroom learning offer a helping, supportive environment in which they can experience success instead of failure. Alternative programs in B.C. school districts include "store-front" schools, programs that combine work experience and academic courses, programs for teen mothers and centres where aboriginal learners can study their culture and language while they complete their graduation requirements.

Peer Helping

Peer pressure is identified as one of the major influences on a student's decision to drop out of school. Peer helping uses that pressure in constructive ways to encourage a more caring school atmosphere and a sense of belonging in all students. In many schools students are learning leadership and conflict management skills, and many students take part in peer counselling and tutoring. Successful peer helping is known to help students develop decision-making skills and self-esteem, two common deficits in "at-risk" students.

Work Orientation Workshop

The WOW program is used by the majority of B.C. school districts. With support from the community and employers, the program provides intensive career orientation to help students explore and experience different career options and develop personal goals. This program is highly successful in

redirecting and motivating "at-risk" students to continue their education.

Computer-Assisted Learning

Computer-assisted learning programs create individualized learning paths that allow students to progress at their own rate and to choose what they want to learn. In 1990/91, these programs were offered in 42 B.C. schools, mainly with students who have difficulty with regular classroom learning, who are doing remedial studies or who have returned to school after dropping out.

Identifying "At-Risk" Students

Several school districts use computer-based questionnaires to help schools identify students who are at greatest risk of dropping out. The pattern of answers students give indicates the problems that are likely to influence their decision whether to stay in school. Once schools identify high-risk students, they can design plans to meet a student's particular needs. Districts that have used this type of program have been successful in reducing the student withdrawal rate.

One of the features of all successful stay-in-school initiatives is cooperation among schools, students, parents, employers and the community. Improving the relevance of school to students' individual needs requires more and stronger partnerships among all sectors of society.

RELEVANCE TO THE REAL WORLD

The relevance of learning experiences isn't an issue that relates only to students at risk of dropping out. Most B.C. students do in fact reach graduation. The question is: Do they leave school with a useful education?

A year after leaving school, one out of three 1990 graduates estimated that less than half of what they learned in school was meaningful. Almost all of the graduates felt it was important for schools to teach practical life skills, but only a third said this was done effectively in schools. The public also feels that school programs could be more relevant to real life. In a recent Canadian study, most people said the education system placed

One of the features of all successful stay-in-school initiatives is cooperation among schools, students, parents, employers and the community.

Helping Students Stay in School

In one northern interior B.C. school district, 40 percent of students are native learners. Yet until recently about 80 percent of these students left school before Grade 8, and in 20 years not a single native student had reached graduation. A district study identified the low literacy rate among students and the loss of their own heritage as two of the students' principal frustrations.

The district's Stay-In-School project began with the purchase of two computer-assisted learning programs to teach both Carrier-Dene and English. The program also provided co-op education opportunities through local industries, career preparation programs, work experience, career counselling and a program for teen mothers.

The result of these combined community and school efforts is that only 15 percent of students leave before the end of Grade 9, and the district expects its first native graduates in 1994.

Integrated Learning

Learning experiences like this one, described by a Grade 7 student, engage students' interest and help them develop skills that will be useful throughout their lives.

“For our project we picked ten heritage houses - you know, like the Emily Carr House. We visited the houses, learned about when they were built and who built them, and all the families that had lived in them. Then we put all our information on to the computer - even pictures of the houses.

The project had lots of different subjects in it: social studies, writing, research — lots of research — and I guess computer skills, because I learned so much about computers. We learned all about the history and the architecture of Victoria and about different things that happened in B.C., like the gold rush. We had a learner's log and every day we wrote what we had done and our personal view on it. It was really creative. You had to connect everything together.

It's neat because I live in a house like that. So when I get my computer I'm going to start my own file on the history of my house.”

too little emphasis on the development of useful skills. Most also felt that the priority of secondary education should be to give students a wide range of learning experiences.

Integrated Learning

In integrated learning experiences, content from different subjects is organized around themes or issues. This approach encourages students to see the real-life connections among the things they learn, resulting in more meaningful learning experiences. Integrated learning is an important feature of the new Primary, Intermediate and Graduation Programs.

The Tri-Universities Integration Project, initiated in 1990, is a collaborative effort of the Ministry of Education, B.C.'s three universities

and several B.C. school districts. The aim of the project is to increase understanding of integrated learning through research, publications and presentations to educators and other interested groups.

Local Programs

School districts can now develop up to 20 percent of the program time in their schools. Locally developed programs expand the range of learning experiences available and are generally more relevant to students since they reflect the interests and needs that arise from each school district's unique context.

In 1990/91, 74 out of 75 school districts offered locally developed courses. These included aboriginal culture and language programs, heritage language courses, cooperative education projects in regionally relevant fields such as forest resource management or agriculture, and enriched programs for gifted students.

Number of Computers per 100 Students 1990

P.E.I.	3.3
N.S.	3.7
Quebec	3.8
N.B.	5.6
Sask.	5.9
Ontario	6.7
B.C.	7.7
Alberta	8.3

(No data available for Man. and Nfld; data for Alta., Ont. and Quebec are for 1989/90)

Source: Computers In Education, March/April 1991

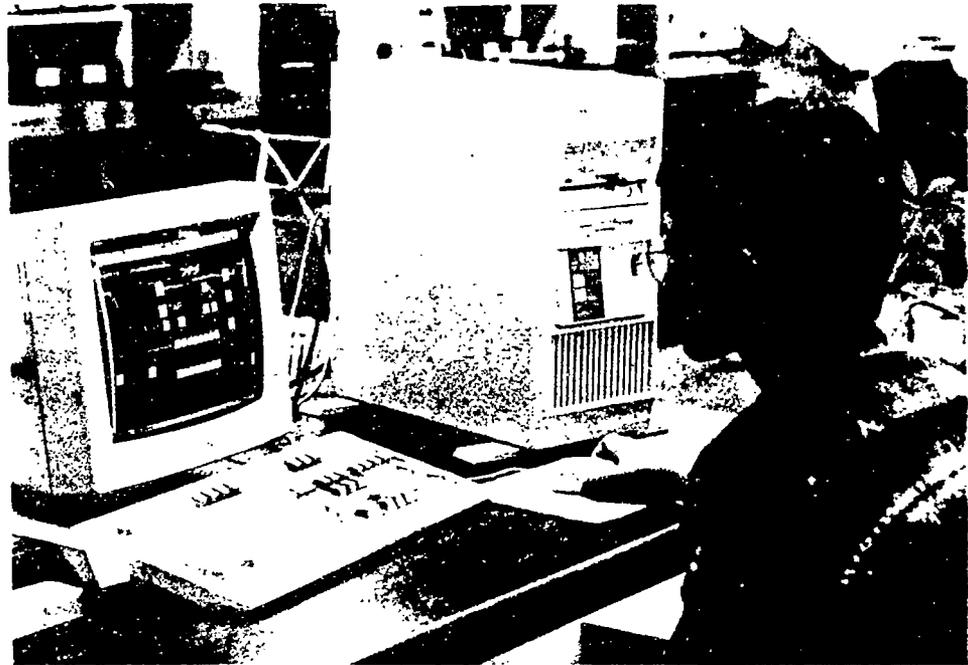
Exposure to New Technologies

Technology is becoming part of the classroom, though not just to prepare students for the demands of an increasingly computerized society. Many students enjoy working with computers and use them to explore their interests more independently.

Between 1987 and 1991 the number of computers in B.C. schools rose from 21,000 to 39,000. At present, B.C. ranks second in Canada in the ratio of computers to students. The distribution of funds for computer technology is aimed at allowing all districts to improve student achievement, motivation and employment potential.

The Southern Interior Telecommunications Project is a major cooperative initiative of the Ministry of Education, eight corporate partners and Simon Fraser University to bring advanced technology into B.C. schools and classrooms. In 1990/91, 1500 students in 11 southern interior districts took part in Phase I of this project. These districts are serving as a pilot project to provide a model for a province-wide learning network. The following are examples of the many activities that were part of Phase I of the project.

■ **Environment:** Students studied the environmental state of their local school area and shared their findings with other



students in the region using computer-mediated communication. Mentors from the Ministry of Environment and from Fisheries and Oceans Canada assisted with this project.

■ **Information Services:** Selected school libraries and resource centres had access to online news services and data bases for use in social studies, business education and other courses.

■ **Learning Network:** This network electronically connects students and teachers from classrooms around the world in curriculum theme projects including language arts, social studies, sciences and geography.

"Students were highly motivated by their Learning Network exchanges. They took great pride in their work and learned to deal with information much more effectively. They felt they were in control and responsible for their own learning."

LIBRARIAN PARTICIPANT IN A
LEARNING NETWORK PROJECT

Q U A L I T Y

Professional teaching and administration are of high quality.

The quality of a school system depends largely on the quality of its educators. Most students and members of the public judge the quality of teaching in B.C. as satisfactory or better. The energy and dedication of B.C. teachers and administrators are major factors in the overall performance of the school system.

The success of the current education changes in B.C. relies in large part on the development of new instructional methods and leadership skills. Thousands of B.C. educators are involved in professional development activities to adapt to the new framework for learning. However, there is still a need for better understanding of these changes and for more long-range planning of professional development at both the school and school district levels.

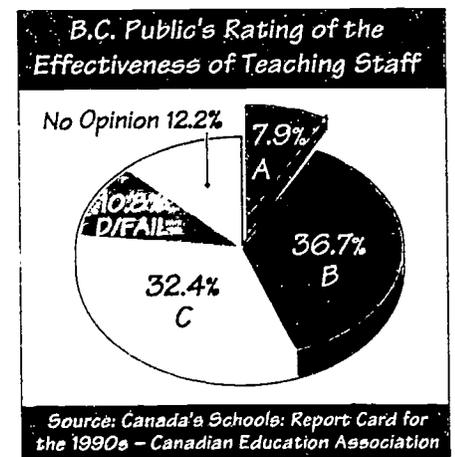
THE QUALITY OF TEACHING AND ADMINISTRATION

The practices of B.C. educators are guided by professional standards and expectations. These begin with the setting of minimum standards of training and professional qualifications by the B.C. College of Teachers. The College is also responsible for the issuing of teaching certificates in British Columbia and for investigating allegations of professional misconduct or unethical behaviour. All teachers, vice-principals, principals and district administrators in public schools are required to be members of the College.

In the 1990/91 year, the College suspended the certificates of four members and terminated the memberships and certificates of five members. This small number

of incidents among an active membership of 41,000 indicates a high standard of conduct by educators.

Ensuring that teaching and administration are of high quality is a joint responsibility of local school districts and the Ministry of Education. At the provincial level, the school accreditation process is one source of information on the performance of B.C. educators in



meeting professional expectations. Accreditation involves two teams of educators — one from within the school and one from outside — who observe and analyze student and school performance in order to evaluate the school's effectiveness in achieving education goals. The results, which in many cases include surveys of students, parents and community members, are used to develop school action plans to improve both instructional and administrative services to students. In 1990/91, 31 secondary schools and 70 elementary schools completed the accreditation process. Accreditation at the elementary level is a voluntary activity.

Teaching

Survey results show that most people associate the overall quality of a school with the competency and dedication of its teaching staff. In a 1990 public survey, for example, British Columbians were more likely to judge their community school by the quality of its teachers than by any other factor.

In recent surveys, most British Columbians said they were satisfied with the quality of teachers and were more likely than in the past to say that B.C. teachers are good or excellent. In a 1990 Canada-wide public survey, 8 percent of British Columbians assigned teachers an "A," 37 percent a "B," and 32 percent a "C." Eleven percent gave teachers a "D" or "Fail."

Overall, British Columbians tended to be more critical than other Canadians. Nationally, 14 percent of people gave teachers an "A," 44

School Research Project

Many educators feel that traditional research is not always relevant to the classroom. To get closer to the information teachers need, a new project begun in 1990/91 casts teachers themselves in the role of classroom researchers as part of the review of the Primary Program implementation. The teachers work in groups guided by a professional researcher to collect and interpret information at the classroom level. With their first-hand experience of the new program and its outcomes, teacher-researchers bring a perspective to the review different from that of outside researchers.

Participants in the pilot project were enthusiastic about the personal and professional benefits they gained from the experience. The project, which currently involves 100 teachers in ten school districts is expected to expand next year to include about a third of B.C. school districts.

percent a "B," 26 percent a "C," and 8 percent a "D" or "Fail."

The 1991 survey of B.C. Grade 12 students produced similar results. Students said 38 percent of their secondary teachers were excellent, 37 percent were average, and 25 percent were poor. These figures, however, do not include the views of students who did not stay in school long enough to reach Grade 12.

Accreditation results for the last three years have consistently found B.C. teachers to be competent, dedicated and professional. They interact with students in a supportive manner and are committed to the goals of education. The 1990/91 secondary accreditations suggested that both teachers and students would benefit from systematic, ongoing professional development for teachers and from better methods to help the integration of special education students.

The 1991 accreditation reports also indicated that teachers are supporting the goals of education



Accreditation results from the past three years have found B.C. teachers to be dedicated, competent and committed to the goals of education.

and the learner focus outlined in Year 2000. The results show that teachers:

- Use a variety of instructional tools to assess learners;
- Design learning experiences that stress the appropriate application of knowledge and skills;
- Are sensitive to individual development level, abilities and needs.

As part of the 1991 Science Assessment, teachers were asked the extent to which they used various instructional approaches in their science classes. The results reveal

that, while teachers are using learner-focused instructional approaches, the amount of time they devote to these practices declines as students get older. Teachers at the Grade 10 level are less likely than those at the Grades 4 and 7 levels to use cooperative learning groups or integrated learning. Instead, they are more likely to lecture to the whole class and to teach from textbooks.

Fifty-six percent of graduates surveyed in 1991 said that secondary teachers did a good job of actively involving them in their learning and providing classroom activities that allowed them to work cooperatively. However, only 43 percent felt that teachers were successful in meeting individual learning needs.

Administration

The 1990/91 secondary school accreditation reports found that school administrators provide effective leadership, make efficient use of resources and use fair personnel policies and practices. Two areas targetted for improvement were: communications among schools, parents, the school district and the community; and planning at both the school and district levels. In general, school philosophy and mission were well articulated and consistent with those of the school system, but were not well understood by students and parents. These findings, both strengths and areas needing improvement, are consistent with past accreditations.

One of the most important roles of administrators is to provide leadership in implementing the

Gender Equity among Educators

A quality education system would offer a balance of role models for both male and female students.

At present, two-thirds of all teachers are women. They represent 87 percent of primary teachers, 54 percent of intermediate level teachers, but only 38 percent of graduation level teachers. Twenty-seven percent of vice-principals and 19 percent of school principals are women.

In 1990/91, women represented 21 percent of math teachers, 18 percent of science teachers, and 11 percent of computer education teachers at the secondary level.

current education reforms. In 1991, a study examined the experiences of teachers in 256 schools to determine the effectiveness of leadership in implementing the Primary Program. The study found school leadership was most effective in:

- Encouraging teamwork and participation in setting goals;
- Providing the information needed to implement the Primary Program;
- Considering teachers' personal needs;
- Setting high professional expectations.

However, teachers felt those providing leadership in their school were less effective in:

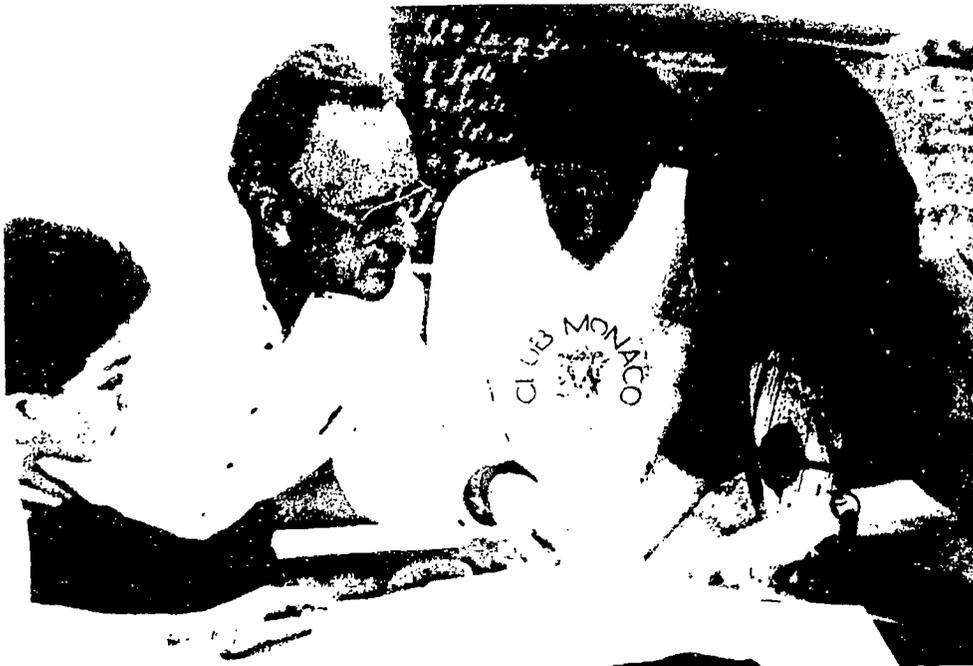
- Acknowledging teacher performance;
- Setting expectations for teachers similar to those set for themselves;
- Providing adequate resources.

PROFESSIONAL DEVELOPMENT

During the 1990/91 school year, virtually every public school teacher and administrator participated in professional development activities. Many of these took place at the school and district levels, where local interests and issues are best determined. At the provincial level, the Ministry of Education sponsored summer institutes and workshops dealing with reforms to B.C.'s education system in which over 6000 educators — almost one fifth of the practising educators in B.C. — participated. Professional development activities such as these are held at sites throughout the province and are often co-sponsored by B.C. universities, school districts, and teacher and administrator associations.

During the 1990/91 school year, more than 8000 teachers took part in professional development activities in special education, and in the summer of 1990, over 400 practising teachers took university credit courses at six sites around the province to help them teach learners with special needs.

Fifty-six percent of graduates surveyed in 1991 said that secondary teachers did a good job of actively involving them in their learning and providing classroom activities that allowed them to work cooperatively.



"The excellent teachers were the ones who were always willing to help students with the study material, who made their courses fun to learn, who reviewed as well as taught and who made almost every individual feel as if learning wasn't an impossible task."

1990 GRADUATE COMMENT.

International and inter-provincial educator exchange programs provide another professional development avenue for teachers. One of the most important of these is the Pacific Rim Teacher Study program which offers B.C. teachers opportunities to increase their knowledge and understanding of the Asia-Pacific region and of Pacific Rim topics. Teachers who participate in the program bring back ideas to share with students and other staff. In 1990/91:

- 240 teachers participated in teacher orientation study tours throughout Southeast Asia. Tours are organized by teachers or districts and take place during spring and summer breaks.

- 60 teachers studied in Japan, Thailand and Malaysia as part of an intensive one-month professional develop-

ment program. These summer courses are specially designed for B.C. teachers, with an emphasis on basic language skills and culture of the host countries.

- 20 teachers were engaged in teaching exchanges, of between one and two years, in Japan, Hong Kong and Brunei.

In other exchange programs in 1990/91, 15 teachers were placed in the United Kingdom, 34 in Australia and 8 in other Canadian provinces.

In addition to these professional development activities, the Ministry of Education has taken a number of steps to ensure that B.C. schools have an adequate supply of qualified teachers and to support university students wanting to enter the teaching profession.

- In 1990/91 the Ministry provided funding for the creation of 981 extra spaces in B.C. faculties of education. Funding for teacher education increased from \$4.7 million dollars in 1989/90 to \$9.3 million in 1990/91.

- The Ministry is also supporting teacher supply requirements through a forgivable loan program designed to encourage teachers to work in rural school districts. In 1990/91, almost half a million dollars in loans were provided.

- Representatives from the Ministry of Education and other major education stakeholders, including the three universities,

are working on joint initiatives through the Teacher Supply and Demand Committee. The Committee's main tasks are to identify short- and long-term needs for teachers, to develop ways to support beginning teachers, to raise the status of the profession and to attract qualified candidates to represent all groups in B.C. society.

■ During the 1990/91 school year, the College of Teachers continued its review of teacher education programs at B.C.'s three universities.

Supporting Beginning Teachers

The first years of a teacher's career are often the most difficult. A recent B.C. study found that by the end of the first five years of teaching, about 44 percent of beginning teachers have dropped out of the profession. In fact, it's estimated that between 1981 and 1988 the number of new teachers who left the profession was about the same as the number of education graduates from B.C.'s three universities in 1988.

While there are many reasons for a teacher's decision to leave the profession, the extent of this loss is a serious concern. To improve the experience of beginning teachers, districts around the province have developed mentoring programs to give new teachers assistance and support through exposure to exemplary teachers.



Surveyed a year after leaving school, 1990 graduates said 36 percent of their secondary teachers were excellent teachers who had a very strong positive effect on their development. Over 60 percent said they "loved" or "enjoyed" their secondary school experiences.

E Q U I T Y

Resources are allocated fairly.

In distributing the funds available for education in British Columbia, the school system is guided by the principle that all children should have a similar opportunity to receive a quality education in a safe, accessible environment. The cost to provide that opportunity varies according to factors unique to each school district, such as the special needs of the student population, transportation costs or teacher salaries. An annual review committee, which includes school district officials, ensures that resources are allocated fairly.

A portion of the funds school districts receive is earmarked for specific purposes. However, the largest amount is undesignated; decisions on the funding of individual schools and programs are largely up to the locally elected school board which accounts to local taxpayers for its spending through public meetings and its annual report.



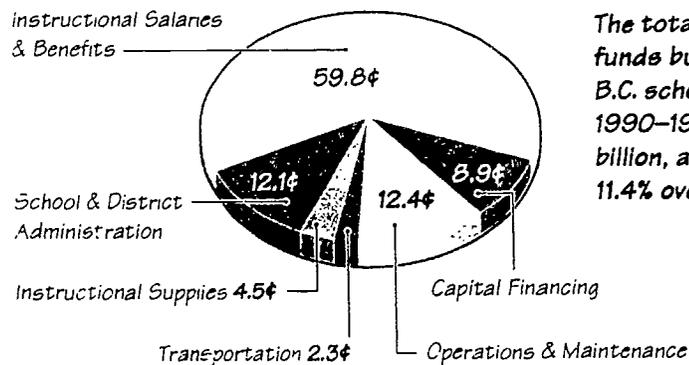
British Columbians spend about 20 percent of public resources on elementary and secondary education — a total of 3 billion dollars in 1990/91.

FUNDING EDUCATION

Out of a total provincial budget of 15.2 billion dollars, 3 billion dollars, or about 20 percent, was spent on elementary and secondary education in the 1990/91 year. This amount was distributed throughout the school system to fund the operating and capital financing costs of education in the province.

In January 1990, government introduced its new block funding system in response to a recommendation of the Royal Commission on Education. Under this system, a block of funds is allocated for the operating costs of B.C.'s 75 school districts. The amount is adjusted each year to reflect changes in enrolment, growth in the economy

How School Districts Spent Each Dollar in 1990-1991



The total amount of funds budgeted by B.C. school districts in 1990-1991 was \$2.9 billion, an increase of 11.4% over 1989-1990

Source: School Finance Branch

and changes in program requirements. For 1990/91, the base per student amount was increased by an average of \$305 to \$5259 per student. The block is paid for entirely out of provincial revenues, including school property taxes.

Once the total block of funds is determined, distribution to individual school boards is done through the fiscal framework, a system for calculating the cost of providing similar educational opportunities to students in each school district.

The fiscal framework takes into account the unique characteristics of school districts, such as size and remoteness, the individual requirements of students based on grade level and special need, and the resulting differences in district costs.

The funding allocation to individual districts must take into account costs such as:

- Average teacher salaries;
- Transportation costs in remote districts;

- Heating costs in northern districts;

- Higher costs due to more English as a Second Language programs in some districts.

In 1990/91 differences such as these accounted for initial per pupil allocations ranging from \$4613 to \$12,263 across the province. As the examples above show, equity does not mean equal distribution of resources, but rather a fair allocation of resources which takes into

Monitoring the Fiscal Framework

To monitor the fairness of the fiscal framework, a Financial Management System Review Committee, made up of school district superintendents and secretary-treasurers, meets annually to review the concerns of parents, teachers, trustees and administrators.

The committee makes recommendations to the Minister of Education on how to achieve the greatest level of equity with the available resources. Of the 32 recommendations made by the committee in 1991, 31 were accepted by the Minister for implementation in 1991/92.



Education spending in B.C. is guided by the principle that each learner should have the opportunity to receive a quality education.

account a school district's unique cost factors.

The fiscal framework is the primary mechanism for ensuring the equitable distribution of education funds and is supported by representatives of all major education groups in the province, including parents, teachers, administrators, secretary-treasurers, superintendents and school trustees.

The block of funds each school district receives includes designated amounts for learning resources, annual capital allowance and accreditation. However, budgeting of the largest amount is left to each school board. The Ministry recognizes that decisions regarding specific programs or services are best made at the school board level where local priorities are known and understood. In 1990/91, unallocated funds accounted for over 98

percent of the total block allocation to school districts.

In addition to the block, school boards receive funds for special programs, special initiatives such as Year 2000 implementation, computer technology and learning resources, and for the capital financing costs of schools.

School districts whose anticipated spending exceeds the funding they receive from the government may support their extra costs through local revenues, including local residential taxation approved by referendum.

The government also allocates funds for independent schools that meet provincial requirements. There are five categories of independent schools which receive varying levels of funding. In 1990/91, independent schools received a total of \$82 million in funding.

FUNDING SCHOOL BUILDING AND IMPROVEMENTS

The Ministry of Education and school boards work together to ensure that all students are provided with a healthy, accessible learning environment. In distributing funds for school facilities, the Ministry tries to give every student access to a quality education regardless of geography or circumstances.

In 1989/90, government provided \$250 million to districts to meet the recommendation of the Royal Commission on Education that more money be spent on school facilities in order to keep pace with

growing enrolments and to upgrade schools built prior to 1945. In 1990/91 the capital budget was increased by 40 percent to \$350 million. In spring 1991, \$650 million was allocated for the 1991/92 school year.

These funds are used primarily to build new schools. Funds are also spent to correct unsafe conditions, address earthquake safety, prevent the deterioration of schools and make schools more accessible to students with physical disabilities.

To decide how much money to invest in school facilities, the Ministry of Education reviews the capital plans submitted annually by school boards. Each capital request is analyzed in detail by the Ministry and ranked as high, medium, or low priority depending mainly on the district's need for space and the condition of school buildings. High priority projects include:

- Building new schools to deal with rapidly growing enrolments and replacing portable classrooms.

- Upgrading for earthquake safety, removing asbestos, and installing sprinkler and alarm systems.

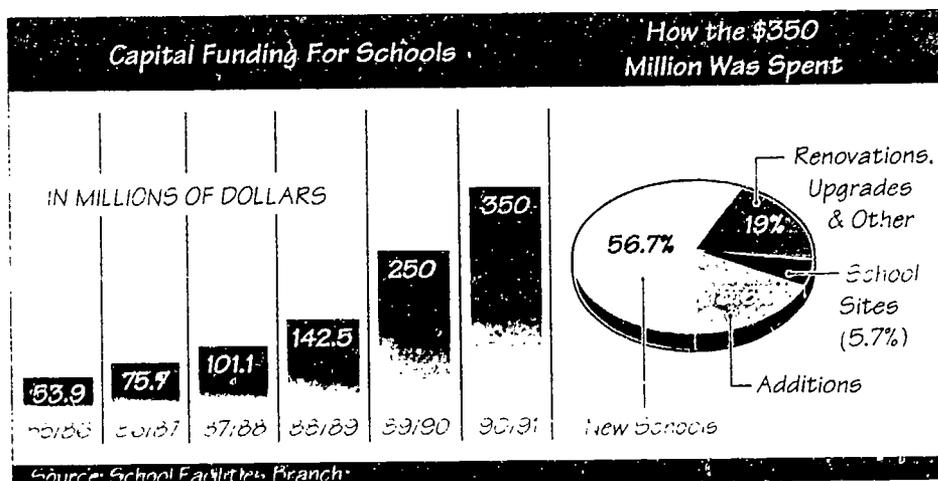
- Preventing the major deterioration of schools by re-roofing and upgrading heating, ventilating, and air conditioning systems.

- Making schools fully accessible to persons with disabilities.

During the 1990/91 school year, the Ministry moved from a one-year to a five-year capital plan in order to identify the long-term facility requirements for the province and to bring greater stability and predictability to capital funding. After a detailed analysis of district submissions, the Ministry compiles its five-year plan to assist government in making decisions on the total capital budget for schools. Once the capital budget is determined, resources are allocated to the highest priority projects, and school boards are advised which projects may proceed.

Seismic Upgrading

The Seismic Upgrading Program, established in 1990/91, will help school districts improve the long-term seismic resistance of school buildings. The aim of the program is to increase student and staff safety and reduce the risk of liability to the Ministry and school boards in the event of an earthquake. The 1990/91 capital budget provided funds for each district to carry out a seismic assessment of school buildings. In addition, pilot projects to improve the seismic resistance of some buildings were approved in 1990/91.



ACCOUNTABILITY

Resources are allocated in a cost-effective manner; parents and the community are informed of the progress of schools and are involved as partners in planning.

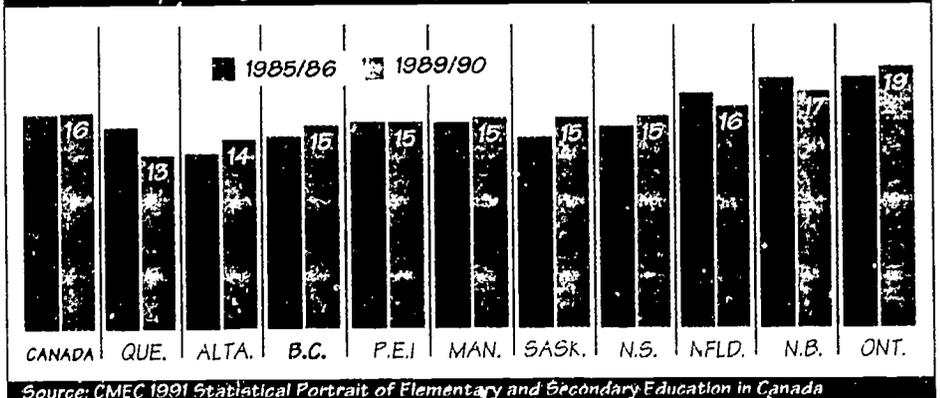
In a recent public survey, British Columbians said they wanted more information about education in B.C. and more opportunity to shape its outcomes. At all levels, the school system is responding to this interest by improving communications — in both directions — between itself and the groups it serves. New methods of reporting student progress, greater participation of parents and community members on education committees, and new partnerships between business, labour, post-secondary institutions and schools are reshaping the school system to be more responsive and accountable to the B.C. public.

ACCOUNTING FOR THE USE OF RESOURCES

The school system has a responsibility to be cost-effective in its use of public resources — to be both effective and efficient in achieving its objectives. A cost-effective system can be described as one which produces good results for the money it spends.

Most British Columbians feel that the school system provides fair value or better for the money it spends on education. In a recent nation-wide survey, 35 percent of British Columbians said education spending in B.C. provided good or excellent results. However, 27 percent said the value provided was poor.

Education Spending as a Percentage of Total Provincial/Local Expenditures

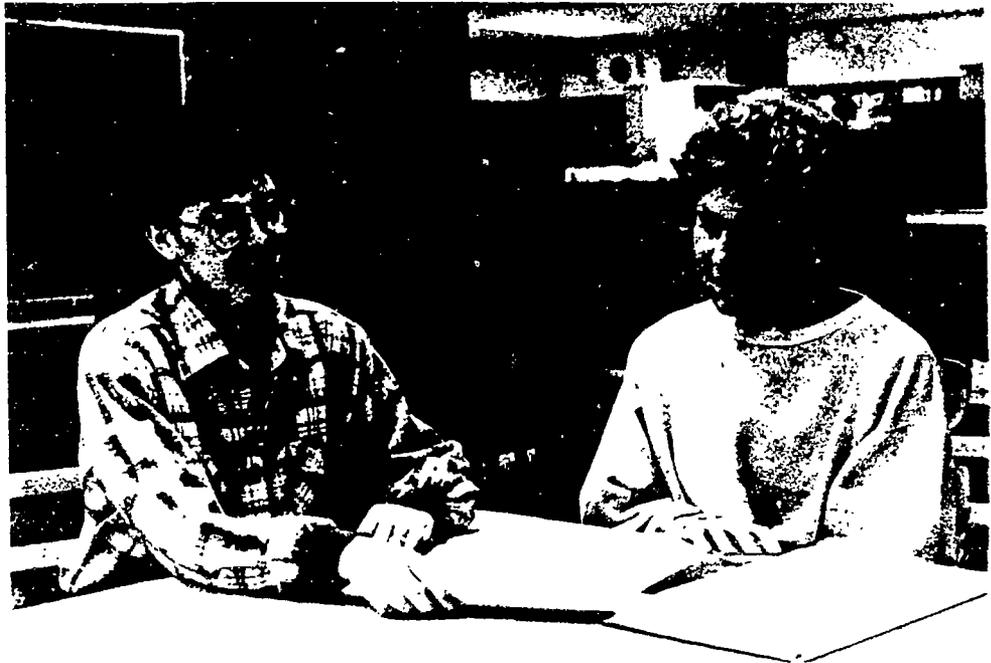


At present, spending on elementary and secondary education in B.C. is below the Canadian average. At the same time, the performance of B.C. students compares well with student performance in other provinces. Taken together, these results indicate that British Columbians receive a value for money spent that is at least equal to that achieved elsewhere in Canada.

Determining the actual relationship between education spending and its effects is difficult. Some of the outcomes of education, such as a lifelong interest in learning, do not lend themselves to a cost-effectiveness analysis. Other outcomes, such as the achievement of career goals, are not immediately apparent. However, to be accountable for the money it spends, the school system must at least communicate its objectives and the extent to which those objectives are achieved. This information provides a basis for consultation with the public on how to increase the benefit it receives for the money it commits to education. The next sections describe what schools, districts and the Ministry are doing to improve accountability.

ACCOUNTABILITY AT THE SCHOOL LEVEL

Schools report their results mainly to parents and mainly in terms of individual student progress. New methods of reporting currently being developed are aimed at giving parents a more descriptive picture of their child's development in all areas of learning. This type of reporting focuses less on a student's



performance in comparison with other students and more on his or her success in achieving more individualized objectives.

Schools are also encouraging more awareness and support for education among local community members by distributing information on school activities and by involving parents and the community in planning. Interested parents have the opportunity to play an active role in school affairs through local Parent Advisory Councils.

School-level communication and community involvement were assessed as part of the 1990/91 secondary school accreditation process. Communication was rated as satisfactory in about half of the 31 schools accredited, and half were found to have a high level of community support. All of the schools accredited had a Parent Advisory Council. In spite of this support,

New methods of student assessment that include a teacher's comments, samples of a student's work and a student's self-assessment give parents and teachers a clearer picture of each learner's individual needs.

the involvement of parents and the community in school planning was the weakest area of accountability identified by accreditation teams.

ACCOUNTABILITY AT THE SCHOOL DISTRICT LEVEL

School district annual reports, now required of every B.C. school board, offer the most comprehensive picture of the results of the school system. Annual reports are an opportunity for each district to describe its goals and its success in

achieving them, within the unique context of the district. As part of the preparation of their report, many districts survey community satisfaction with the school system and consider the results in their plans for improvements.

An analysis of the 1989/90 district annual reports found that half of the districts had surveyed the opinions of students, parents and the public. In addition, half had involved interested community groups or members in preparing their reports. Most reports stated the district's goals and reported the outcomes of those goals by reviewing student and school performance.

Besides their annual reports, B.C. school districts provide information through public meetings, features in the local media and community events. Each year B.C. school districts, in cooperation with the Ministry of Education and several major education interest groups, organize Education Week to highlight the importance of education and to recognize the dedication of all school staff, both teaching and non-teaching. Education Week events offer the public a close-up look at the activities of B.C. students and schools.

An important opportunity for community involvement in education is offered through locally elected school boards. School board elections ensure that the board is held accountable for the quality of education programs in the district

Education Week events highlight the importance of education and bring information about B.C. schools to community members.



and for the use of discretionary funds. Public board meetings offer a forum for discussion and input from interested community members. Through recent changes to the *School Act*, local taxpayers will also have the opportunity to decide by referendum whether to fund district programs at a level beyond that provided by the Ministry of Education.

ACCOUNTABILITY AT THE PROVINCIAL LEVEL

The Ministry of Education has increased its commitment to inform and consult with the public on the school system and on the education reforms currently underway. The Ministry's Annual Report sets out the goals of the school system and reports on the outcomes of those goals on a system-wide basis. During the past year, the Ministry has also surveyed the opinions of graduates, students, employers, post-secondary instructors and the public. The results of these surveys are presented throughout this document and are used in the planning activities of the Ministry.

In 1991, over 3700 British Columbians — parents, teachers, academics and members of the public — responded to draft versions of the Intermediate and Graduation Program documents. The questions and suggestions raised in these submissions will be considered in the preparation of the final versions of the documents.



The input of the public and education advocacy groups to most major education initiatives takes place through a number of advisory committees. The Education Advisory Council, for example, includes members from 23 community groups representing parents, aboriginal people, post-secondary institutions, business, labour, students, seniors, educators and others. The Council advises the Minister on curriculum, assessment, teaching and finance so that decisions in these areas are as representative as possible of the wishes of the entire community. In 1991, representatives of various groups were also invited to sit on the new Provincial Program Evaluation Advisory Committee. The committee will review the evaluation frameworks of a broad range of education initiatives.

Community members support the school system by providing the funds for education, and through their interest in education and the well-being of families and children.

CONCLUSION: CHALLENGE AND CHANGE

This report summarizes the progress of the British Columbia school system in achieving its objectives for learners. The evidence presented here suggests that, for the majority of learners, the school system achieves its principal goals: the intellectual, human, social and career development of students. In their thirteen years of schooling, most students attain a level of education that meets the present standards of the school system, and each year the majority of Grade 12 students graduates.

The report also details the many challenges that the school system faces. Evidence suggests that present standards, though satisfactorily met by most students, do not adequately reflect the demands of today's world and the future. Employers and post-secondary instructors surveyed in 1991 indicated that students do not have the necessary attitudes, knowledge and skills for the workplace or their post-secondary studies. Of equal concern are those young people for whom school offers insufficient support or interest. As many as one in three secondary students leaves school before graduating, though many eventually return to school to complete their education. Many graduates and students surveyed in 1991 indicated that their learning priorities were not necessarily the priorities of schools. Others felt they received less than the full benefits of schooling because of their ethnic status, special needs, gender or location in the province.



There are no simple answers to these challenges. Some are long-standing concerns; others have emerged as a result of changing social and economic conditions. It was an awareness of these concerns that led to the current plans to revitalize learning in British Columbia. *Year 2000: A Framework for Learning* and the new Primary, Intermediate and Graduate Programs that followed are designed to ensure that all learners in B.C. fulfill their potential and leave school having met standards of competence appropriate for today's

world and the future. At all levels of the school system educators, parents, students and community members are reviewing and re-shaping educational programs in order to make learning a rewarding experience for every student and to motivate all young people to prepare themselves for the challenges of the future.

Just as important as planning improvements is knowing whether they bring the school system closer to achieving its goals. The establishment, for students and schools, of standards that reflect the expectations of society today will provide clearer targets against which to measure improvement. New

methods of student assessment will give a more complete picture of each student's progress and allow teachers, parents and students together to set appropriate plans for meeting those standards. Better methods for gathering data on the progress of students and schools will improve the overall picture of the school system's success in achieving its goals. This base of information will also allow greater accountability to the B.C. public for the funds it commits to education.

British Columbians have high expectations of young people and of schools. Fulfilling these expectations cannot be left to the school system alone. Improving the outcomes of education is a responsibility shared by all British Columbians and depends on a greater awareness of the challenges facing schools and a commitment to make learning the highest priority of our society.



Appendices

- Sources of Information
- Key Ministry Publications
- Statistical Appendix



SOURCES OF INFORMATION

The following programs and activities were the major sources of information presented in this report. Other sources are acknowledged in the body of the report.

The Accreditation Process

Accreditation is a planned review of a school by its staff. Students, parents, community members and an external team participate with them to determine the present state of school process, practices and student outcomes. Most importantly, it provides information about the success of the school in providing learning opportunities for students. Accreditation is mandatory for all secondary schools, while accreditation of elementary schools is currently a voluntary activity, as determined by each board of trustees.

The completed review forms the basis for development of a Plan for School Growth designed to:

- Sustain and extend school strengths;
- Address areas needing change;
- Accommodate implementation of *Year 2000: A Framework for Learning* as well as provincial and locally-developed curriculum.

An analysis of 31 secondary schools that completed the accreditation process in 1990/91 provided information for this annual report.

Provincial Learning Assessment Program

Each year the Ministry of Education conducts assessments in certain core subjects. Usually directed at all students in Grades 4, 7 and 10 (corresponding roughly to students of ages 9, 12, and 15), the assessments identify strengths and weaknesses in student performance in relation to the overall objectives of the provincial curriculum. Assessment results are reported for the Province as a whole, and may be made available to districts and schools, but results are not reported on an individual student basis. The Learning Assessment Program will continue to conduct large scale assessments that will collect information about student performance in relation to the knowledge, skills and attitudes identified in *Year 2000: A Framework for Learning*.

Provincial Examinations

Provincial examinations ensure that all graduating students in B.C. meet the same standards of achievement in their academic subjects. The exams are designed, developed, reviewed and marked by committees of experienced B.C. teachers.

Provincial exams, which are based on the provincial curriculum, require students to answer both multiple-choice and written-response questions. The questions test higher-order thinking skills, understanding of topics, and knowledge of specific information.

Student Follow-up Survey and Graduate Follow-up Survey

In the summer of 1991, the Student Follow-up Survey was conducted among a sample of 5000 students who were enrolled in Grade 12 during the 1990/91 school year. In addition, a Graduate Follow-up Survey was conducted from a sample of 5000 secondary school students who graduated in 1990. The general purpose of the surveys was to gather information about the effectiveness of the school system from the point of view of those who had recently been in Grade 12.

Each of the samples was constructed to represent the views of students and graduates from across the province. Students who did not reach Grade 12, and may have had different opinions on the effectiveness of education, were not included in the sample.

Employer Survey

In the summer of 1991, a survey was conducted among a sample of 2000 B.C. employers representing a range of businesses that typically employ students and recent graduates of the school system.

The survey was intended to gather employer opinion about the strengths and weaknesses of B.C. secondary schools in preparing students for the workplace.

Survey of Post-Secondary Instructors

In the fall of 1991, a survey of a sample of 200 post-secondary instructors at colleges and universities in B.C. was conducted with the aim of evaluating the preparedness of students for post-secondary education.

Statistics Canada Survey of Literacy Skills Used in Daily Activities

In October 1989, Statistics Canada conducted a national survey to measure the literacy and numeracy skills of Canadian adults. The information from this survey was obtained from several reports published by Statistics Canada, and the analysis of a database available from Statistics Canada. The following applies to the analysis performed on the microdata file: "The analysis is based on Statistics Canada microdata tape which contains anonymized data collected from the 1989 Survey of Literacy Skills used in Daily Activities. All computation on these microdata were prepared by the Information Management Branch of the Ministry of Education, Province of British Columbia, and the responsibility for the use and interpretation of these data is entirely that of the authors."

KEY MINISTRY PUBLICATIONS

The following publications are available to anyone interested in further information about the provincial education system. There may be a charge for some of these publications.

Mandate For The Education System

- A Legacy for Learners: Summary of Findings 1988
- Policy Directions
- Mandate For The School System

Resource Allocation

- School Finance '90: Changes To The School Finance System
- Bill 11: *School Amendment Act 1990*. Highlights Of School Finance Legislation 1990
- Public School Funding in British Columbia
- School Facilities in British Columbia
- Residential School Property Taxes in British Columbia

Legislation

- *School Act*
- *Teaching Profession Act*
- School Regulations and Minister of Education Orders
- *Independent School Act*
- Independent School Act Regulations

Accountability

- Ministry of Education Annual Report
- Three Years at a Glance

Education Principles

- Year 2000: A Framework For Learning
- Highlights Year 2000: A Framework For Learning
- Primary Program: Foundation Document
- Primary Program: Resource Document
- Primary Program: Supporting Learning. A Resource for Parents and Teachers
- Draft Intermediate Program: Foundation Document
- Draft Graduation Program: Foundation Document

Implementation Guidelines

- Working Plan (ask for latest update)

*For further information
please contact:*

COMMUNICATIONS BRANCH
 Ministry of Education and
 Ministry Responsible for
 Multiculturalism and
 Human Rights
 Parliament Buildings
 Victoria, B.C.
 V8V 2M4

Telephone: (604) 356-2500

Provincial Learning Assessments

- British Columbia Language Assessment in English Language Arts, 1976
- British Columbia Mathematics Assessment, 1977
- British Columbia Reading Assessment, 1977
- British Columbia Social Studies Assessment, 1977
- British Columbia Assessment of Written Expression, 1978
- British Columbia Science Assessment, 1978
- British Columbia Physical Education Assessment, 1979
- British Columbia Kindergarten Needs Assessment, 1981
- British Columbia Mathematics Assessment, 1981
- British Columbia Science Assessment, 1982
- British Columbia Reading Assessment, 1984
- British Columbia Mathematics Assessment, 1985
- British Columbia Science Assessment, 1986
- British Columbia French Immersion Assessment, 1987
- British Columbia Family Life Education Assessment, 1988
- British Columbia French Immersion Assessment, 1988
- British Columbia International Assessment of Science and Mathematics, 1988
- British Columbia Reading and Written Expression Assessment, 1988
- British Columbia Assessment of Social Studies, 1989
- The Second International Mathematics Study

Standard Reports

These reports are produced on an annual basis by Information Management Branch (previously Data Systems Administration Branch), and are based on data collected from school districts.

Student Information

- Students' Graduation Year Calendar
- Financial Opportunities for Students: A Resource Book

Miscellaneous

- Report to Schools (Grade 12 Examinations Report)
- Public and Independent Schools Book. A Complete Listing of Schools and Principals
- Contacts in Education
- Distance Learning Guidebook

STATISTICAL SUPPLEMENT: LIST OF TABLES

- Literacy and Numeracy Rates in Canada
- Mathematics Assessment Results
- Provincial Examination Results 1990/91
- Graduation from all B.C. Schools 1977/78-1990/91
- Scholarship Examinations 1984/85-1990/91
- Passport to Education 1987/88-1990/91
- Mathematics and Careers, B.C. 1990
- Grade 12 Mathematics and Computer Studies in B.C. Public Schools 1986/87 and 1990/91
- Number of Students Receiving Special Education Services 1986/87-1990/91
- English as a Second Language Program Enrolment 1986/87-1990/91
- B.C. Public Schools Budget 1988/89-1990/91
- Independent School Enrolment by Affiliation (Headcount) 1980/81, 1988/89-1990/91
- Independent School Grants 1977/78-1990/91

Literacy and Numeracy Rates in Canada

Percentage of adults (16 to 69-year-olds) and youth (16 to 24-year-olds) who were classified at the top levels for reading, writing and numeracy skills, Canada, regions and provinces, 1989.

	Reading Literacy Level 4		Writing Literacy % correct		Numeracy Level 3	
	Adults	Youth	Adults	Youth	Adults	Youth
British Columbia	69	75	48	57	69	60
Prairies	70	74	51	55	68	59
Ontario	62	72	52	52	64	60
Quebec	57	67	41	51	54	48
Atlantic	52	61	40	48	52	46
CANADA	62	70	47	52	62	55

Source: Statistics Canada data, processed by Information Management Branch, B.C. Ministry of Education.

- Notes:
1. Smaller provinces have been grouped into regions above because the relatively small sample size of 16 to 24-year-olds could lead to misleading comparisons between provinces. Prairies include Alberta, Saskatchewan and Manitoba. Atlantic includes New Brunswick, Nova Scotia, P.E.I. and Newfoundland.
 2. The 9455 people surveyed by Statistics Canada were classified into four reading levels (with level 4 being the highest), three numeracy levels (with level 3 being the highest) and were asked to complete two writing tasks (the more difficult of which is reported above).

Mathematics Assessment Results

Percentage of students able to perform at each of four achievement categories, B.C., 1990.

	Achievement Categories			
	1	2	3	4
	easiest			hardest
Grade 4	95	59	21	3
Grade 7	98	66	40	5
Grade 10	96	66	27	9

Source: Assessment, Exams and Reporting Branch

Provincial Examination Results 1990/91

Examination results and participation rates for students who took the Grade 12 provincial examinations for all examined subjects.

B.C. public and independent schools, January and June, 1991.

	Percentage of Students Achieving Each Level				Participation Rate*
	Excellent	Good	Satisfactory	Fail	
Algebra	14.0	28.7	42.6	14.7	2%
Biology	10.6	15.7	55.5	18.1	30%
Chemistry	16.5	23.0	47.5	13.0	24%
Communications	4.0	28.9	58.2	8.9	16%
English	9.5	27.4	55.2	7.9	87%
English Literature	11.3	15.9	63.2	9.6	14%
Français-Langue	21.8	35.8	41.6	0.7	6%
French	15.6	25.8	50.0	8.6	20%
German	31.6	16.2	42.7	9.4	1%
Geography	6.1	21.5	61.7	10.7	27%
Geology	8.0	11.2	66.4	14.4	11%
History	7.8	19.0	62.1	11.1	24%
Latin	27.3	36.4	36.4	0.0	2%
Mathematics	12.9	18.3	52.9	15.9	39%
Physics	19.8	17.5	46.0	16.8	13%
Spanish	34.5	35.5	16.8	13.2	2%

Source: Information Management Branch, B.C. Ministry of Education

Notes: These are provincial examination results and do not include school marks.
Excellent = A; Good = B; Satisfactory = C+, C, P; Fail = F.

* Participation Rate = Number of students writing this exam divided by the number of students writing either English 12 or Communications 12 in the schools which offer this subject.

Graduation from all B.C. Schools 1977/78-1990/91

Estimated percentage¹ of Grade 8 students who reach Grade 12 and who graduate, B.C. public and independent schools, 1977/78 to 1990/91.

	Grade 12 enrolment	Grade 8 enrolment (4 years earlier)	No. ² of Grade 12 graduates	% ³ of Grade 8 reaching Grade 12	% ⁴ of Grade 12 graduating	% of Grade 8 graduating	
						B.C.	Canada
1977/78	38 326	48 423	30 989	70.3	80.9	62.1	61.9
1978/79	38 070	48 747	30 424	69.7	79.9	60.8	62.2
1979/80	38 144	49 516	31 127	68.6	81.6	61.1	64.0
1980/81	38 252	49 385	30 917	68.1	80.8	60.1	65.9
1981/82	38 079	48 367	31 472	68.7	82.6	62.0	67.1
1982/83	38 116	44 968	30 842	74.1	80.9	65.4	67.8
1983/84	37 404	42 144	28 714	78.2	76.8	65.5	73.5
1984/85	37 003	41 534	27 670	79.8	74.8	65.1	73.5
1985/86	36 925	42 249	27 458	79.4	74.4	64.5	72.1
1986/87	37 288	43 741	27 060	77.8	72.6	61.6	69.2
1987/88	39 236	44 250	28 191	80.6	71.8	63.2	65.5
1988/89	38 056	42 346	27 522	80.9	72.3	63.9	67.3
1989/90	37 545	40 461	27 105	82.2	72.2	64.8	69.7
1990/91	37 259	39 402	27 300 ⁵	82.3	73.3	65.8	N/A

Sources: Statistics Canada; Information Management Branch, B.C. Ministry of Education.

- Notes:
1. Percentages are adjusted for migration over the relevant time period. Some numbers differ slightly from those published last year, due to updated migration estimates and an improved computational methodology.
 2. Number of Grade 12 graduates includes independent school graduates who did not receive a Dogwood Certificate.
 3. Calculated by dividing first-time Grade 12 enrolment by Grade 8 enrolment four years earlier (after adjusting for migration).
 4. Calculated by dividing the number of graduates for the given year by the Sept 30 Grade 12 enrolment at the beginning of the year.
 5. Based on actual public school graduates and estimated independent school graduates.

Scholarship Examinations 1984/85-1990/91

Estimated percentage of all B.C. Grade 12 students participating and succeeding in scholarship exams in B.C., 1984/85 to 1990/91.

	Grade 12 Enrolment	Participating		Succeeding	
		Number	Est. %*	Number	Est. %*
1984/85	36 480	5 200	14.3	N/A	3.0
1985/86	36 223	5 400	14.9	N/A	3.0
1986/87	36 665	5 572	15.2	N/A	3.0
1987/88	38 621	6 372	16.5	1 180	3.1
1988/89	37 596	6 485	17.2	1 159	3.1
1989/90	37 220	6 346	17.0	1 311	3.5
1990/91	37 198	8 076	21.7	2 087	5.6

Source: Information Management Branch

Note: Enrolment includes public school students and students from funded independent schools. Correspondence and continuing education students are excluded.

There were very small numbers of students participating in scholarship exams who were not in Grade 12.

Passport to Education 1987/88-1990/91

B.C. Public and Independent Schools

	Enrolment in Grades 9 to 12	Number of Passport Stamps	% of Enrolment	Value of Passport Stamps
1987/88	156 007	48 086	30.8%	\$9 556 150
1988/89	154 076	47 059	30.5%	\$9 367 325
1989/90	163 540	49 739	30.4%	\$9 938 475
1990/91	165 092	49 019	29.7%	\$9 688 475

Source: Information Management Branch

Note: Only Group 2 independent schools are included to 1988/89 and only Groups 1 and 2 are included from 1989/90.

Mathematics and Careers, B.C. 1990

Percentage of students agreeing with statement

	Grade 4		Grade 7		Grade 10	
	Male	Female	Male	Female	Male	Female
You have to be able to do mathematics to get a good job when you grow up.	85	84	90	89	77	74
Most people use mathematics in their jobs.	81	82	86	88	71	72
When I leave school I would like a job where I have to use mathematics.	55	54	45	39	34	26

Source: Assessment, Exams and Reporting Branch

Grade 12 Mathematics and Computer Studies in B.C. Public Schools 1986/87 and 1990/91

	1986/87	1990/91
Mathematics enrolment	10 243	11 238
Grade 12 enrolment	34 913	35 054
% taking Mathematics	29.3%	32.1%
Computer Studies enrolment	1 674	2 052
Grade 12 enrolment	34 913	35 054
% taking Computer Studies	4.8%	5.9%

Source: Information Management Branch

Note: Mathematics enrolment is actually Algebra 12 in 1986/87 and Mathematics 12 in 1990/91. Both subjects were the dominant mathematics courses in their respective year.

English as a Second Language Program Enrolment 1986/87-1990/91

	1986/87	1987/88	1988/89	1989/90	1990/91
Elementary	11 438	12 496	14 473	15 861	23 902
Secondary	4 267	4 088	5 776	7 219	10 276
TOTAL	15 705	16 584	20 249	23 080	34 178

Source: Information Management Branch

Note: From 1989/90 onwards, adult students are excluded from the headcount in the above table (5 adults in 1989/90).

Number of Students Receiving Special Education Services 1986/87-1990/91

	1986/87	1987/88	1988/89	1989/90	1990/91
3.19 Dependent Handicapped	N/A	N/A	288	364	428
3.20 Moderately Mentally Handicapped	1 254	1 287	1 275	1 296	1340
3.21 Severe Profound Handicapped	368	376	276	288	314
3.22 Physically Handicapped	425	508	598	698	828
3.23 Visually Impaired	402	409	384	415	420
3.24 Hearing Impaired	797	812	907	1 051	1158
3.25 Autistic	150	153	178	225	275
3.26 Severe Learning Disabled	N/A	7 567	8 667	9 768	10 719
3.27 Mildly Mentally Handicapped	N/A	4 062	4 153	4 179	4129
3.28 Severe Behaviour	N/A	3 215	3 503	4 056	4335
3.29 Rehabilitation	N/A	3 408	3 702	4 130	4758
SUB-TOTAL Special Education Services	21 638*	21 797	23 931	26 470	28 704
3.32 Gifted	11 517*	11 447	13 005	12 951	15 729
TOTAL Special Education	33 155*	33 244	36 936	39 421	44 433

Source: Information Management Branch

Note: The table does not include enrolment in 100% Funded Provincial Programs, i.e. Containment Centres, Provincial Resource Programs, and (up to 1988/89) District-to-District Placements.

* Estimate

B.C. Public Schools Budget, 1988/89-1990/91

	1988/89		1989/90		1990/91	
	Amount (\$million)	% of Total	Amount (\$million)	% of Total	Amount (\$million)	% of Total
Instructional Salaries and Benefits	1 367.4	59.7%	1 584.0	60.5%	1 743.7	59.8%
School & District Administration	252.3	11.0%	295.3	11.3%	352.1	12.1%
Instructional Supplies	93.7	4.1%	113.7	4.3%	132.1	4.5%
Transportation	55.1	2.4%	60.4	2.3%	66.2	2.3%
Operations and Maintenance	300.4	13.1%	332.4	12.7%	360.7	12.4%
Capital Financing	219.7	9.6%	231.3	8.8%	259.5	8.9%
TOTAL	2 288.7	100.0%	2 617.2	100.0%	2 914.4	100.0%

Source: School Finance Branch

Note: Educators' pensions are included in Instructional Salaries and Benefits. Textbook allocations are not included in public schools budgets.

Independent School Enrolment by Affiliation (Headcount) 1980/81, 1988/89 - 1990/91

Affiliation	1980/81	1988/89	1989/90	1990/91
Catholic Schools	13 712	16 768	16 693	17 359
Society of Christian Schools	3 239	5 740	6 345	7 479
Independent Schools Assoc. (British model)	3 661	4 804	4 901	5 157
Non-aligned	886	6 646	9 275	10 386
TOTAL	21 498	33 958	37 214	40 381

Source: Independent Schools Branch

Note: Includes all independent schools open at the end of September of the given year.

Independent School Grants 1977/78-1990/91

School Year	Group 1 (\$)		Group 2 (\$)		Group 3 (\$)		Total (\$)
	Grant	Funding level	Grant	Funding level	Grant	Funding level	
1977/78	N/A	9%	N/A		N/A		8 402 275
1978/79	57 954	9%	9 417 741	30%	N/A		9 475 695
1979/80	130 503	9%	10 532 897	30%	N/A		10 663 400
1980/81	93 806	9%	12 928 500	30%	N/A		13 022 306
1981/82	146 435	9%	16 785 807	30%	N/A		16 932 242
1982/83	204 281	9%	20 751 666	30%	N/A		20 955 947
1983/84	260 223	9%	22 796 202	30%	N/A		23 056 425
1984/85	322 679	9%	24 433 376	30%	N/A		24 756 055
1985/86	247 561	9%	26 225 405	30%	N/A		26 472 966
1986/87	232 236	9%	30 876 129	30%	N/A		31 108 365
1987/88	418 201	10%	41 089 201	35%	N/A		41 507 402
1988/89	515 691	10%	45 544 691	35%	N/A		46 060 382
In 1989/90, schools in Group 2 were assigned to Group 1 at a 50% funding level and Group 2 at a 35% funding level. Schools in Group 1 became Group 3 and retained a 10% funding level.							
1989/90	61 554 882	50%	9 744 517	35%	522 651	10%	71 822 050
1990/91	71 112 136	50%	10 281 361	35%	669 726	10%	82 063 223

Source: Independent Schools Branch

Notes: The grouping of independent schools changed substantially in 1989/90. Funding levels shown reflect the change in group structure. Generally, the current differences among groups are as follows:

Group 1 schools offer programs consistent with the goals of the B.C. curriculum, employ certified teachers, maintain adequate education facilities, and meet municipal codes. They receive per student grants of 50% of the per student cost in the local public schools.

Group 2 schools meet the same requirements as Group 1 schools. They receive per student grants at the 35% level because their per student costs exceed those of the local public schools.

Group 3 schools must maintain adequate education facilities and meet municipal codes. Per student grants are at the 10% level.

Group 4 schools cater to non-provincial students. They meet the same curricular requirements as Group 1, and 80% of their teachers must be certified. These schools must be bonded, and they are not eligible for grants.

Group 5 schools must maintain adequate facilities and meet municipal codes. They do not receive provincial grants.

A

Aboriginal learners see *Native education*

Academic competitions 23

Academic performance see *Provincial learning assessments, Provincial examinations, Scholarship examinations*

Accessibility 39-44

Accountability 13, 60-63, 66

Accreditation
description 50-51, 69
results 51, 52, 61

Administrators
see also *Educators*
accreditation findings 52
role in implementing
the Primary Program 53

Advanced placement
examinations 33

Alcohol and drug use 27-28

Alternative programs 43, 46

Annual report
Ministry of Education 12, 63
school district 56, 62

Arithmetic see *Mathematics*

Art 30

Assessment
learning see *Provincial learning assessments*
student 28, 66

Athletics 27

Attributes of the
school system 12, 37-66
accessibility 39-44
accountability 60-63
equity 56-59
quality 50-55
relevance 45-49

Availability of courses 42

B

B.C. College of Teachers 50, 55

B.C. Education
Technology Centre 42

B.C. English Teachers'
Assn. Writing Contest 24

B.C. Film and Video Festival 30

B.C. Heart and Stroke
Foundation 26

B.C. Lung Association
study of smoking 28

B.C. Ministry of Labour and
Consumer Services
survey of drug and
alcohol use 27, 28

Band competitions 24, 30

Basic skills of learners 17-19
Statistics Canada Survey 17, 18

Biology

female enrolment 36

provincial examination 21, 22

Block funding 56

British Columbia
Ministry of Health 25

British Columbia
school system 12, 14, 65
attributes 37-63
changes in 14, 65
choice of schooling 43-44
cost effectiveness 60-61
funding 56-58
goals 17-36

Budgets
capital 59
operating 56
school district 57

Buildings see *School Building*

C

Canada Fitness Award program 27

Canada Wide Science Fair 24

Canadian Mathematics
Competition 23

Cantonese 42

Capital funding see *Funding*

Career development 31-36

Career preparation programs 33

Cayley Mathematics
Competition 23

Certification see *Educators*

College of Teachers see *B.C. College of Teachers*

Communication
student skills 19

Communications 12 18, 21

Computer studies
enrolment 36, 78
female educators 53
female student enrolment 36

Computers 48-49
availability 48
computer-assisted learning 47

Conclusion 65-66

Consultation 14
Ministry level 63
school district level 61
school level 62

Consumer math
female student enrolment 36

Cooperative education
programs 48

Cooperative learning 52

Correspondence education 43

Cost per student 57

Cost-effectiveness
public perceptions 60

Costs see *Funding*

- Courses refer to specific subject, e.g. English
Cultural heritage.....29
- D**
Distance education see Correspondence education
Drama.....30
Dropouts.....45-47
see also *School Completion*
Drug and alcohol use.....27-28
- E**
Economy
changes in.....13
Education
changes in.....14. 65-66
system see *British Columbia school system*
Education Advisory Council.....63
Education spending
see also *Equity*
as percentage of provincial budget..56
provincial comparison.....60-61
public survey results.....60
Education Week.....62
Educators
see also *Teachers and Administrators*
certification.....50
exchange programs.....54
female.....53
professional development.....53-55
Employer survey.....63
basic skills.....18
career preparation.....31
problem solving.....20
spoken communication.....19
willingness to learn.....35
work habits.....34
Employment and Immigration
Canada.....41, 46
English 12.....21-22
English as a Second Language.....42
enrolment.....42. 78
Enrolment
apprenticeship programs.....33
career preparation courses.....33
computer studies.....36
correspondence education.....43
English as a Second Language.....42
female, in math and science courses.....36, 40
fine arts.....30
home schooling.....44
independent school.....43
Japanese.....30
Mandarin.....30
mathematics.....36
native culture programs.....29
native language programs.....29
Passport to Apprenticeship.....34
physical education.....27
Programme Cadre de Français.....42
special education service.....40
Environmental awareness.....29
Equity.....56-59
Euclid Mathematics competition..23
Evaluation see *Assessment*
Examinations see *Advanced placement examinations, Provincial examinations, Scholarship examinations*
Exchange programs
educator.....54
student.....29, 30
Extracurricular activities.....26, 27
- F**
Facilities see *School Building*
Female
educators.....53
student enrolment in math and sciences.....36, 40
student interest in mathematics.....36
student post-secondary choices.....40
Fermat Mathematics
Competition.....23
Festival of the Arts.....30
Financial Management System
Review Committee.....57
Fine arts.....30
competitions.....24, 30
festivals.....24, 30
First Nations Congress.....41
First Nations Education Advisory Committees.....41
First Nations learners see *Native education*
Fiscal framework.....57
Follow-up survey see *Graduate survey*
Francophone learners.....42
Funding.....56-59
block funding.....56
capital financing.....56, 58
fiscal framework.....57-58
independent school.....58
school building and improvement.....58-59
school district.....56-57
- G**
Gender equity
among educators.....53
female enrolment in math and sciences.....36, 40
post-secondary choices of females..40
Gender Equity Advisory Committee.....40
Geometry.....36
German.....42

Gifted learners	40, 48
Goals of education	12, 65
career development.....	31-36
human and	
social development.....	25-30
intellectual development.....	17-24
Graduate follow-up survey	63, 70
alcohol use.....	28
athletic activities.....	27
availability of courses.....	42
career preparation.....	31, 33
correspondence education.....	43
current affairs.....	29
environment.....	29
extra-curricular activities.....	26, 27, 30
fine arts.....	30
healthful living.....	27
multiculturalism.....	29, 41
personal initiative.....	26
post-secondary studies.....	33, 42
racism.....	30, 41
relevance.....	47
self-esteem.....	26
social responsibility.....	28
spoken communication.....	19
teacher quality.....	52
tolerance.....	30
Graduation	
programs leading to.....	43-44
rate.....	45
<i>see also School completion</i>	
statistical table.....	76
Graduation Program	48, 66
draft document.....	10, 63
H	
Handicapped students <i>see Special needs students</i>	
Health	27
Heritage language courses	42, 48
Home schooling	44
Housing services	42
Human and	
social development.....	25-30
I	
Independent schools	43
enrolment.....	43, 80
funding.....	43, 58
grants.....	81
<i>Independent School Act</i>	43
Instruction	52
Integrated learning	48, 52
Integration	
<i>see Special needs students</i>	
Intellectual development	17-24
Intermediate program	48, 66
draft document.....	9, 63
Italian	42
J	
Japanese	30
Jericho Hill School	42
Jump Rope for Heart	26
L	
Language <i>refer to individual course, e.g. Japanese</i>	
Learning assessment program <i>see Provincial learning assessments</i>	
Legacy for Learners	9
Literacy	18
<i>see also Basic skills of learners</i>	
Literacy survey <i>see Statistics Canada Survey</i>	
Locally developed courses	48
M	
Mandarin	30
Mathematics	
Canadian Mathematics	
Competition.....	23
enrolment.....	36, 78
female educators.....	53
female student enrolment.....	36, 40
female student performance.....	36
provincial learning	
assessment.....	18, 20, 36
statistical tables.....	74, 78
Message from the Minister	9
Ministry of Education	
annual report.....	12, 63
attributes of	
the school system.....	37-66
goals of education.....	17-36
mission statement.....	12
publications.....	71-72
Mission statement	12
Multiculturalism	29, 41
Music	30
N	
Native education	
alternative programs.....	46
culture courses.....	29, 41, 48
language courses.....	29, 41, 42, 48
school completion rate.....	41
student transition program.....	41
Numeracy	18
O	
Odyssey of the Mind	24
P	
Pacific Rim	
Education Initiatives Program.....	30
exchange programs.....	30, 54
Teacher Study Program.....	54
Parent Advisory Councils	61, 62
Pascal Mathematics	
Competition.....	23

- Passport to Apprenticeship**.....34
Passport to Education
 Program.....33, 34
 statistical table.....77
Peer helping.....46
Per pupil spending.....57
Performing arts.....30
Personal initiative.....26
Physical education.....27
Physical health see Health
Physics
 female enrolment.....36
Post-secondary
 instructor survey.....63, 70
 appreciation of learning.....23
 basic skills.....18
 creativity.....23
 intellectual curiosity.....23
 post-secondary preparation.....33
 problem solving.....20, 33
 reading.....18
 social responsibility.....28
 spoken communication.....19
 work habits.....35
 writing.....18, 33
Post-secondary studies.....33, 42
Primary Program.....48, 66
Problem solving.....20
Professional development.....53-54
Programme Cadre de Français.....42
Programs refer to individual programs
Project Heavy Duty.....34
Provincial examinations.....21-22
 statistical table.....75
Provincial learning assessments.....20
 mathematics.....18, 20, 36
 reading and writing.....18
 science.....28, 52
 social studies.....26, 28
Provincial Program Evaluation Advisory Committee.....63
Provincial Resource Programs.....44
Public School
 budget.....80
 number of.....43
 student enrolment.....43
Public surveys.....63
 cost-effectiveness.....60
 drug and alcohol abuse.....27
 education reform.....46
 female student preparation.....36
 post-secondary preparation.....33
 racism.....41
 relevance.....47
 work habits.....35
Q
Quality.....50-55
R
Racism.....30, 41
Reading.....17-18
 provincial learning assessment.....18
 skills of students.....19
 Statistics Canada Survey.....18
 survey results.....17, 18
Referendum.....58
Relevance.....45-49
Reporting
 Ministry of Education.....63
 school.....61-62
 school district.....62
 student progress.....61
Retention rate see School completion rate
Royal Commission on Education.....9, 41, 56, 58
Russian.....42
S
Scholarship examinations.....33
 statistical table.....77
School
 correspondence education.....43
 home schooling.....44
 independent schools.....43
 provincial resource programs.....44
 public schools.....43
School accreditation see Accreditation
School Act.....44
School board
 annual reports.....62
 capital plans.....59
 elections.....62
 funding of schools and programs.....56, 58
 meetings.....63
School building
 capital plan.....59
 funding.....58-59
 improving accessibility.....39
School completion
 dropouts.....45
 native learners.....41
 rate.....10, 31-32
School district
 accountability.....62
 annual reports.....56, 62
 funding.....56-59
 referendum.....58, 63
 stay-in-school initiatives.....46
School Research Project.....51
School system see British Columbia school system
Science
 fairs.....23
 female educators.....53

female student enrolment.....	36, 40
provincial learning assessment ..	28, 52
Seismic Upgrading Program	59
Self-esteem	25-26
Smoking	28
Social development see <i>Human and social development</i>	
Social responsibility	28-29
Social studies	
provincial learning assessment ..	26, 28
Southern Interior	
Telecommunications Project	49
Spanish	42
Special education see <i>Special needs students</i>	
Special Education Technology	
Centres	40
Special needs students	39-40
integration.....	39, 42
number receiving special services ..	79
specialized services for	39-40
Spending see <i>Education Spending</i>	
Sports	27
Statistical tables	73-81
Statistics Canada Survey ...	17-19, 70
numeracy.....	18
reading.....	18
statistical table.....	74
writing tasks	19
Stay-in-school initiatives	46-47
Student follow-up survey	63, 70
basic skills.....	18
creativity.....	23
healthful living.....	27
intellectual curiosity.....	23
personal initiative	26
post-secondary studies.....	31, 33
tolerance	30
work experience.....	35
work habits	35
Summer institutes	53
Surveys see <i>Employer survey, Graduate follow-up survey, Post-secondary instructor survey, Public surveys, Student follow-up survey</i>	
T	
Teacher Supply and Demand Committee	55
Teachers	50-55
accreditation findings	51-52
mentoring programs	55
professional development	53
ratings of	51
supply of qualified	54
Technology	36, 48-49
availability of	48-49
female student preparation.....	36
survey of advanced	
technology industries.....	36
Thinking skills	20-22
Transportation services	42
Tri-Universities	
Integration Project	48
W	
Withdrawal see <i>School completion</i>	
Work experience	35
Work habits	34
Work Orientation Workshop	46
Writing	
provincial learning assessment	18
skills of graduates	18, 33
Statistics Canada Survey.....	18-19
Y	
Year 2000: A Framework for Learning	9, 52, 58, 66