



January 2003

The \$100,000,000 Giveaway: Who Says Education Doesn't Get Enough Money?

Peter Cowley, Stephen T. Easton and Davin Li

Contents

<i>Executive Summary</i>	3
<i>Introduction</i>	5
<i>How BC Allocates Operating Grants to its Schools</i>	7
<i>How is Funding Allocated in Other Jurisdictions?</i>	13
<i>How Can British Columbia Improve its Funds Allocation System?</i>	16
<i>Appendix</i>	18
<i>Bibliography</i>	30
<i>About the Authors</i>	31
<i>Acknowledgements</i>	32

Studies in Education Policy is published periodically throughout the year by The Fraser Institute, Vancouver, B.C., Canada.

The Fraser Institute is an independent Canadian economic and social research and educational organization. It has as its objective the redirection of public attention to the role of competitive markets in providing for the well-being of Canadians. Where markets work, the Institute's interest lies in trying to discover prospects for improvement. Where markets do not work, its interest lies in finding the reasons. Where competitive markets have been replaced by government control, the interest of the Institute lies in documenting objectively the nature of the improvement or deterioration resulting from government intervention. The work of the Institute is assisted by an Editorial Advisory Board of internationally renowned economists. The Fraser Institute is a national, federally chartered non-profit organization financed by the sale of its publications and the tax-deductible contributions of its members, foundations, and other supporters; it receives no government funding.

For information about Fraser Institute membership, please call the Development Department in Vancouver at (604) 688-0221, or from Toronto: (416) 363-6575, or from Calgary: (403) 216-7175.

Editor & Designer: *Kristin McCahon*

For media information, please contact Suzanne Walters, Director of Communications, (604) 688-0221, ext. 582, or from Toronto: (416) 363-6575, ext. 582.

To order additional copies, write or call

The Fraser Institute, 4th Floor, 1770 Burrard Street, Vancouver, B.C., V6J 3G7

Toll-free order line: 1-800-665-3558; *Telephone:* (604) 688-0221, ext. 580; *Fax:* (604) 688-8539

In Toronto, call (416) 363-6575, ext. 580; *Fax:* (416) 601-7322

In Calgary, call (403) 216-7175; *Fax:* (403) 234-9010

Visit our Web site at <http://www.fraserinstitute.ca>

Copyright © 2003 The Fraser Institute. All rights reserved. No part of this monograph may be reproduced in any manner whatsoever without written permission except in the case of brief quotations embodied in critical articles and reviews.

The author of this study has worked independently and opinions expressed by him are, therefore, his own, and do not necessarily reflect the opinions of the members or trustees of The Fraser Institute.

Printed and bound in Canada.

ISSN 1492-1863

Date of issue: January 2003



Executive Summary

When a part-time student enrolls in just one course in a British Columbia public high school, the Ministry of Education provides a “Basic Allocation” operating grant of \$3,339 to that school’s district. The grant is provided even if the student rarely attends the class and subsequently drops or fails the course. That is a great deal of money to spend with so uncertain a return. It is especially generous given that the enrollment of a full-time student taking 8 courses attracts only 60 percent more grant dollars—just \$5,343.

Analysis of data provided by the Ministry of Education suggests that this disproportionately high level of grant support for part-time students—apparently unique to British Columbia—may annually provide the province’s 60 public school districts with at least \$100,000,000 more than they would receive if, instead, the Ministry adopted the simple, transparent, and widely-used formula that funds students in direct proportion to the number of courses they take.

There is no evidence that school districts incur higher costs for part-time students than they do for full-time students. Indeed, because the labour costs associated with counseling, teaching, and assessment are by far the largest operating costs facing the province’s school districts, and because these costs are directly proportional to the number of courses taken, it is likely that full-time students represent a considerably higher cost burden to school districts than do part-time students.

Further, there is no evidence that the additional funds generated by part-time students are used

effectively to ensure that these part-time students are successful. Analysis of grade 12-level provincial examination results and graduation rates suggests that student success is more likely when students take more courses each year rather than fewer.

While BC’s funding formula is apparently not justified either by school district costs or student results, the perverse incentives that this bizarre system presents to school districts are of greatest concern. The existing funding formula provides the school districts with a strong financial incentive to minimize the total number of courses each of their students takes. By doing so, the school district maximizes its revenue and minimizes its non-discretionary costs. Excess funds are thereby secured for other initiatives that the school district may wish to pursue.

These perverse incentives may lead school districts to:

- *Encourage students to take an extra year to graduate.* If students complete their grade 12 course work in two years, taking just 4 courses each year, rather than taking all 8 courses in just one year, the school district will receive twice the revenue related to that student while incurring virtually no extra cost.
- *Encourage students to take the minimum number of courses needed to graduate.* Again, by encouraging students to take fewer courses in a given year and, in total, over the students’ secondary school career, school districts will maximize grants from the ministry while minimizing costs.

- *Encourage chronic school-aged drop-outs to enroll in one or two courses even though there is very little likelihood that they will regularly attend class.* Mindful that a single individual enrolling in one course generates a basic allocation grant of \$3,339, there is enormous incentive to maximize these high-revenue enrollments. Yet there is no financial incentive to see that these students actually accomplish anything as a result of their enrollment.

As these examples demonstrate, the existing funding formula encourages school districts to act contrary to the best interests of their students. Indeed, the funding formula is at odds with the ministry's own focus on improving student results. In Spring of 2002, the ministry required every school district to enter into an "Accountability Contract" that publicly committed the district to improving its students' results. In light of this renewed emphasis on results, it is irresponsible for the Ministry to maintain a funding formula that discourages school districts from seeking the best for their students.

While our analysis shows that some schools and some districts seem to be relatively more effective in ignoring these perverse incentives, the Ministry should immediately redesign the funding formula to:

1. Provide incentives for school districts to encourage their students to take more rather than fewer courses in each of their high school years.
2. Provide incentives for school districts to encourage their students to attend class regularly so as to maximize the likelihood that they will successfully complete the courses in which they enrolled.

In future, the ministry should consider additional changes in the funding formula to provide stronger incentives for school districts to encourage and assist their students to achieve academic success.



Introduction

Here is a math problem for all those interested in making sure that British Columbia's school system is as effective and efficient as it can be.

Secondary School A in School District X enrolls 1,000 students, each of whom takes four courses in the school year 2002-2003. In the same year, in the same district, Secondary School B enrolls 1,000 students, each of whom takes a full-time program of 8 courses in the school year. Which school should receive the largest operating grant from BC's Ministry of Education?

Perhaps after giving it some thought, you decided that School B should attract more funding. After all, you reasoned, that school provided more services. Its students took 8,000 courses (1,000 students times 8 courses per student) whereas at School A its students took only 4,000 courses (1,000 students times 4 courses per student). In addition, you noted, the extra production at School B would undoubtedly have resulted in higher costs than those incurred at School A. You thought that School B's teachers' salaries alone would likely be double those at School A.

Your answer has been assessed. It is quite rational, and, regrettably, quite wrong. In fact, under the method by which British Columbia's Ministry of Education allocates taxpayer dollars to the province's 60 public school districts, even though School B produces far more output than School A and faces higher costs on everything from teacher's salaries to building maintenance, it receives exactly the same basic operating grant as

does its neighbor, School A. For the school year 2002-2003, each would receive \$5,343,000. What sense can be made of a funds allocation model that rewards school districts for producing less rather than more?

In 2002, the ministry required every school district to enter into an "Accountability Contract" that committed the district to improving student results. While not legally binding, the pacts are a public reminder that the ministry sees student learning as the key responsibility of school districts. Although the accountability contracts come with few carrots and even fewer sticks, they are a first step in introducing a new results-based environment within which the province's public schools must work.

However, as the example above reflects, nothing has been done to tie school district revenues—the most direct and effective incentive for any organization—to the outputs that the ministry, parents, and taxpayers desire: effective teaching leading to demonstrable learning. Surely the most certain carrot for encouraging school districts to focus on the task of producing well-educated future citizens is for funding to be tied to real student results. While this may not seem a novel idea to many outside BC's education establishment, within it, it may be considered revolutionary.

More than just student results are affected by the ministry's perverse funds allocation system. The above example used mythical Schools A and B in the mythical School District X. Mythical school districts only receive mythical money. But real school districts receive operating grants in real

taxpayer dollars. Because the current funds allocation mechanism pays out much more for the first few courses in which a student enrolls than it does for additional course enrollments, BC's taxpayers are contributing hundreds of millions of dollars to school district coffers while getting little or nothing in return. The analysis presented in this study shows that there is a gap between services funded and services received of at least \$100,000,000 annually with respect to grade 11 and grade 12 enrollments alone. The tables in Appendix 1 provide school-by-school and district-by-district details. Regrettably, no reliable course enrollments or course completion data are available for students enrolled in lower grades, so the total annual funding provided for which no results are achieved cannot be calculated. However, bearing in mind that the legal school-leaving age is 16 years old, and that a considerable proportion of the province's students reach that age before completing grade 10, all told, the overpayment gap is likely to be considerably higher.

British Columbia is unique

We have discovered no other jurisdiction in North America that allocates public funds with so little regard for the provision of effective incen-

tives to school districts to encourage them to do what is best for their students. The BC ministry's funds allocation system is based on neither theoretical logic nor empirical evidence, and is not defended in any ministry publication that we can find. It simply defies reason to pay for services that a school district does not intend to render. Now, it is understandable why school districts take advantage of this bizarre funding mechanism—it can bring extra money into the district with no extra costs attached. As any school administrator in the public system will tell you, there is always a use for that kind of money. What is not understandable—and not acceptable—is that a ministry, intent upon ensuring that the focus of the education system is on student results, continues to use a funds allocation system that rewards schools that fail to convince their students of the value of a rigorous program of study.

Now is the time for change

Soon it will be budget time in British Columbia and the ministry will entertain demands for more money from a variety of vested interests involved in the K-12 education system. Until it overhauls its funds allocation system to ensure that the money currently provided is being effectively spent, it should turn a deaf ear to those demands.



How BC Allocates Operating Grants to its Schools

The calculation of full time equivalent (FTE) enrollment

The bulk of the operating revenues that BC's 60 public school districts receive is provided in an annual grant from the province's Ministry of Education. In the school year 2002-2003, for each full-time equivalent student (FTE) enrolled in the district, the ministry will provide an operating grant of \$5,343. This basic allocation accounts for over 80 percent (BC Ministry of Education, 2002c) of the total provincial operating grant. Each district may qualify for additional operating grants recognizing differences among districts in their operating costs and the nature of the student body.

Early in the school year, for each of the students enrolled at the school, every school in British Columbia is required to submit a completed Form 1701 to the Ministry of Education. Along with other information, the school must report the number of courses that the student is taking that count toward graduation. For students in grades 1 through 7, the number is almost certainly 8, as there are few circumstances in which elementary school students take a partial program. However,

for students in grades 8 through 12, these numbers vary widely.¹

During their high school years, students have considerable flexibility in establishing their program and class timetable. They are offered both 4-credit courses (100 or more hours of instruction) and shorter courses that earn 1 or 2 credits. They may enroll in a full program—normally 32 credits—or some fraction of a full program. This flexibility dictates that the method of counting enrollment take into account the differences in student workload and therefore the differences for funding purposes in the amount of services each individual student receives.

Why use FTE enrollments?

A simple head count of students is not a valid basis for funds allocation because any given "head" may represent a full-program student or a student taking just one or two courses. Many jurisdictions, including British Columbia, use an FTE enrollment count instead of a head count. In most cases, the FTE enrollment count equals the total number of courses in which all the students have enrolled divided by the number of courses in-

1 In evaluating the effectiveness of BC's funds allocation system we chose course completions per FTE enrolled because data were available for grade 11 and grade 12 course completions by school. We would also have liked to have known the number of courses students enrolled in at each school. This additional data would have made the analysis more precise by segregating shortfalls in course enrolment from shortfalls in course completion. Unfortunately, some versions of the software used to report the course enrollments report 8 courses whenever the actual number is 4 or more. For this reason, ministry data on course enrollments is unreliable.

A course is considered completed as long as a final grade is assigned. The student may pass or fail the course.

Table 1: British Columbia Ministry of Education's Assignment of FTE Value by Number of Courses Enrolled In

Number of courses	School-aged, non-graduate	School-aged graduate or adult non-graduate
	% of FTE for Funding purposes	
1.0	62.50	12.50
1.5	68.75	18.75
2.0	75.00	25.00
2.5	81.25	31.75
3.0	87.50	37.50
3.5	93.75	43.75
4.0	100.00	50.00
5.0	100.00	62.50
6.0	100.00	75.00
7.0	100.00	87.50
8.0	100.00	100.00
9.0	100.00	100.00
10.0	100.00	100.00

cluded in a normal, full-time program—usually eight. As a result, for instance, the FTE calculation counts two students each taking a half program as one FTE. However, as noted above, British Columbia's funds allocation system is not like that in most jurisdictions.

Because FTEs are used to calculate funding, and a full FTE is worth \$5,343, it is critical to understand what guides the flow of funds. Table 1 converts the number of courses a student takes into a percentage of a British Columbia FTE enrollment. Note that the first set of FTE values applies to school-aged, non-graduates, while, interestingly, the second set applies to graduates and adult non-graduate students.

Table 1 (BC Ministry of Education, 2002a) shows the proportion of an FTE assigned to each of the possible number of courses in which a student may enroll. If a student takes one course, that

course represents 62.5 percent of an FTE for funding purposes, 2 courses are valued at 75 percent of an FTE. *Note that any school-aged student taking four courses or more is deemed to represent 100% of an FTE for funding purposes.*

Each 1.0 FTE enrollment will attract a basic allocation grant of \$5,343 for the school year 2002-2003. Thus, if a student enrolls in just one course at Earl Marriott Secondary school in Surrey, School District #36 (Surrey) will receive a basic allocation grant from the ministry of \$3,339. That is, taxpayers will contribute \$3,339 to the school district to secure a single seat in one course of about 100 hours of instruction. Thus, the funding per hour of instruction is \$33.39. Compare this high per hour funding level to that provided when the student is enrolled in four courses—\$13.36 per hour of instruction—or when the student is enrolled in a full-time program of 8 courses—just \$6.68 per hour of instruction.

Although the use of FTE enrollments as the basis for allocating funds is common throughout Canada and the United States, the disproportionate weight assigned to enrollment in a small number of courses is apparently unique to British Columbia. In Washington State, for instance, the Department of Education allocates funds per pupil in accordance with the proportion of a normal, full-time program in which the student is enrolled (Bergeson, *et al.*, 2000). Interestingly, the BC Ministry follows the same rule when funding school-aged graduate students and adult non-graduates. Table 1 reveals that a single course enrolled in by one of this group of students attracts one-eighth of an FTE, two courses attract one-quarter funding, three courses attract three-eighths funding, and so on. This seems reasonable and is consistent with practices outside BC. It is the unique, front-loading feature of British Columbia's FTE enrollment calculation for *school-aged students* with which this paper is concerned.

Funding for independent schools in British Columbia

Operating grants are also provided to certain private or independent schools in British Columbia. The calculation of these grants uses the same front-end loaded FTE enrollment as for school-aged students. For each FTE enrollment, Group 1 independent schools receive 50 percent of the basic allocation grant that neighbouring public schools get. Group 2 schools—where the operating costs per student exceed that of neighbouring public schools—receive 35 percent of the of the basic allocation grant per FTE given to public schools. Group 3 and Group 4 schools receive no funding from the ministry because they do not follow the provincial curriculum or are not non-profit organizations (BC Ministry of Education, 2002b).

Is there justification for the front-end loaded FTE system?

As noted above, the disproportionate front-end loaded FTE system of funds allocation is unusual. Is there any justification for its use? None is to be found in the literature, nor has the ministry published any justification of its design or benefits that we can find.

Speculation may suggest a few rationales. First, one could argue that certain resources that students use—library time, counseling, administration—may be consumed even though the student is not taking a full program. With this argument, heavier weighting for low course enrollments would take into account the likelihood of costs incurred by students independent of the number of courses in which the student is enrolled. It seems unlikely, however, that the heavy weighting of the first course is a realistic reflection of the extent to which a student taking only one course might affect the school's resources. Indeed, it is likely that the fixed cost of delivering services other than teaching is fully amortized over the full-time

or near full-time enrollments at the school. Thus, the marginal cost of these ancillary services occasioned by the enrollment of a student in one or two courses is probably insignificant.

Second, it may be argued that this disproportionate allocation of funds would tend to deliver more money per course enrollment to districts that have a greater population of students in alternative and part-time programs. One could surmise that these programs are more expensive to administer, and that the students enrolled in these programs require more services, than is the case with mainstream programs and full-time students. If this is in fact the case, one would hope that a relatively low course enrollment per student accompanied by a relative high per course grant would generate relatively good student results. We have found no evidence in our analysis of data collected for *The Fraser Institute's Report Card on British Columbia's Secondary Schools* to support this hypothesis.

If there is evidence that British Columbia's method of calculating FTE enrollments does result in benefits to the province's students, then the Ministry of Education should make it public. In the absence of such evidence, there can be no justification for continuing to employ this method.

What perverse incentives are presented to school boards by this funding mechanism?

Naturally, school district personnel will do what they legally and morally can to maximize the funds flowing to their district. What incentives does the fund allocation system present to board administrators and what actions might these incentives induce?

The current funds allocation mechanism introduces powerful incentives to act contrary to the best interests of the students. Among them are:

- *Promote enrollment by students who might just take a course or two.*

As noted above, there is a powerful incentive built into the disproportionate funds allocation system for school districts to promote part-time enrollment. Enrollment of a student in a single course generates approximately \$33 per hour of class time reserved for that student. A full-time student with 800 hours of class time reserved for her or him generates funding of less than \$7 per hour of class time. The funding mechanism actually *encourages* school districts to dissuade less committed students from taking a full program.

- *Encourage students to complete the lowest possible number of courses required for graduation.*

In order to graduate in British Columbia, students must accumulate 52 course credits (13 courses of 4 credits each) at the grade 11 and 12 levels. Thus, while students have time within the regular school year to take a total of 16 courses during their two senior years, they need only take 13. Since courses not taken by students mean reduced teaching hours with no corresponding reduction in funding, there is a powerful financial incentive for districts to instruct schools to let students take it easy rather than to take a rigorous, full-time program.

- *Promote enrollment to students who are unlikely to attend or use the school's resources.*

School districts across the province pride themselves on a wide variety of programs that are designed to keep uncommitted or troubled students in school or encourage them to get back into a school program after they have dropped out. While these programs undoubtedly have noble aims, they can also be large contributors to the school district's net revenue because of the disproportionate nature of the existing funds allocation method. Are the funds generated by such programs used solely for the benefit of the students whose partial enrollments have generated them? Since the revenues they gen-

erate go into the general operating grants to the districts, there is no way to know.

- *Keep poorly performing schools open as cash cows for the district.*

Imagine a funding system that rewards districts for having poorly performing schools, and that penalizes districts that work hard to ensure that all their students succeed. This is the effect of BC's current funds allocation system. A school where students take few courses and seldom attend class will be a net contributor to the district's coffers. High-performing schools with highly motivated students will require far more teaching hours, and will therefore contribute less. Thus, there is a strong incentive not to improve poor performing schools in that doing so will result in reductions in the size of the school district's operating revenues.

There is some reason to hope that the ministry may consider more closely tying fund allocations to student outcomes. Section 108, subsection 2.3 of the BC School Act states

If, in relation to a particular (school) board, the minister is of the opinion that the rate of successful completion of courses for students... enrolled with the board is unsatisfactory, the minister may withhold or reduce, to a maximum of 10 percent, that portion of an allocation... that relates to those students." (BC Ministry of Education, 2000b, p. 58)

The existence of this subsection demonstrates that the ministry accepts the notion that incentives attached to funding might help schools improve. Yet the penalty for unsatisfactory performance is neither automatic nor onerous given the value of front-end loading in the current system.

The other side of the incentive coin also deserves note. What incentives might be built into the funding system to encourage better student results?

- *Encourage students to take a full program of courses in the later secondary years.*
Certainly, the funds allocation system could be designed to reward districts for encouraging their students to take school seriously, and to demonstrate that commitment by enrolling in a full program of courses. The current system lacks such an incentive.
- *Encourage students to attend class regularly.*
Learning is likely an incremental process, so attendance in class—be it in a bricks and mortar classroom or in a distributed learning environment—will result in more learning than would take place with less attendance. Thus, a funds allocation method that rewards students' attendance in class would result in greater aggregate learning than would one that does not. The current system lacks such an incentive.
- *Encourage students to complete the courses they begin.*
It is not enough for a student simply to enroll in courses and attend occasionally. In order for maximum learning to take place, students should plan to complete each course in which they enroll; they should also participate in all the local and external assessments of their progress that are part of each course's syllabus. The funds allocation system can be designed to encourage full completion. Yet the current system lacks such an incentive.
- *Encourage students to successfully complete the courses they choose.*
The aim of course enrollment should be successful completion of the course, including a passing grade on any final assessment of the student's understanding of the course material. Should school districts not be rewarded

for improved levels of student success? The current system lacks such an incentive.

It is clear that British Columbia's system of funds allocation includes incentives that do not encourage school districts to improve student outcomes. Design changes should retarget incentives to complement the ministry's other, non-financial improvement programs. At the very least, funds allocations should no longer make poor performing schools the special treasure trove of the district secretary-treasurer's office.

Are some schools more productive than others?

In order to track the extent to which school boards profit from the disproportionate character of the funds allocation system, we have established an indicator that can be generated annually from ministry data. Appendix table 1 reports the average number of combined grade 11 and grade 12 course completions (see footnote 1) per FTE student enrolled for the two school years 1998/1999 and 1999/2000 for 275 of the 278 British Columbia schools included in the 2002 edition of *The Fraser Institute's Report Card on British Columbia's Secondary Schools*.² Column 6 is the average of columns 3 and 4. This value is an estimate of the per-FTE course completions for 2002/2003. In order to provide some indication of the cost of these shortfalls, the value in the column 7 uses the calculated average course completions in column 6, the actual 2002/2003 FTE school enrollment in column 5, and the school year 2002-2003 value for the basic allocation (\$5,343³) to estimate the dollar value of the school's 2002-2003 course completion shortfall.

2 This analysis included only schools for which historical data were available and where historical enrolments in grade 12 exceeded 15 students.

3 The basic allocation is reduced appropriately for those private schools that are included in the analysis.

Table 2: Average Course Completions per FTE Enrollment by School Sector in British Columbia

School Affiliation	Average Completions/ FTE 1998/1999	Average Completions/ FTE 1999/2000
Public	6.21	6.21
Independent		
Diocesan Catholic	7.38	7.44
Christian Schools	7.67	7.57
Selective Admission Schools	8.88	8.58
First Nations Band Schools, Other	4.77	3.15
All Independent	7.87	7.61

A small shortfall indicates that the students at the school are, on average, making productive use of the ministry's funding that has been provided to the school district as a result of their enrollment. For example, at Lord Byng Secondary School in Vancouver, the historical per FTE course completion reported in column 6 is approximately 7.7. This results in a shortfall in course completions of about 0.3 courses per student—the normal maximum 8 course completions minus the historical course completions of 7.7. The grade 11 and grade 12 FTE enrollment in 2002/2003 as reported in column 5 is 419 students, and the current year's value for the basic allocation grant is \$5,343 per student. Thus, the estimated 2002/2003 dollar value of the shortfall in course completions at Lord Byng, as reported in column 7, is about \$84,000.

A larger shortfall indicates that the students at the school are attracting more funding for the district than may be warranted by the number of courses in which they are enrolled. At John Oliver, another secondary school in Vancouver, the historical per FTE course completion is approximately

5.4. This results in a shortfall in course completions of about 2.6 courses per student. The grade 11 and grade 12 FTE enrollment in 2002/2003 is 533. Thus, the estimated dollar value of the shortfall in course completions at John Oliver, as reported in column 7, is about \$926,000, 11 times higher than that at Lord Byng.

During the 1998/1999 and 1999/2000 periods, the average course completion rate was about 6.3 completions per FTE enrolled. Lord Byng's completions were far above average at 7.7 per FTE, while completions at John Oliver were considerably below average at 5.4 per FTE.

Is there a difference between public and private schools on this efficiency measure?

Of course, on any measure that uses the basic allocation grant, independent schools will rate favourably because these schools receive a basic allocation per FTE that is, at most, only 50 percent of that of nearby public schools. Nevertheless, a comparison of the by-school average course completions per FTE, presented in table 2, shows considerable differences between public and independent schools in the number of courses completed per FTE enrollment. Marked differences are also present within the independent school sector.

Students at independent schools on average complete more courses per FTE enrollment than do those at public schools. Students at non-selective Catholic and Christian schools normally complete in excess of one course more than do students at public schools. Students at schools with selective admissions complete in excess of two more courses per FTE enrollment than do students attending public school.



How is Funding Allocated in Other Jurisdictions?

How best can the ministry apportion its budgeted operating grants across the province's diverse public school districts? Of course, this question begs another. What does an ideal system of funds allocation look like? One convincing argument is that consumers of education services—that is, the parents as guardians of their children's interests—should allocate funds to districts, rather than the districts receiving funds through a bureaucratic formula. This argument suggests that the most efficient and effective way to allocate funds is by market processes (see, for instance, Tooley, pp. 1-23). The ministry could simply provide vouchers to all parents with school-aged children in an amount equal to the portion of the cost of education that citizens agreed should be borne by the state, and allow them to decide which school would receive their voucher money. By financing consumers rather than service providers, the education sector would be freed from the arbitrary nature of funding allocation systems. This paper's goal, however, is to focus on the particular issue of funds allocation within the present system of direct ministry transfers to the public school districts.

Most funds allocation systems are based on two notions. First is the notion that in some way, an operating grant made to a school district on a per-student basis is intended as payment to reserve a place for the student in the class or classes for a period of time. That is, the grant purchases those services—a certain number of teaching hours, counseling, and assessment, for example—that are deemed essential to a student's

achievement of the learning embodied in the course syllabus. This is essentially the way learning services are bought in the private post-secondary sector. A student enrolls in a course or program of a defined length and pays the tuition fee to secure his place. Whether in the private or the public sector, the service provider is not responsible for the student's attendance or for the results. However, in the private sector where students spend money directly from their own pockets or those of their parents, the direct cost of tuition is an incentive to both attend class and achieve a passing result. If the student does not successfully complete the course, the investment is lost. The student may choose to blame him or herself for not attending, or blame the service provider for delivering a faulty product, and the student's subsequent investments will undoubtedly be influenced by this experience. In the public school sector, however, while there may be a variety of incentives for the student to successfully complete an annual course of study, there is no immediate, direct financial incentive to do so.

In order to replace the consumer-centred incentives to attend and complete studies, some ministries of education have added a second component to the funds allocation system. They have built mechanisms into the design of such systems to provide incentives to the *school district* to encourage students to attend class and successfully complete their studies.

Our survey of six North American school districts provides examples of common allocation systems

and the extent to which they attempt to add performance incentives to more basic enrollment considerations.

Funds allocation by enrollment

The simplest way to allocate funds is to require that each school report to the ministry the number of students enrolled at the school on some day shortly after the beginning of the fall term, and then provide an operating grant in the amount of a set per-student dollar amount multiplied by the reported number of students enrolled. However, the use of such student head counts to determine funding makes no distinction between a student who is enrolling in half a program and a student who is enrolling in a full program.

To allow for differences in the number or length of courses in which students enroll, the concept of full-time equivalent (FTE) enrolments, or “membership,” as it is sometimes known, has become the standard for enrollment-based funds allocation. A form of FTE-based funds allocation is used in BC, Alberta (from Grades 1 to 9), Ontario, and Florida. As previously noted, under an FTE-based allocation system, grants are made to the school district based on the number of FTE students enrolled on a certain day or days during the school year. FTE enrollments may be calculated by summing the total number of courses taken by all the enrolled students at a school and then dividing that number by eight, where eight is the normal number of courses included in a full-time program. However, in order to take

into account the possibility that courses may have different course credit values⁴ or lengths, an alternative calculation sums total course credits in which students are enrolled and then divides that number by the number of course credits normally associated with a full-time course. The number of classroom hours is sometimes used as a substitute for course credits in the calculation of FTE enrollments.

BC uses a one-time FTE system, meaning that it records FTEs for funding purposes on one day per school year—September 30 (BC Ministry of Education, 2000a). In contrast, Ontario’s Ministry of Education uses a two-count system. It records FTEs for funding purposes on October 31 and March 30—and averages them (Ontario Ministry of Education, 2001, p.2). Florida records FTEs for funding purposes during four designated survey weeks per year (Florida Department of Education, 2001). Multiple enrollment counts are more accurate in jurisdictions that offer semestered timetabling systems where students are at liberty to enroll in a different number of courses in each semester of the school year.

Education officials in Ontario mention three major advantages of the FTE-based system. First, it results in more accurate funding levels than a headcount (Ireland, 2001).⁵ Second, the FTE system accounts for the fixed costs—such as a reserved seat in a classroom equipped with a teacher—incurred with respect to students who drop out of courses during the year (Ireland, 2001). Third, users believe it is easier for financial planning purposes because FTEs are reasonably stable from year to year and thus easier to forecast (Garcia, 2001; Edgars, 2001).

4 Courses in an educational program are often assigned a credit value. In BC, a full-year course of 100 or more hours of classroom instruction carries a value of 4 credits. Courses with fewer instruction hours carry proportionately lower course credit values.

5 For funding purposes, headcount is defined as the number of students enrolled in a district, regardless of whether they are part-time or full-time students.

Importantly, among the jurisdictions studied, only British Columbia has modified the definition of the FTE so as to deliver disproportionate funding with respect to students enrolling in a very few courses. Table 1 above defines FTEs in British Columbia. By providing 62.5 percent of maximum FTE funding for the first course enrolled in, BC's system is actually more closely related to the simple head count enrollment system, which provides 100 percent funding for the first course in which a student is enrolled, and no incremental funding for more than one course taken. The advantages of the FTE-based system described above are diminished when disproportionate funding is used.

Of course, FTE enrollment as the basis for funding does not take into account student results. It is simply a more accurate way to gauge the level of enrollment at the school than is a head count-based system.

Funds allocation by Average Daily Attendance

California, New York, and Texas use average daily attendance (ADA) as the basis for their funds allocations. ADA is defined as the number of students attending school on a typical or average day. ADA is calculated by summing the daily attendance at the school during the school year, then dividing the sum by the number of school days in the school year (Texas Education Agency, 2001, ch. 42, subsec. A, sec. 42.005; California Department of Education, 2001, sec. 4630). All three states use similar ADA systems.

Attendance is influenced both by enrollment and by the effectiveness of the school in keeping its students interested enough to attend regularly. If, as some Texas administrators believe, "students must attend class in order to learn," then a funds allocation system that provides incentives to school districts to maximize attendance is a major

improvement over the enrollment-based systems. In pursuit of higher levels of attendance, the Texas State Legislature enacted regulations that encourage school districts to focus on raising attendance rates in order to maximize funding. Among its provisions, the regulations require mandatory attendance record-keeping throughout the school year (Garcia, 2001).

One education official worried that those school districts that have chronically poor attendance rates are the very districts that most need extra resources—help that may be denied them under an attendance-based funds allocation system (Hyary, 2001).

Funds allocation by course completion

While the use of incentives—both financial and regulatory—to encourage school districts to meet student results targets is becoming popular, of the jurisdictions studied, only Alberta uses student results as one of the factors in its basic funds allocation system. With respect to enrollments in grades 10 through 12, the Alberta system allocates funds based on a specific performance target: the number of course completions per district. The course completion system calculates the level of funding by multiplying the number of courses completed by a predetermined operating grant per course. If a course is not completed, then no grant accrues to the district for it. Critical to this system is the definition of course completion. Alberta's definition is not particularly onerous. In that province, a course is deemed completed when the student has achieved a grade of 25 percent or higher, and has attended at least 25 percent of all classes (Poon, 2001).

Kenneth Poon of the funding department at Alberta Learning offered an example of the perverse incentives associated with the province's previous FTE-based system.

Before we based the system on course completions... kids enrolled in school in September just to play on the football or basketball team. And when the season was over, they left school... At that time, we saw moving to the CEU system as a way of cutting costs and as a way of add-

ing more accountability. Now the kids can still enroll just to play on the sports team, but the districts won't get any funding if [the students] leave halfway through the year" (Poon, 2001).



How Can British Columbia Improve its Funds Allocation System?

Conclusions

The data presented in the appendix tables make several important points clear.

First, there are wide disparities in the number of courses completed per FTE among public schools. The existing, disproportionate FTE calculation provides an incentive to school districts to enroll more students in fewer courses. The shortfalls in course completions presented in the appendix tables are likely attributable in part to this built-in, perverse incentive.

Second, course completions per FTE enrollment among private schools are, on average, substantially higher than among public schools. Not only is the basic allocation grant provided to private schools at least 50 percent lower than that provided to public schools, but the funding provided for each FTE enrolled produces a greater number of courses completed. Since private schools are subject to market pressures to produce results in order to earn and keep customers, it is not sur-

prising that their completion rates per FTE are higher on average. More important, the private school results suggest the importance to student success of direct incentives within the funds allocation system.

Third, as appendix table 2 shows, differences in course completions per FTE appear among districts as well as among schools. The districts receive the operating grants, and district administrators set policy and practice. Incentives within the funds allocation system must be capable of changing district-level behaviors to promote improved student results.

Finally, other jurisdictions have in place funds allocation systems that encourage attendance and/or reward positive student outcomes.

Recommendations

1. *Eliminate disproportional FTE weightings.* Every funds allocation system presents possibilities for the unscrupulous to manipulate

data to maximize the funding delivered to a school district. But, to our knowledge, only the BC system has a built-in, legal mechanism that allows school districts to maximize funding at the expense of their students' results. The perverse incentives described above should be eliminated immediately. At the minimum, the FTE enrollment system should be amended to eliminate the disproportional funding provided for enrollment in small numbers of courses by school-aged, non-graduate students. The ministry should adopt for all students the current FTE conversion schedule now used for adult, non-graduate and school-aged graduate students noted in table 1 above.

Once this simple change is made, school districts will no longer have as great an incentive to enroll uncommitted students in one or two courses that they will likely neither attend nor complete. Districts will no longer see poor-performing schools as cash cows, but as drains on district resources. This realization will provide an incentive for districts to improve student results at these schools more quickly than would otherwise be the case. The school districts will have a positive incentive to ensure that their students get the most out of their senior secondary years by taking a rigorous program including as many courses as time allows.

2. *Add attendance into the funds allocation formula.* The funds allocation system should be further amended so that student attendance levels are considered in the calculation of the basic allocation to be provided to each district. We agree with the Texas administrator who believes that students must attend class in order to learn. With that in mind, we suggest that some portion of the money no longer allocated as a result of the elimination of

the disproportionate FTE calculation be distributed among those districts meeting attendance targets as measured a number of times throughout the year.

3. *Consider adding student results criteria to funds allocation formula at a later date.* The use of results targets in the calculation of the basic allocation is a suggestion worthy of further study. To the extent that school districts would be rewarded if they succeed in their mission and penalized if they do not, the addition of student results to the mix would bring some of the discipline of the market to public sector education funding.

While careful thought should be given to any possible unintended consequences that might accompany the use of results in the calculation of the basic allocation, the ministry should, over the next year, consider the recent experience of other jurisdictions in this regard with a view to applying the results of that research to further refining British Columbia's funds allocation system for the school year 2004-2005.

Every year, as a result of the improper calculation of full-time equivalent enrollments, the Ministry of Education delivers, on behalf of the province's citizens, an extra \$100,000,000 taxpayer dollars to the 60 school districts of the province and it neither asks for nor receives anything in return. The speed with which the Ministry acts to repair the FTE calculation will be some measure of the extent to which it believes its own message that student results must be the focus of the education system and that the ministry's resources must be directed toward their improvement. We hope we will soon be able to award the ministry a passing grade in Resource Husbandry. The final exam is just a few months away.



Appendix Tables

**Table 1: Estimated Cost of Course Completion Shortfall By School
(Public and Independent Schools), 2002/2003**

School District Name	School Name	Course Completions/ FTE, 1998/1999	Course Completions/ FTE, 1999/2000	G11 & G12 FTE Enrollment, 2002/2003	Estimated Course Completions/ FTE, 2002/2003*	Estimated Cost of Course Completion Shortfall, 2002/2003 (\$ thousands)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Independent	St. Michaels University School	10.2	10.3	276	10.3	0
Independent	Brentwood College	10.2	9.6	194	9.9	0
Independent	Collingwood School	8.9	9.9	192	9.4	0
Independent	St. Margaret's	10.9	7.7	97	9.3	0
Independent	Southridge Senior Secondary	8.8	9.7	108	9.3	0
Independent	Meadowridge Senior School	8.4	10.0	33	9.2	0
Independent	Pacific Academy	8.9	9.2	219	9.1	0
Independent	Little Flower Academy	8.9	9.0	183	9.0	0
Independent	Notre Dame Regional Secondary	8.3	9.7	270	9.0	0
Independent	St. George's School	9.3	8.7	297	9.0	0
Vancouver	University Hill Secondary	9.4	8.4	178	8.9	0
Independent	Glenlyon-Norfolk Senior School	8.5	9.1	128	8.8	0
Independent	Bulkley Valley Christian School	7.1	10.3	83	8.7	0
Kamloops/Thompson	Logan Lake Elementary-Secondary	8.8	8.4	59	8.6	0
Independent	York House School	9.1	8.1	93	8.6	0
Independent	Campbell River Christian School	8.7	8.3	36	8.5	0
Independent	Vancouver College	8.7	8.2	259	8.5	0
Independent	Houston Christian School	9.1	7.7	33	8.4	0
Independent	Shawnigan Lake	8.3	8.4	192	8.4	0
Independent	Richmond Christian School	8.3	8.5	62	8.4	0
Independent	St John's School	9.5	7.3	34	8.4	0
Independent	Mennonite Educational Institute	8.6	7.9	318	8.3	0

**Table 1: Estimated Cost of Course Completion Shortfall By School
(Public and Independent Schools), 2002/2003**

School District Name	School Name	Course Completions/ FTE, 1998/1999	Course Completions/ FTE, 1999/2000	G11 & G12 FTE Enrollment, 2002/2003	Estimated Course Completions/ FTE, 2002/2003*	Estimated Cost of Course Completion Shortfall, 2002/2003 (\$ thousands)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Independent	Duncan Christian School	8.8	7.7	42	8.3	0
North Vancouver	Seycove Community Secondary	8.6	8.0	324	8.3	0
Independent	White Rock Christian Academy	7.9	8.6	36	8.3	0
Independent	Archbishop Carney Secondary	8.0	8.0	239	8.0	0
Independent	Okanagan Adventist Academy	7.6	8.1	23	7.9	1
Independent	Credo Christian High School	7.7	8.1	134	7.9	4
Independent	Timothy Christian School	7.3	8.0	49	7.7	5
Independent	Regent Christian Academy	8.1	7.0	40	7.6	5
Independent	St. Thomas Aquinas	7.8	7.9	176	7.9	6
Independent	Maxwell International Baha'i School	8.4	6.8	62	7.6	6
Independent	Heritage Christian School	7.8	5.7	15	6.8	6
Independent	Cedars Christian School	7.9	6.7	29	7.3	7
Independent	Fraser Valley Christian High	7.8	8.0	239	7.9	8
Independent	St. Thomas More Collegiate	8.0	7.7	229	7.9	8
Independent	Queen Margaret's	7.4	6.9	43	7.2	8
Independent	St. Patrick's Regional Secondary	7.7	7.8	202	7.8	13
Independent	Pacific Christian School	7.7	7.6	142	7.7	14
Independent	Kelowna Christian School	7.7	7.4	114	7.6	15
Independent	Fraser Valley Adventist Academy	6.7	7.3	47	7.0	16
Independent	Langley Christian	7.0	8.2	127	7.6	17
Coast Mountains	Kitimat City High School	4.8	9.2	28	7.0	19
Independent	Kamloops Christian School	5.9	6.3	35	6.1	22
Independent	Highroad Academy	6.5	5.9	42	6.2	25
Independent	Crofton House	6.7	7.7	144	7.2	27

**Table 1: Estimated Cost of Course Completion Shortfall By School
(Public and Independent Schools), 2002/2003**

School District Name	School Name	Course Completions/ FTE, 1998/1999	Course Completions/ FTE, 1999/2000	G11 & G12 FTE Enrollment, 2002/2003	Estimated Course Completions/ FTE, 2002/2003*	Estimated Cost of Course Completion Shortfall, 2002/2003 (\$ thousands)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Independent	Holy Cross Regional High	7.8	7.6	282	7.7	28
Kootenay Lake	Crawford Bay Elementary-Secondary	6.1	5.6	21	5.9	29
Prince George	McBride Secondary	6.6	7.4	49	7.0	33
Peace River North	Prespatou Elementary-Secondary	6.2	5.6	25	5.9	35
Independent	Bella Bella Community School	5.0	4.3	32	4.7	35
Independent	Immaculata Regional High School	7.6	6.0	100	6.8	40
Sunshine Coast	Pender Harbour Secondary	6.3	7.1	46	6.7	40
Independent	St. Andrew's Regional High School	6.8	7.6	153	7.2	41
Arrow Lakes	Lucerne Elem.-Secondary	5.7	4.7	27	5.2	50
Francophone Education Authority	Kitsilano Secondary	5.9	6.5	46	6.2	55
Independent	Abbotsford Christian School	7.0	7.2	190	7.1	57
Central Coast	Sir Alexander Mackenzie Secondary	6.0	5.9	43	6.0	57
Kootenay Lake	J.V. Humphries School	6.8	6.1	58	6.5	58
Boundary	Boundary Central Secondary	6.8	6.9	83	6.9	61
Gold Trail	David Stoddart Secondary	4.8	5.7	34	5.3	61
Arrow Lakes	Nakusp Secondary School	7.0	6.6	80	6.8	64
Independent	St. John Brebeuf Regional Secondary	6.5	6.4	132	6.5	66
Vancouver Island West	Gold River Secondary	4.3	6.7	41	5.5	68
Nisga'a	Nisga'a Elementary-Secondary	5.7	5.9	49	5.8	72
Gold Trail	Kumsheen Secondary	4.9	3.6	30	4.3	74
Independent	St. Ann's Academy	6.1	6.3	128	6.2	77
Vancouver	Lord Byng Secondary	7.7	7.6	419	7.7	84
Kootenay-Columbia	Rossland Secondary	6.7	7.2	128	7.0	85
Kootenay Lake	Salmo Secondary	5.4	5.4	49	5.4	85
Kamloops/Thompson	Barriere Secondary	6.7	6.9	110	6.8	88

**Table 1: Estimated Cost of Course Completion Shortfall By School
(Public and Independent Schools), 2002/2003**

School District Name	School Name	Course Completions/ FTE, 1998/1999	Course Completions/ FTE, 1999/2000	G11 & G12 FTE Enrollment, 2002/2003	Estimated Course Completions/ FTE, 2002/2003*	Estimated Cost of Course Completion Shortfall, 2002/2003 (\$ thousands)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Southeast Kootenay	Elkford Secondary School	6.4	6.8	101	6.6	94
Vernon	Kalamalka Secondary	7.7	7.2	285	7.5	95
Okanagan Similkameen	Similkameen Secondary	6.5	6.3	92	6.4	98
Prince George	Valemount Secondary	5.1	5.5	55	5.3	99
Southeast Kootenay	Sparwood Secondary	6.6	6.5	109	6.6	102
North Okanagan-Shuswap	Eagle River Secondary	6.7	6.4	116	6.6	108
Kamloops/Thompson	Valleyview Secondary	7.3	7.4	281	7.4	113
Burnaby	Moscrop Jr. Secondary	7.7	7.5	453	7.6	121
Peace River South	Tumbler Ridge Secondary	5.5	5.6	76	5.6	122
Kootenay Lake	Mount Sentinel Elementary-Secondary	6.4	6.5	125	6.5	125
Gold Trail	Lillooet Secondary	6.4	6.4	117	6.4	125
Alberni	Ucluelet Secondary	5.3	5.1	72	5.2	135
North Okanagan-Shuswap	Pleasant Valley Secondary	7.3	7.2	292	7.3	137
Central Okanagan	Rutland Secondary	7.1	8.5	1057	7.8	141
Kamloops/Thompson	John Peterson Secondary	7.2	6.9	239	7.1	144
Gold Trail	Ashcroft Secondary	4.5	6.2	84	5.4	146
Kamloops/Thompson	Clearwater Secondary	6.6	6.1	139	6.4	149
Kamloops/Thompson	Chase Secondary	6.2	6.3	132	6.3	150
Rocky Mountain	Selkirk Secondary	7.0	7.0	228	7.0	152
Powell River	Max Cameron Sr. Secondary	7.2	7.1	286	7.2	153
Haida Gwaii—Queen Charlotte	George M. Dawson Secondary	4.2	5.1	70	4.7	154
Okanagan Similkameen	Osoyoos Secondary School	6.5	6.3	149	6.4	159
Nanaimo-Ladysmith	Woodlands Secondary	7.1	7.2	303	7.2	162
Vancouver	Sir Winston Churchill Secondary	7.8	7.6	859	7.7	172
North Vancouver	Argyle Secondary	7.7	7.4	648	7.6	173
Delta	Seaquam Secondary School	7.7	7.3	517	7.5	173
Cowichan Valley	Chemainus Secondary	6.4	6.8	187	6.6	175
Vancouver	Point Grey Secondary	7.5	7.4	528	7.5	176
Cowichan Valley	Lake Cowichan Secondary	6.4	5.9	146	6.2	176
Vancouver Island North	North Island Secondary	6.8	6.7	221	6.8	177

**Table 1: Estimated Cost of Course Completion Shortfall By School
(Public and Independent Schools), 2002/2003**

School District Name	School Name	Course Completions/ FTE, 1998/1999	Course Completions/ FTE, 1999/2000	G11 & G12 FTE Enrollment, 2002/2003	Estimated Course Completions/ FTE, 2002/2003*	Estimated Cost of Course Completion Shortfall, 2002/2003 (\$ thousands)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Richmond	Steveston Sr. Secondary	7.3	7.2	391	7.3	183
North Vancouver	Handsworth Secondary	7.5	7.4	556	7.5	186
Nechako Lakes	Fraser Lake Elem.-Sec.	5.6	5.2	107	5.4	186
North Okanagan-Shuswap	A.L. Fortune Secondary	6.2	6.1	163	6.2	196
Bulkley Valley	Houston Secondary	5.9	5.4	129	5.7	198
Rocky Mountain	Golden Secondary School	6.6	6.1	191	6.4	204
Fraser-Cascade	Agassiz Elementary-Secondary	5.9	6.0	154	6.0	206
Howe Sound	Whistler Secondary Community	4.2	6.4	115	5.3	207
Howe Sound	Pemberton Secondary	4.4	5.0	96	4.7	212
Richmond	Hugh McRoberts Secondary	7.2	7.1	398	7.2	213
North Vancouver	Sutherland Secondary	7.4	7.2	465	7.3	217
West Vancouver	Sentinel Secondary	7.8	6.8	490	7.3	229
Surrey	Elgin Park Secondary	7.0	7.4	433	7.2	231
Nicola-Similkameen	Princeton Secondary	5.3	4.7	116	5.0	232
Powell River	Brooks Secondary	6.6	6.3	233	6.5	233
Nechako Lakes	Lakes District Secondary	6.0	5.7	175	5.9	245
Nechako Lakes	Fort St. James Secondary	5.7	4.6	131	5.2	245
Kamloops/Thompson	Kamloops Sr. Secondary	6.9	6.8	340	6.9	250
Prince Rupert	Prince Rupert Secondary	6.3	6.2	224	6.3	254
Langley	Langley Fine Arts School	6.0	5.6	173	5.8	254
Mission	Heritage Park Secondary	6.7	6.6	297	6.7	258
Vernon	Charles Bloom Secondary	5.3	6.4	184	5.9	258
Vancouver	King George Secondary	6.6	5.5	204	6.1	259
Kamloops/Thompson	Brocklehurst Secondary	6.3	6.9	278	6.6	260
Comox Valley	Highland Secondary	7.2	7.2	493	7.2	263
Greater Victoria	Lambrick Park Secondary	6.4	7.1	330	6.8	264
Kamloops/Thompson	Sa-Hali Secondary	6.6	6.7	308	6.7	267
Prince George	D.P. Todd Secondary	6.7	6.4	287	6.6	268
Southeast Kootenay	Fernie Secondary School	6.7	5.7	223	6.2	268
Central Okanagan	Okanagan Mission Secondary	6.7	6.9	339	6.8	272
Vancouver	Prince of Wales Secondary	7.2	7.1	516	7.2	276

**Table 1: Estimated Cost of Course Completion Shortfall By School
(Public and Independent Schools), 2002/2003**

School District Name	School Name	Course Completions/ FTE, 1998/1999	Course Completions/ FTE, 1999/2000	G11 & G12 FTE Enrollment, 2002/2003	Estimated Course Completions/ FTE, 2002/2003*	Estimated Cost of Course Completion Shortfall, 2002/2003 (\$ thousands)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Revelstoke	Revelstoke Secondary	6.0	6.7	261	6.4	279
Greater Victoria	Oak Bay Secondary	7.1	7.3	534	7.2	285
Prince George	Duchess Park Secondary	6.8	6.7	361	6.8	289
Fort Nelson	Fort Nelson Secondary	5.4	5.6	175	5.5	292
Vernon	Clarence Fulton Secondary	6.5	7.1	369	6.8	296
Nanaimo-Ladysmith	Wellington Secondary	6.6	6.9	374	6.8	300
Fraser-Cascade	Hope Secondary	5.3	5.9	188	5.6	301
Kootenay-Columbia	J. Lloyd Crowe Secondary	6.7	7.0	420	6.9	309
Nicola-Similkameen	Merritt Secondary	6.7	6.0	289	6.4	309
Prince George	Mackenzie Secondary	5.6	5.3	187	5.5	312
Kamloops/Thompson	Westside Secondary	6.1	6.5	282	6.3	320
Peace River South	Chetwynd Secondary	6.4	5.4	229	5.9	321
Cariboo-Chilcotin	Anne Stevenson Secondary	6.2	4.9	201	5.6	322
Saanich	Claremont Secondary	7.3	6.9	540	7.1	325
Coquitlam	Pinetree Secondary School	7.6	7.1	821	7.4	329
Richmond	J.N. Burnett Secondary	7.3	6.8	548	7.1	329
Delta	South Delta Secondary	7.0	6.9	503	7.0	336
Coast Mountains	Mount Elizabeth Secondary	6.7	6.5	371	6.6	347
Greater Victoria	Reynolds Secondary	6.4	6.6	347	6.5	348
Howe Sound	Howe Sound Secondary	6.6	6.9	437	6.8	350
Coast Mountains	Hazelton Secondary	5.3	5.4	202	5.4	351
Nanaimo-Ladysmith	Ladysmith Secondary	6.0	6.3	298	6.2	358
Richmond	Charles E. London Secondary	6.7	6.9	448	6.8	359
Kamloops/Thompson	Norkam Secondary	6.6	6.7	419	6.7	364
Vancouver	Britannia Secondary	6.6	5.8	305	6.2	367
Langley	Walnut Grove Secondary	7.0	7.3	704	7.2	376
Burnaby	Alpha Secondary	6.9	6.6	474	6.8	380
Vancouver Island North	Port Hardy Secondary	4.7	4.8	178	4.8	380
Langley	Mountain Secondary	6.6	5.3	286	6.0	382
Boundary	Grand Forks Secondary	5.2	6.0	240	5.6	385
Vancouver	Gladstone Secondary	7.2	6.8	578	7.0	386
Richmond	Richmond Sr. Secondary	7.0	6.9	580	7.0	387
Maple Ridge-Pitt Meadows	Pitt Meadows Secondary	6.7	6.3	387	6.5	388

**Table 1: Estimated Cost of Course Completion Shortfall By School
(Public and Independent Schools), 2002/2003**

School District Name	School Name	Course Completions/ FTE, 1998/1999	Course Completions/ FTE, 1999/2000	G11 & G12 FTE Enrollment, 2002/2003	Estimated Course Completions/ FTE, 2002/2003*	Estimated Cost of Course Completion Shortfall, 2002/2003 (\$ thousands)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Richmond	Hugh Boyd Secondary	6.5	6.5	391	6.5	392
Surrey	North Surrey Secondary	6.8	6.5	460	6.7	399
Gulf Islands	Gulf Islands Secondary	5.8	6.1	305	6.0	407
Rocky Mountain	David Thompson Secondary	5.5	5.5	244	5.5	407
Kootenay-Columbia	Stanley Humphries Secondary	6.2	6.0	332	6.1	421
North Vancouver	Windsor Secondary	6.4	6.3	402	6.4	430
Prince Rupert	Charles Hays Secondary	5.4	4.9	230	5.2	430
Mission	Hatzic Secondary	5.8	5.6	281	5.7	432
Sunshine Coast	Chatelech Secondary	5.8	6.2	326	6.0	435
Nechako Lakes	Nechako Valley Secondary	6.0	5.8	310	5.9	435
Saanich	Parkland Secondary	6.2	6.3	391	6.3	444
Coquitlam	Port Moody Sr. Secondary	7.0	7.5	952	7.3	445
Quesnel	Correliou Secondary	5.9	6.1	335	6.0	447
Mission	Mission Secondary	5.9	5.8	321	5.9	450
Sunshine Coast	Elphinstone Secondary	5.4	5.7	282	5.6	452
Burnaby	Cariboo Hill Secondary	6.5	6.1	400	6.3	454
Cariboo-Chilcotin	Williams Lake Secondary	5.8	5.7	311	5.8	457
Maple Ridge-Pitt Meadows	Westview Secondary	6.5	6.5	457	6.5	458
Kootenay Lake	Prince Charles Secondary	5.6	6.3	351	6.0	469
Vancouver	Kitsilano Secondary	7.0	6.6	592	6.8	474
Okanagan Similkameen	Southern Okanagan Secondary	5.8	5.4	298	5.6	478
Southeast Kootenay	Mount Baker Secondary	7.0	7.0	718	7.0	480
Nanaimo-Ladysmith	John Barsby Secondary	5.1	5.0	249	5.1	482
Saanich	Stelly's Secondary	6.7	6.7	556	6.7	483
Surrey	Enver Creek Secondary	6.6	6.5	518	6.6	484
Langley	D.W. Poppy Secondary	6.6	6.2	456	6.4	487
Surrey	Earl Marriott Secondary	6.8	6.6	563	6.7	489
Langley	Aldergrove Secondary	6.1	6.1	388	6.1	492
Comox Valley	Georges P. Vanier Secondary	6.9	7.3	833	7.1	501
Vancouver	Eric Hamber Secondary	7.1	6.8	752	7.0	502
Cowichan Valley	Cowichan Secondary	7.0	6.5	633	6.8	507
Prince George	Kelly Road Secondary	6.7	6.4	551	6.6	515

**Table 1: Estimated Cost of Course Completion Shortfall By School
(Public and Independent Schools), 2002/2003**

School District Name	School Name	Course Completions/ FTE, 1998/1999	Course Completions/ FTE, 1999/2000	G11 & G12 FTE Enrollment, 2002/2003	Estimated Course Completions/ FTE, 2002/2003*	Estimated Cost of Course Completion Shortfall, 2002/2003 (\$ thousands)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Central Okanagan	George Elliot Secondary	5.9	5.6	354	5.8	520
Surrey	Johnston Heights Secondary	6.5	6.2	493	6.4	527
Cariboo-Chilcotin	Peter Skene Ogden Secondary	6.1	6.0	415	6.1	527
Vancouver	Magee Secondary	6.6	6.3	529	6.5	530
Cariboo-Chilcotin	Columneetza Sr. Secondary	5.0	5.6	296	5.3	534
Langley	H D Stafford Secondary	5.4	6.1	368	5.8	541
Vancouver	David Thompson Secondary	6.8	7.0	744	6.9	547
Qualicum	Ballenas Secondary	6.1	6.2	456	6.2	548
Sooke	Edward Milne Commu- nity School	4.9	5.2	284	5.1	550
Vernon	Vernon Secondary	6.0	5.6	379	5.8	557
Kootenay Lake	L.V. Rogers Secondary	6.4	6.3	522	6.4	558
Surrey	Frank Hurt Secondary	5.8	5.7	385	5.8	566
Burnaby	Burnaby Central Secondary	6.8	6.5	660	6.7	573
Vancouver	Sir Charles Tupper Secondary	6.2	5.5	409	5.9	574
Prince George	College Heights Secondary	5.7	6.0	413	5.9	579
Surrey	Lord Tweedsmuir Secondary	6.0	6.1	457	6.1	580
Surrey	Tamanawis Secondary School	6.2	6.3	512	6.3	581
Nanaimo-Ladysmith	Nanaimo District Secondary	5.9	6.7	514	6.3	584
Langley	Brookwood Secondary	5.7	6.2	438	6.0	585
Langley	Langley Secondary School	5.6	5.8	381	5.7	585
Surrey	Semiahmoo Secondary	7.0	6.6	732	6.8	587
Bulkley Valley	Smithers Secondary	5.6	5.5	373	5.6	598
Richmond	R.C. Palmer Secondary	5.9	5.7	415	5.8	610
Greater Victoria	Mount Douglas Sr. Secondary	6.6	7.0	766	6.8	614
Coquitlam	Riverside Secondary	6.7	6.6	707	6.7	614
Okanagan Skaha	Summerland Secondary	5.2	5.6	356	5.4	618
Surrey	Fleetwood Park Secondary	6.4	6.2	547	6.3	621

**Table 1: Estimated Cost of Course Completion Shortfall By School
(Public and Independent Schools), 2002/2003**

School District Name	School Name	Course Completions/ FTE, 1998/1999	Course Completions/ FTE, 1999/2000	G11 & G12 FTE Enrollment, 2002/2003	Estimated Course Completions/ FTE, 2002/2003*	Estimated Cost of Course Completion Shortfall, 2002/2003 (\$ thousands)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Vancouver	Templeton Secondary	6.1	5.8	466	6.0	622
Vancouver	Windermere Secondary	6.2	5.9	492	6.1	624
Surrey	L A Matheson Secondary	5.8	5.7	431	5.8	633
Abbotsford	Yale Secondary School	6.3	6.5	595	6.4	636
Qualicum	Kwalikum Secondary	5.4	5.8	398	5.6	638
Vernon	W.L. Seaton Secondary	5.0	6.2	402	5.6	644
Nanaimo-Ladysmith	Dover Bay Secondary	6.5	6.5	644	6.5	645
Maple Ridge-Pitt Meadows	Garibaldi Secondary	6.2	5.7	483	6.0	645
Richmond	Cambie Secondary	6.2	6.0	510	6.1	647
Abbotsford	W.J. Mouat Secondary	6.4	6.4	612	6.4	654
West Vancouver	West Vancouver Secondary	6.6	6.9	817	6.8	655
Delta	Delta Secondary	6.3	6.2	584	6.3	663
Quesnel	Quesnel Secondary School	5.6	5.9	451	5.8	663
Greater Victoria	Esquimalt Secondary	5.5	5.7	421	5.6	675
Campbell River	Timberline Secondary School	6.5	6.3	651	6.4	696
Abbotsford	Robert Bateman Secondary	6.0	5.4	470	5.7	722
Abbotsford	Rick Hansen Secondary	5.8	5.9	524	5.9	735
Abbotsford	Career Technical Centre	4.3	4.6	315	4.5	736
Richmond	Matthew McNair Sr. Secondary	5.6	5.8	485	5.7	745
Chilliwack	Sardis Secondary School	7.0	6.7	1025	6.9	753
Burnaby	Burnaby North Secondary	6.7	6.7	872	6.7	757
Peace River South	South Peace Secondary	5.7	5.5	480	5.6	769
North Vancouver	Carson Graham Secondary	6.5	6.1	681	6.3	773
Maple Ridge-Pitt Meadows	Maple Ridge Secondary	5.5	6.4	589	6.0	787
Campbell River	Carihi Secondary	5.7	5.9	580	5.8	852
Vancouver	Vancouver Technical Secondary	6.3	6.1	716	6.2	861
Coquitlam	Gleneagle Secondary School	6.5	6.4	875	6.5	877
Vancouver	Killarney Secondary	6.5	6.2	830	6.4	887
Coquitlam	Centennial Sr. Secondary	6.8	6.6	1065	6.7	925

**Table 1: Estimated Cost of Course Completion Shortfall By School
(Public and Independent Schools), 2002/2003**

School District Name	School Name	Course Completions/ FTE, 1998/1999	Course Completions/ FTE, 1999/2000	G11 & G12 FTE Enrollment, 2002/2003	Estimated Course Completions/ FTE, 2002/2003*	Estimated Cost of Course Completion Shortfall, 2002/2003 (\$ thousands)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Vancouver	John Oliver Secondary	5.8	4.9	533	5.4	926
Burnaby	Burnaby South Secondary	6.4	6.7	996	6.6	931
Maple Ridge-Pitt Meadows	Thomas Haney Secondary	4.2	4.5	397	4.4	955
North Okanagan-Shuswap	Salmon Arm Sr. Secondary	6.1	6.2	797	6.2	958
Coquitlam	Terry Fox Sr. Secondary	6.5	6.4	973	6.5	975
Cowichan Valley	Frances Kelsey Secondary	4.7	5.5	504	5.1	976
Surrey	Queen Elizabeth Sr. Secondary	6.2	5.8	734	6.0	980
Surrey	Guildford Park Secondary	5.6	5.4	593	5.5	990
Abbotsford	Abbotsford Sr. Secondary	6.0	5.8	720	5.9	1,010
New Westminster	New Westminster Secondary	6.0	6.1	800	6.1	1,015
Chilliwack	Chilliwack Secondary	5.8	6.1	782	6.0	1,045
Coast Mountains	Caledonia Sr. Secondary	5.6	5.0	586	5.3	1,057
Greater Victoria	Spectrum Community	5.6	5.4	645	5.5	1,077
Peace River North	North Peace Secondary	5.7	5.8	769	5.8	1,130
Delta	North Delta Sr. Secondary	6.6	6.5	1243	6.6	1,162
Surrey	Princess Margaret Secondary	5.2	5.4	658	5.3	1,187
Greater Victoria	Victoria High	5.7	5.2	787	5.5	1,314
Alberni	Alberni District Secondary	5.3	5.2	739	5.3	1,333
Central Okanagan	Mount Boucherie Secondary	5.7	5.8	928	5.8	1,364
Okanagan Skaha	Penticton Secondary	5.6	5.6	939	5.6	1,505
Prince George	Prince George Secondary	5.3	5.4	958	5.4	1,664
Sooke	Belmont Secondary	5.2	5.0	952	5.1	1,844

Notes

* 2002-2003 Course completions/FTE are estimated to be equal to the average of course completions during the years 1998/1999 and 1999/2000.

The Formula used to derive the Estimated Cost of Course Completion is $ECCCS = (8 - ECCFTE) \times G11-12FTEE \times 0.667875$

Where: ECCCS is the Estimated Cost of Course Completion Shortfall, 2002-2003; ECCFTE is the Estimated Course Completions per FTE, 2002-2003; G11-12FTEE is the grade 11 and grade 12 FTE Enrollment, 2002-2003; and 0.667875 is the basic allocation grant divided by the number of courses in a normal full-time program (8), expressed in thousands of dollars. Calculated totals may not sum due to rounding.

**Table 2: Estimated Cost of Course Completion Shortfall By School District
(Public Schools Only), 2002/2003**

District Name	Course Completions/FTE, 1998/1999	Course Completions/FTE, 1999/2000	Estimated Course Completions/FTE, 2002/2003	Estimated Cost of Course Completion Shortfall, 2002/2003*, (\$ thousands)
Francophone Education Authority	5.9	6.5	6.2	54
Central Coast	5.6	5.2	5.4	59
Nisga'a	5.7	5.9	5.8	73
Vancouver Island West	4.4	5.8	5.1	78
Arrow Lakes	6.6	6.0	6.3	115
Haida Gwaii-Queen Charlotte	4.0	3.5	3.7	156
Revelstoke	6.0	6.7	6.3	288
Fort Nelson	5.4	5.6	5.5	291
Powell River	6.9	6.7	6.8	410
Gold Trail	5.2	5.7	5.4	420
Gulf Islands	5.8	6.1	5.9	422
Boundary	5.6	6.2	5.9	453
Fraser-Cascade	5.6	5.9	5.8	511
Nicola-Similkameen	6.3	5.7	6.0	555
Vancouver Island North	5.7	5.8	5.7	571
Prince Rupert	5.7	5.2	5.4	711
Okanagan Similkameen	6.1	5.8	5.9	738
Rocky Mountain	6.2	6.1	6.1	767
Comox Valley	7.0	7.3	7.1	776
Howe Sound	5.8	6.5	6.1	791
Bulkley Valley	5.9	5.5	5.7	812
Kootenay-Columbia	6.5	6.7	6.6	822
West Vancouver	7.2	6.9	7.1	907
Sunshine Coast	5.7	6.1	5.9	938
Southeast Kootenay	6.8	6.7	6.8	952
New Westminster	6.0	6.1	6.0	1,045
Quesnel	5.7	6.0	5.9	1,123
Nechako Lakes	5.9	5.4	5.6	1,128
Mission	6.1	6.0	6.0	1,162
Peace River North	5.7	5.8	5.8	1,185
Qualicum	5.8	6.0	5.9	1,199
Peace River South	5.9	5.5	5.7	1,202
Saanich	6.8	6.7	6.7	1,259

**Table 2: Estimated Cost of Course Completion Shortfall By School District
(Public Schools Only), 2002/2003**

District Name	Course Completions/FTE, 1998/1999	Course Completions/FTE, 1999/2000	Estimated Course Completions/FTE, 2002/2003	Estimated Cost of Course Completion Shortfall, 2002/2003*, (\$ thousands)
Kootenay Lake	6.2	6.2	6.2	1,353
North Okanagan-Shuswap	6.4	6.4	6.4	1,450
Alberni	5.3	5.2	5.3	1,489
Campbell River	6.2	6.1	6.1	1,562
Coast Mountains	5.9	5.7	5.8	1,777
Chilliwack	6.3	6.4	6.4	1,853
North Vancouver	7.2	6.9	7.1	1,860
Cowichan Valley	7.1	6.2	6.7	1,865
Vernon	6.0	6.4	6.2	1,885
Cariboo-Chilcotin	5.6	5.6	5.6	1,924
Okanagan Skaha	5.5	5.6	5.6	2,094
Kamloops/Thompson	6.7	6.8	6.7	2,170
Central Okanagan	6.3	6.2	6.3	2,331
Sooke	5.1	5.1	5.1	2,388
Delta	6.8	6.7	6.7	2,420
Nanaimo-Ladysmith	6.2	6.4	6.3	2,561
Maple Ridge—Pitt Meadows	5.9	5.9	5.9	3,288
Burnaby	6.7	6.7	6.7	3,292
Langley	6.3	6.2	6.3	3,764
Prince George	6.0	5.9	5.9	3,875
Richmond	6.6	6.6	6.6	3,922
Coquitlam	6.9	6.8	6.9	4,343
Abbotsford	6.2	5.9	6.0	4,490
Greater Victoria	6.6	6.2	6.4	4,597
Vancouver	7.1	6.5	6.8	8,411
Surrey	6.5	6.2	6.3	8,969
Stikine	n/a	n/a	n/a	n/a

Notes:

*2002-2003 Course completions/FTE are estimated to be equal to the average of course completions during the years 1998/1999 and 1999/2000.

The Formula used to derive the Estimated Cost of Course Completion is $ECCCS=(8-ECCFTE) \times TFTEE \times 0.667875$

Where: ECCCS is the Estimated Cost of Course Completion Shortfall, 2002-2003, ECCFTE is the Estimated Course Completions per FTE, 2002-2003, G11-12FTEE is the grade 11 and grade 12 FTE Enrollment, 2002-2003, and 0.667875 is the basic allocation grant divided by the number of courses, in a normal full-time program (8), expressed in thousands of dollars.

Calculated totals may not sum due to rounding.



Bibliography

- Bergeson, Terry *et al.* (2000). "Instructions for the 2000-2001 School Year." *Enrollment Reporting Handbook* (August).
- British Columbia Ministry of Education (1996). *Support for Learning—1995/96 Education Finance System*.
- ____ (2000a). *BC Funding Manual*. Digital document available at: <http://www.bced.gov.bc.ca/accountability/district/budget-instruction-manual/budget-instruction-manual-00-01.pdf>. (Checked April 17, 2001.)
- ____ (2000b). *The British Columbia School Act*. Digital document available at <http://www.bced.gov.bc.ca/legislation/schoollaw/revisedstatutescontents.pdf>. (Checked December 31, 2002.)
- ____ (2002a). "Form 1701: Student Data Collection. Completion Instructions for Public Schools" (July 12). Digital document available at <http://www.bced.gov.bc.ca/datacollections/public/pf1701.pdf>. (Checked December 26, 2002.)
- ____, Office of the Inspector of Independent Schools (2002b). *General Independent Schools Information*. Digital document available at http://www.bced.gov.bc.ca/independentschools/is_info/geninfo.pdf. (Checked December 31, 2002.)
- ____ (2002c). "2002/03 Final Funding Allocations, Table 1A: Provincial Overview of 2002/03 Final Operating Grants." Digital document available at <http://www.bced.gov.bc.ca/k12funding/funding/02-03/final/welcome.htm>. (Checked December 26, 2002.)
- California Department of Education (2001). *California Education Code*. Digital document available at: <http://www.leginfo.ca.gov/calaw/htm>, then follow the links. (Checked April 17, 2001.)
- Cowley, Peter C, and Stephen Easton (2002). *Report Card on British Columbia's Secondary Schools, 2002 Edition* (March). Vancouver: Fraser Institute.
- Edgars, Mark. Educational Policy Analyst, Florida State Department of Education. Interview (February 21, 2001).
- Florida Department of Education (2000). *Funding for Florida School Districts*. Digital document available at: <http://www.myfloridaeducation.com/bin00042/home0042.htm> (Checked December 31, 2002).
- Garcia, Omar. Director of State Funding, Texas Education Agency. Interview (February 20, 2001).
- Gold, Stephen D. and David M. Smith (1992). *Public School Finance Programs of the United States and Canada 1990-91*. Vols. 1 and 2. American Education Finance Association.
- Hyary, Andrea. New York State Education Department. Interview (February 21, 2001).
- Ireland, Allan. Analyst, Financial Modelling and Forecasting Department, Ontario Ministry of Education. Interview (February 21, 2001).
- Jordan, K. Forbis and Teresa S. Lyons (1992). *Financing Public Education in an Era of Change*. USA: Phi Delta Kappa Educational Foundation.
- Lam, Y.L. Jack (1998). *Education Finance: Current Canadian Issues*. Canada: Detselig Enterprises Ltd.
- Lawton, Stephen B. (1996). *Financing Canadian Education*. Canadian Education Association.
- ____ (1989). *Scrimping or Squandering? Financing Canadian Schools*. The Ontario Institute for Studies in Education Press.
- Levacic, Rosalind (1989). *Financial Management in Education*. UK: Open University Press.
- Odden, Allan and Lawrence Picus (1992). *School Finance: A Policy Perspective*. USA: McGraw-Hill Inc.
- Odden, Allan (1992). *Rethinking School Finance*. USA: Jossey-Bass Inc.
- Ontario Ministry of Education (2001). *Regulation Made Under the Education Act: Calculation of Average Daily Enrolment for the 2000-2001 School Board Fiscal Year*. Digital document available at: <http://www.edu.gov.on.ca/eng/funding>. (Checked April 17, 2001.)
- Picus, Lawrence O. and, James L. Wattenbarger (1996). *Where Does the Money Go? Resource Allocation in Ele-*

mentary and Secondary Schools. American Education Finance Association, Corwin Press, Inc.

Pierce, Lawrence C. and Walter I. Garms (1975). *State School Finance Alternatives: Strategies for Reform*. USA: Center for Educational Policy and Management.

Poon, Kenneth. Manager, Funding Department, Alberta Learning. Interview (February 20, 2001).

Swanson, Austin D. and Richard A. King (1997). *School Finance: Its Economics and Politics, 2nd ed.* USA: Longman Publishers.

Texas Education Agency (n.d.). *Education Code*. Digital document available at: <http://www.capitol.state.tx.us/statutes/edtoc.html>. (Checked April 17, 2001.)

Tooley, James (2000). *Reclaiming Education*. London: Cassell.

Wong, Kenneth (1999). *Funding Public Schools: Politics and Policies*. University Press of Kansas.



About the Authors

Peter Cowley is the Director of School Performance Studies at The Fraser Institute. Upon graduation from the University of British Columbia (B.Comm. 1974), Mr Cowley accepted a marketing post with Proctor and Gamble in Toronto. He later returned to Vancouver to begin a long career in marketing and general management in the furniture-manufacturing sector. In 1994, Mr Cowley wrote and published *The Parent's Guide*, a popular handbook for parents of British Columbia's secondary-school students. It was replaced by www.parentsguide.com in 1995. In 1998, Mr Cowley was co-author of The Fraser Institute's *A Secondary Schools Report Card for British Columbia*. This was followed in 1999 by *The 1999 Report Card on British Columbia's Secondary Schools*, *The 1999 Report Card on Alberta's High Schools*, and *Boys, Girls, and Grades: Academic Gender Balance in British Columbia's Secondary Schools*. In 2000, he was co-author of new editions of the *Report Cards* for Alberta and British Columbia and of the first edition of the *Bulletin des écoles secondaires du Québec: Édition 2000/Report Card on Quebec's Secondary*

Schools. In 2001, he was author of the first edition of the *Report Card on Ontario's Secondary Schools* and was co-author of new editions of the established *Report Cards*. In 2002, he was co-author of the *Report Card on Alberta's Elementary Schools*, the first of its kind in Canada, as well as new editions of established *Report Cards*. He continues the development and publication of school performance measurement studies for The Fraser Institute.

Stephen T. Easton is a professor of Economics at Simon Fraser University and a Senior Scholar at The Fraser Institute. He received his A.B. from Oberlin College and his Ph.D. from the University of Chicago. Recent works published by The Fraser Institute include *Privatizing Prisons* (editor, 1998), *The Costs of Crime: Who Pays and How Much? 1998 Update* (with Paul Brantingham, 1998), and *Rating Global Economic Freedom* (editor, 1992). He was also co-author of *A Secondary Schools Report Card for British Columbia* (1998), *The 1999 Report Card on British Columbia's Secondary Schools*, *Boys,*

Girls, and Grades: Academic Gender Balance in British Columbia's Secondary Schools (1999), and *The 1999 Report Card on Alberta's High Schools*. Other publications about education include "Do We Have a Problem Yet? Women and Men in Higher Education," in David Laidler (ed.), *Renovating the Ivory Tower: Canadian Universities and the Knowledge Economy* (Toronto: C.D. Howe Institute 2002), pp. 60–79; "Plus ça change, plus c'est la même chose" in Stephen B. Lawton, Rodney Reed, and Fons van Wieringen, *Restructuring Public Schooling* (Berlin: Springer-Verlag, 1997) and *Education in Canada: An Analysis of Elementary, Secondary and Vocational Schooling* (Vancouver:

The Fraser Institute, 1988). His editorials have been carried by the *Vancouver Sun*, the *Globe and Mail*, the *Financial Post*, the *Ottawa Citizen*, the *Stirling chain* and many other newspapers around the country. Professor Easton continues his work as co-author of the institutes Report Cards in Alberta and British Columbia.

Davin Li is a graduate of the Richard Ivey School of Business at the University of Western Ontario. He is currently an analyst at a Toronto-based energy company where he conducts financial modeling, process-improvement studies, and strategic planning.



Acknowledgements

The Fraser Institute wishes to acknowledge the generous support for this project from the Max Bell Foundation. Thanks are also due to the employees of the Ministry of Education for their help acquiring and verifying the data upon which this work is based.