



Max Shang and Peter Cowley



# Report Card on Alberta's High Schools 2024

by Max Shang and Peter Cowley

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## Introduction

The Report Card on Alberta's High Schools 2024 (hereafter, Report Card) collects a variety of relevant, objective indicators of school performance into one, easily accessible public document so that anyone can analyze and compare the performance of individual schools. By doing so, the Report Card assists parents when they choose a school for their children and encourages and assists all those seeking to improve their schools.

# The Report Card helps parents choose

Where parents can choose among several schools for their children, the *Report Card* provides a valuable tool for making a decision. Because it makes comparisons easy, the *Report Card* alerts parents to those nearby schools that appear to have more effective academic programs. Parents can also determine whether schools of interest are improving over time. By first studying the *Report Card*, parents are better prepared to ask relevant questions when they interview the principal and teachers at the schools under consideration.

Of course, the choice of a school should not be made solely on the basis of any one source of information. Families choosing a school for their students should seek more information by visiting the school and interviewing teachers and school administrators. The web sites of Alberta Education, local school districts, and individual schools can also be sources of useful information. And, a sound academic program should be complemented by effective programs in areas of school activity not measured by the *Report Card*. Nevertheless, the *Report Card* 

provides a detailed picture of each school that is not easily available elsewhere.

# The Report Card aids school improvement

Certainly, the act of publicly rating and ranking schools attracts attention. Schools that perform well or show consistent improvement are applauded. The results of poorly performing schools and those whose performance is deteriorating generate concern. This attention, in itself, provides an incentive for all those connected with a school to redouble their efforts to improve student results. However, the *Report Card* offers more than just incentive: it includes a variety of indicators, each of which reports results for an aspect of school performance that might be improved. School administrators who are dedicated to improvement accept the *Report Card* as another source of evidence that their schools can do a better job.

#### Some schools do better than others

In order to improve a school, one must believe that improvement is achievable. The *Report Card on Alberta's High Schools*, like all the other editions, provides evidence about what can be accomplished. It demonstrates clearly that even when we take into account factors such as the students' family background, which some believe dictates the degree of academic success that students will have in school, some schools do better than others. This finding confirms research results from other countries. Indeed, it will come as no great surprise to experienced parents and educators that the data consistently suggest that what goes on in the schools makes a difference to

student success and that some schools make more of a difference than others.

# Comparisons are at the heart of the improvement process

By comparing a school's latest results with those of earlier years, we can see if the school is improving. By comparing a school's results with those of neighbouring schools, or of schools with similar school and student characteristics, we can identify more successful schools and learn from them. Reference to overall provincial results places an individual school's level of achievement in a broader context.

There is great benefit in identifying schools that are particularly effective. By studying the proven

techniques used in schools where students are successful, less effective schools may find ways to improve. Comparisons are at the heart of improvement and making comparisons among schools is made simpler and more meaningful by the *Report Card*'s indicators, ratings, and rankings.

# You can contribute to the development of the *Report Card*

The *Report Card* program benefits from the input of interested parties. We welcome your suggestions, comments, and criticisms. Please contact co-author Max Shang at max.shang@fraserinstitute.org.

# Key academic indicators of school performance

The foundation of the *Report Card* is an overall rating of each school's academic performance. Building on data about student results provided by Alberta Education (the provincial ministry of education) we rate each school on a scale from zero to 10. We base our overall rating of each school's academic performance on eight indicators:

- (1) average diploma examination mark;
- (2) percentage of diploma examinations failed;
- (3) difference between the school mark and examination mark in diploma courses;
- (4) difference between male and female students in the average value of their exam marks in English 30-1/2;
- (5) difference between male and female students in the average value of their exam marks in Mathematics 30-1/2;
- (6) diploma courses taken per student;
- (7) diploma completion rate;
- (8) delayed advancement rate.

We have selected this set of indicators because they provide systematic insight into a school's performance. Because they are based on annually generated data, we can assess not only each school's performance in a year but also its improvement or deterioration over time.

# Three indicators of effective teaching

#### 1 Average diploma examination mark

This indicator (in the tables *Average exam mark*) is the average percentage achieved by a school's students on the uniform final examinations in all of the diploma courses at all sittings during the year. In the calculation of this indicator, each course result is weighted by the relative number of students who completed the course.

Examinations are designed to achieve a distribution of results reflecting the differences in students' mastery of the course work. Differences among students in interests, abilities, motivation, and work-habits will inevitably have some impact upon the final results. There are, however, recognizable differences from school to school within a district in the average results on the diploma examinations. There is also variation within schools in the results obtained in different subject areas. Such differences in outcomes cannot be wholly explained by the individual and family characteristics of the school's students. It seems reasonable, therefore, to include the average examination mark for each school as one indicator of effective teaching.

## 2 Percentage of diploma examinations failed

For each school, this indicator (in the tables Percentage of exams failed) provides the rate of failure (as a percentage) in the diploma examinations. It was derived by dividing the sum, for each school, of all diploma examinations written by a school's students at all sittings during the year where a failing grade was awarded, by the total number of such examinations

written by those students. In part, effective teaching can be measured by the ability of the students to pass any uniform examination that is a requirement for successful completion of a course. Schools have the responsibility of preparing their students to pass these final examinations.

There is good reason to have confidence in this indicator as a measure of effective teaching. A student need only successfully complete two diploma courses in order to graduate. Such a student's course of study may not include the prerequisites for all post-secondary educational options but it will be sufficient for graduation from high school. Thus, students enroll in the diploma courses, in large measure, because they want to take them. Further, their success in grade 12 reflects to a certain extent how well students have been prepared in the lower grades. All of the diploma courses have prerequisite courses. Indeed, depending on the school, admission to some of the grade-12 courses may require that the student have received a prescribed minimum grade in the prerequisite lower-level course. Since the decision to take diploma courses is, for the most part, voluntary and requires demonstrated success in previous courses, it seems reasonable to use the percentage of examinations failed in these courses as an additional indicator of the effectiveness of the teaching in high schools.

## 3 Difference between school mark and examination mark

For each school, this indicator (in the tables *School vs exam mark difference*) gives the average amount (for all of the diploma courses) by which the "school" mark—the assessment of each student's learning that is made by the school—exceeds the exam mark in that course.<sup>2</sup>

Effective teaching includes regular assessment so that students and teachers alike may be aware of a student's progress. For such assessment to be useful, it must reflect the student's understanding of the course accurately. As a systematic policy, inflation of the grades awarded by the school will be counterproductive. Students who believe they are already successful when they are not will be less likely to invest the extra

effort needed to master the course material. In the end, they will be poorer for not having achieved the level of understanding that they could have through additional study.

The effectiveness of school-based assessments can be determined by a comparison to external assessments of the students. For each diploma course, Alberta Education, the authority that designed the course, administers its uniform examination. This examination will test the students' knowledge of the material contained in the course. If the mark assigned by the school is a reasonably accurate reflection of students' understanding, it should be roughly the same as the mark gained on the diploma examination. Thus, if a school has accurately assessed a student as consistently working at a C+ level, the student's examination result will be at a similar level. If, however, a school is consistently granting marks substantially higher or lower than those achieved by its students on the final examinations, then the school is not providing an accurate indicator of the extent to which knowledge of the course material is being acquired.

# An indication of consistency in teaching and assessment

#### The Gender gap indicators

Research<sup>3</sup> has shown that, in British Columbia's secondary schools, there are systematic differences between the academic results achieved by boys and those achieved by girls. These differences are particularly apparent where the local school makes the assessments. These findings are supported by data from Alberta Education. However, the same research found that "there appears to be no compelling evidence that girls and boys should, given effective teaching and counselling, experience differential rates of success." Further, "[t]he differences described by each indicator vary from school to school over a considerable range of values." <sup>5</sup>

The *Gender gap* indicators measure the difference, if any, between the average exam marks in English 30-1 or English 30-2 and Mathematics 30-1

or 30-2—depending upon which courses have the largest enrolment—for boys and girls. The indicator reports the size of the difference and the more successful sex.

# Three indicators of practical, well-informed counselling

While they are attending high school, students must make a number of decisions of considerable significance about their education. They will, for instance, annually decide whether to begin or continue learning a second language. In grade 10, they are required to choose between different streams in several core subject areas. In all the senior high-school years, they will face the choice of completing high school or abandoning it in favour of full-time work.

Will these young people make good decisions? It is unrealistic to presume that they can do so without advice. What practical, well-informed counselling can they call upon? While parents, in the main, are willing to help, many lack the information they need to be able to provide good advice. It falls, therefore, to the schools to shoulder some responsibility for advising students and their parents about educational choices.

The final three indicators used in the calculation of the *Overall rating out of 10* assess the counsel given by the schools by measuring the quality of the decisions taken by the students about their education. Of course, wise students will seek guidance not only from the counsellors designated by the schools but also from teachers and administrators, parents, and other relatives. Where students have strong support from family and community, the school's responsibility for counselling may be lighter; where students do not have such strong support, the school's role may be more challenging. These indicators measure the school's success in using the tools at its disposal to help students make good decisions about their education.

There are two very important decisions that senior students must make. First, they must decide whether or not to remain in school, do the work, and graduate with their class. Second, they must decide whether or not to take a number of academically challenging diploma courses. Effective counselling will encourage students to make appropriate choices.

#### 1 Delayed advancement rate

This indicator measures the extent to which schools keep their students in school and progressing in a timely manner toward completion of their diploma program. It uses data that report the educational status of students one year after they have enrolled in a given grade at any school in Alberta. For example, we can determine from these data how many of a school's grade-10 students re-enroll in the following year in grade 11; are enrolled in grade 10 for a second time; or fail to re-enroll. With these raw data, following a technique that we introduced to Canada in the Report Card on Quebec's Secondary Schools, 2001 Edition, 6 we calculate a statistic that will answer the question, "Based on this single year's school results, what is the likelihood that a student entering grade 10 at the school will graduate in the normal three-year period?"

The indicator is calculated as follows. For each school for each of grades 8, 10, 11, and 12, a rate of successful transition is determined by first summing the number of students who either receive a diploma in the current school year or re-enroll in a higher grade in the following year and then dividing that sum by the number of students enrolled in the grade in the current year. Then, for each grade, an unsuccessful transition rate is determined by subtracting the rate of successful transition from 1. The unsuccessful transition rates for grades 10, 11, and 12 are then reduced by the grade-8 unsuccessful transition rate at the school in order to produce a net unsuccessful transition rate for each grade of senior high school. We have adopted the grade-8 unsuccessful transition rate as an estimate of the effect on student transition of such events as emigration or death that lead to the disappearance of students from the school system.

The *Delayed advancement rate* indicator can now be calculated. The complements of the net unsuccessful transition rates (1 – net unsuccessful transition rate) for grades 10 through 12 are determined and

their product is calculated. This three-year composite successful transition rate is then subtracted from 1 to produce the *Delayed advancement rate* indicator that appears in the detailed tables.

Where a school does not enroll grade-8 students, the net dropout rate is calculated using the weighted average grade-8 dropout rate for all the schools in the relevant school district or division. Where a school does not enroll students in any of grade 10, 11, or 12, no *Delayed advancement rate* can be calculated.

#### 2 Diploma completion rate

This indicator, related to the *Delayed advancement rate*, reports the percentage of first-time grade-12 students who received a diploma in the reported school year. It is derived from data provided by Alberta Education. Graduation from high school retains considerable value since it increases options for post-secondary education. Further, graduates from high school who decide to enter the work force immediately will, on average, find more job opportunities than those who have not graduated.

By completing the 11 years of schooling in preparation for the final high-school year, students have already demonstrated a reasonable ability to handle the basic courses offered by the school. Moreover, for the majority of students, the minimum requirements for graduation are not onerous. The chance that students will not graduate solely because they are unable to meet the intellectual demands of the curriculum is, therefore, relatively small.

Nevertheless, the graduation rate varies quite widely from school to school throughout the province. While there are factors not related to education—emigration from the province, sickness, death, and the like—that can affect the data, there is no reason to expect these factors to influence particular schools systematically. Accordingly, we take variations in the graduation rate to be an indicator of the extent to which students are being well coached in their educational choices.

#### 3 Diploma courses taken per student

This indicator (in the tables Courses taken per stu-

dent) measures the average number of diploma courses completed by those students registered in a school on September 30th of the reported school year who are classified as having been in Grade 10 two years earlier. It is derived by summing each school's diploma course participation rates provided by Alberta Education.

In their senior years, students have freedom to choose from a considerable variety of courses. Their choices will have an impact upon their literacy, numeracy, and analytical skills upon graduation. Their choices also affect the post-secondary options open to them.

Diploma courses offer study at the senior level in a variety of core disciplines: English language arts (or French for francophone students), Mathematics, the sciences, and the humanities. Alberta Education has developed courses in each discipline that reflect the post-secondary ambitions of different groups of students and, far from being courses only for a university-bound elite, these courses teach skills and knowledge that will benefit students, no matter what they plan to do after graduation. Further, it is the marks obtained in these courses that are commonly used by post-secondary institutions—institutes of technology and community colleges as well as universities—to assess the applicant's readiness for further study and for admission to programs with limited enrollment. Thus, for most students a decision to take advantage of these courses is a good one and a school that is successful in encouraging students to take these courses shows that it offers practical, wellinformed counselling.

**Please note:** The method of calculation that Alberta Education uses to determine this participation rate has changed. Values for this indicator for the school year 2015/2016 and subsequent are not comparable with earlier values.

# In general, how is the school doing academically? The Overall rating out of 10

While each of the indicators is important, it is

almost always the case that any school does better on some indicators than on others. So, just as a teacher must make a decision about a student's overall performance, we need an overall indicator of school performance (in the tables Overall rating out of 10). Just as teachers combine test scores, portfolio assessment, and class participation to rate a student, we have combined all the indicators to produce an overall school rating. The Overall rating is not an absolute measure. That is, if a school scores a 10 out of 10 that does not mean that it has achieved perfection. It simply means that when all the indicators were taken into account, that school performed better than all the other schools in the Report Card. Thus, the overall rating of school performance answers the question, "In general, how is the school doing, academically compared to other schools in the Report Card?"

To derive this rating, the results for each of the indicators, for each school year were first standardized. Standardization is a statistical procedure whereby sets of raw data with different characteristics are converted into sets of values with "standard" statistical properties. Standardized values can readily be combined and compared.

The standardized data were then combined as required to produce eight standardized scores—one for each indicator—for each school, for each year. The eight standardized scores were weighted and combined to produce an overall standardized score. Finally, this score was converted into an overall rating. It is from this *Overall rating out of 10* that the school's provincial rank is determined.

For schools where either of the *Gender gap* indicators could not be calculated, *Gender gap* results were not used in the calculation of the *Overall rating*. In such cases the *Overall rating* was derived using the remaining six indicators. (See Appendix 1 for an explanation of the calculation of the *Overall rating out of 10*.)

Finally, note that the *Overall rating out of 10*, based as it is on standardized scores, is a relative rating. That is, in order for a school to show improvement in its overall rating, it must improve more than the average. If it improves, but at a rate less than the average, it will show a decline in its rating.

# Other indicators of school performance

Since the first edition of the *Report Card*, we have added other indicators that, while they are not used to derive the *Overall rating out of 10*, add more information on the school's effectiveness.

#### The *Trend* indicator

Is the school improving academically? For most schools, the *Report Card* includes several years of results. Unlike a simple snapshot of one year's results, this historical record provides evidence of change (or lack thereof) over time.

In order to detect trends in the performance indicators, we developed the *Trend* indicator. This indicator uses statistical analysis to identify those dimensions of school performance in which there has been real change rather than a fluctuation in results caused by random occurrences. To calculate the trends, the standardized scores rather than raw data are used. Standardizing makes historical data more comparable and the trend measurement more reliable. Because

calculation of trends is uncertain when only a small number of data points is available, a trend is indicated only in those circumstances where five years of data are available and where a trend is determined to be statistically significant. For this indicator we have defined the term "statistically significant" to mean that, nine times out of 10, the results displayed represent a real change, that is, it is unlikely that the differences in the indicator values are simply random variation from year to year.

# Indicators of student characteristics and programs

In order to get the most from the *Report Card*, readers should consult the complete table of results for each school of interest available at <a href="https://www.compareschoolrankings.org">https://www.compareschoolrankings.org</a>. By considering several years of results—rather than just a school's rank in the most recent year—readers can get a better idea of how the school is likely to perform in the future.

## **Notes**

- 1 See, for instance, Michael Rutter et al., FifteenThousand Hours: Secondary Schools and Their Effects on Children (Cambridge, MA: Harvard University Press, 1979) and Peter Mortimore et al., School Matters: The Junior Years (Wells, Somerset: Open Books, 1988).
- 2 As of September 1, 2015, for calculating the final mark, the school-awarded mark counts for 70% and the diploma examination mark counts for 30%.
- 3 Peter Cowley and Stephen Easton, *Boys, Girls,* and Grades: Academic Gender Balance in British Columbia's Secondary Schools. Public Policy Sources 22 (Vancouver, BC: The Fraser Institute, 1999).

- 4 Cowley and Easton, *Boys, Girls, and Grades*: page 7.
- 5 Cowley and Easton, *Boys, Girls, and Grades*: page 17.
- 6 A detailed discussion of the Transition Rate indicator will be found on page 8 of Richard Marceau and Peter Cowley, Bulletin des écoles secondaires du Québec: Édition 2001 / Report Card on Quebec's Secondary Schools: 2001 Edition (Montréal, QC and Vancouver, BC: Institut économique de Montréal and The Fraser Institute, 2001), where it is called Promotion rate or Taux de promotion.

## How does your school stack up?

#### Important notes to the rankings

In this table, schools are ranked (on the left hand side of the page) in descending order (from 1 to 290) according to their academic performance as measured by the Overall rating out of 10 (shown on the right hand side of the table) for the school year 2022/2023. Each school's five-year average ranking and Overall rating out of 10 are also listed. The higher the overall rating (out of 10), the higher the rank awarded to the school. Where schools tied in the overall rating, they were awarded the same rank. Where less than five years of data were available, "n/a" appears in the table.

Not all the province's high schools are included in the tables or the ranking. Excluded are schools at which fewer than 10 regular day students were enrolled in grade-12 and schools that did not gener-

---Rank----Overall rating-Last Last 2022/ 5 2022/ 5 vrs Trend School name 2023 yrs 2023 Webber Calgary 10.0 10.0 Old Scona Edmonton 10.0 10.0 n/a n/a Calgary French & International Calgary 10.0 n/a 6 Strathcona-Tweedsmuir **Okotoks** 9.7 9.0 3 Rundle College Calgary 9.3 9.8 6 n/a n/a Alberta Ballet Calgary n/a n/a n/a Renert Calgary 9.1 n/a Westmount 9.0 8.7 9 — Calgary 9.0 n/a n/a Tempo Edmonton n/a Master's College 8.9 n/a n/a Calgary n/a FFCA Calgary 9.1 11 4 — Millwoods Christian Edmonton 8.8 9.1 17 A Dr. E. P. Scarlett 8.8 11 Calgary 8.1 11 n/a n/a FFCA South Calgary 8.8 n/a n/a n/a 15 Bearspaw Christian Calgary 8.7 n/a Archbishop MacDonald Edmonton 8.5 9.0 6 16 6 — West Island College Calgary 8.5 9.0 16 10 — Western Canada Calgary 8.5 8.5 16 n/a n/a Olds Koinonia Olds 8.5 n/a 20 25 A Henry Wise Wood Calgary 8.4 7.7 20 n/a n/a Our Lady of the Snows Canmore 8.4 22 11 — Ernest Manning 8.3 8.4 Calgary

ate a sufficiently large set of student data to enable the calculation of an Overall rating out of 10. Also excluded from the ratings and rankings are: online learning centres, home-schooling centres, certain alternative schools, and adult education schools.

The exclusion of a school from the *Report* Card should in no way be construed as a judgement of the school's effectiveness.

IMPORTANT: In order to get the most from the *Report Card*, readers should consult the complete table of results for each school of interest. By considering several years of results—rather than just a school's rank in the most recent year—readers can get a better idea of how the school is likely to perform in the future

Rank Last					-	–Overall rating– Last		
	2022/ 2023	5 yrs	Trend	School name	City	2022/ 2023	5 yrs	
	22	13	_	William Aberhart	Calgary	8.3	8.3	
	22	13	—	Sir Winston Churchill	Calgary	8.3	8.3	
	22	17	_	Lillian Osborne	Edmonton	8.3	8.1	
	26	11	—	Edmonton Islamic	Edmonton	8.2	8.4	
	26	16	_	Strathcona	Edmonton	8.2	8.2	
	26	19	—	Holy Trinity Academy	Okotoks	8.2	8.0	
	26	20	_	Calgary Christian	Calgary	8.2	7.9	
	30	31		Notre Dame	Calgary	8.0	7.5	
	30	n/a	n/a	J H Picard	Edmonton	8.0	n/a	
	32	20	_	Strathcona Christian	Sherwood Park	7.9	7.9	
	32	25	_	Bishop Carroll	Calgary	7.9	7.7	
	32	29		Centennial	Calgary	7.9	7.6	
	32	n/a	n/a	Notre-Dame Monts	Canmore	7.9	n/a	
	32	n/a	n/a	St. Albert	St. Albert	7.9	n/a	
	32	n/a	n/a	Bowden Grandview	Bowden	7.9	n/a	
	32	n/a	n/a	Immanuel Christian	Lethbridge	7.9	n/a	
	39	31	_	Innisfail	Innisfail	7.8	7.5	
	39	n/a	n/a	St. Mary's	Vegreville	7.8	n/a	
	39	n/a	n/a	Vauxhall	Vauxhall	7.8	n/a	
	42	13	$\blacksquare$	Springbank	Calgary	7.7	8.3	
	42	20	_	St. Gabriel the Archangel	Chestermere	7.7	7.9	
	42	25	—	Archbishop Jordan	Sherwood Park	7.7	7.7	

Ra	nk Last			-0	verall rat	ing- Last	Ra	nk Last			-0ve	erall rat	ting- Last
2022/ 2023	5 yrs	Trend	School name	City	2022/ 2023	5 yrs	2022/ 2023	5 yrs	Trend	School name	City	2022/ 2023	5 yrs
42	25	_	Harry Ainlay	Edmonton	7.7	7.7	98	n/a	n/a	Penhold Crossing	Penhold	6.6	n/a
42	43		Spruce Grove	Spruce Grove	7.7	6.9	98	n/a	n/a	Joane Cardinal-Schubert	Calgary	6.6	n/a
42		n/a	Thorsby	Thorsby	7.7	n/a	98	n/a	n/a	Blessed Sacrament	Wainwright	6.6	n/a
48	23	_	Rundle College Academy	Calgary	7.6	7.8	109	38	_	St. Timothy	Cochrane	6.5	7.1
48	55	_	Lacombe	Lacombe	7.6	6.6	109		_	Westwood	Fort McMurray	6.5	6.4
48		n/a	Holy Cross	Strathmore	7.6	n/a	109		_	Louis St. Laurent	Edmonton	6.5	6.4
48		n/a	Clear Water	Calgary	7.6	n/a	109		_	H. J. Cody	Sylvan Lake	6.5	6.3
48	n/a		Heritage Christian	Calgary	7.6	n/a	109	83		Magrath	Magrath	6.5	6.2
53	29	_	Beaumont Box Forev	Beaumont	7.5	7.6	109	119	<b>A</b>	Bert Church	Airdrie	6.5	5.7
53 53	36	m/a	Bev Facey New Norway	Sherwood Park New Norway	7.5 7.5	7.2 n/a	109 109	125 n/a	n/a	Medicine Hat Dr. Anne Anderson	Medicine Hat Edmonton	6.5 6.5	5.5 n/a
56	38	II/d	St. Peter the Apostle	Spruce Grove	7.3	7.1	109		n/a	Vegreville	Vegreville	6.5	n/a
57	33		Ardrossan	Ardrossan	7.3	7.4	118		11/ a	Assumption	Cold Lake	6.4	6.6
57 57		n/a	Parkland Immanuel	Edmonton	7.3	n/a	118	75		Jasper Place	Edmonton	6.4	6.3
57	n/a		Brant	Brant	7.3	n/a	118	92		Bishop Grandin	Calgary	6.4	6.1
60	35		St. Francis	Calgary	7.2	7.3	118	125		Crowsnest	Coleman	6.4	5.5
60	36	_	John G Diefenbaker	Calgary	7.2	7.2	118		n/a	Tofield	Tofield	6.4	n/a
60	41	_	St. Mary's	Calgary	7.2	7.0	118	n/a	n/a	Banff	Banff	6.4	n/a
60	43	_	St. Francis Xavier	Edmonton	7.2	6.9	124	65	_	Salisbury	Sherwood Park	6.3	6.4
60	65	_	Queen Elizabeth	Calgary	7.2	6.4	124	75	_	J. R. Robson	Vermilion	6.3	6.3
60	75		Peace Wapiti Academy	Grande Prairie	7.2	6.3	124	83	_	Highwood	High River	6.3	6.2
60	75	_	David Thompson	Leslieville	7.2	6.3	124		_	Leduc	Leduc	6.3	6.1
60	n/a		All Saints	Calgary	7.2	n/a	124	100		Chestermere	Rocky View County		6.0
60		n/a	Airdrie Koinonia Christian	Airdrie	7.2	n/a	124	105		Lord Beaverbrook	Calgary	6.3	5.9
69	47	_	Foothills	Okotoks	7.1	6.8	124	123		Charles Spencer	Grande Prairie	6.3	5.6
69		n/a	Savanna	Silver Valley	7.1	n/a	124	129		Frank Maddock	Drayton Valley	6.3	5.4
71	41	_	Ross Sheppard	Edmonton	7.0	7.0	124	n/a		St. Dominic	Rocky Mountain H		
71 71	52	_	Memorial St. Martin De Porres	Stony Plain Airdrie	7.0 7.0	6.8 6.7	124 124		n/a	National Sport F. P. Walshe	Calgary Fort Macleod	6.3 6.3	n/a n/a
71			George McDougall	Airdrie	7.0	6.1	124		n/a n/a	Maurice-Lavallee	Edmonton	6.3	n/a
71	114		Three Hills	Three Hills	7.0	5.8	136			Christ The King	Leduc	6.2	6.8
71	n/a		St. Joseph	Whitecourt	7.0	n/a	136	47		Didsbury	Didsbury	6.2	6.8
71		n/a	F G Miller	Elk Point	7.0	n/a	136	55		Bishop O'Byrne	Calgary	6.2	6.6
78	23	<b>V</b>	Olds	Olds	6.9	7.8	136		_	Raymond	Raymond	6.2	6.6
78	55	_	Crescent Heights	Calgary	6.9	6.6	136	61	_	Sexsmith	Sexsmith	6.2	6.5
78	65	_	Notre Dame	Bonnyville	6.9	6.4	136	83	_	Austin O'Brien	Edmonton	6.2	6.2
78	114		Central Memorial	Calgary	6.9	5.8	136	105	_	Will Sinclair	Rocky Mountain He	ouse6.2	2 5.9
78	n/a		Morinville	Morinville	6.9	n/a	136	105	_	Bishop McNally	Calgary	6.2	5.9
78_		n/a	Cremona	Cremona	6.9	n/a	136		n/a	BCS@Home	Calgary	6.2	n/a
84	38	_		Cochrane	6.8	7.1	136			St. Augustine	Ponoka	6.2	n/a
84		_	Bow Valley	Cochrane	6.8	6.1	136			Our Lady of Mount Pleasant	Camrose	6.2	n/a
84	119		Cardston	Cardston	6.8	5.7	136		n/a	Beiseker	Beiseker	6.2	n/a
84		n/a	Covenant Canadian Reformed	Barrhead	6.8	n/a	148	43		W. R. Myers	Taber	6.1	6.9
<u>84</u> 89		11/d	South Central Mother Margaret Mary	Oyen Edmonton	6.8	<u>n/a</u> 7.4	148 148		_	Hugh Sutherland Onoway	Carstairs Onoway	6.1 6.1	6.4 6.3
89		_	Holy Trinity	Edmonton	6.7	6.6	148		_	Cold Lake	Cold Lake	6.1	6.3
89	61		Archbishop O'Leary	Edmonton	6.7	6.5	148		_	St. Paul	St. Paul	6.1	6.2
89		_	Strathmore	Strathmore	6.7	6.2	148		_	John Maland	Devon	6.1	6.1
89	100		Catholic Central	Lethbridge	6.7	6.0	148		_	Notre Dame	Red Deer	6.1	6.1
89	100		Bowness	Calgary	6.7	6.0	148		_	William E Hay	Stettler	6.1	6.0
89	105		Wetaskiwin	Wetaskiwin	6.7	5.9	148		_	Robert Thirsk	Calgary	6.1	5.9
89	129	_	W.H. Croxford	Airdrie	6.7	5.4	148	105	_	M. E. LaZerte	Edmonton	6.1	5.9
89	n/a	n/a	College Heights	Lacombe	6.7	n/a	148	135		Fort Saskatchewan	Fort Saskatchewan	1 6.1	5.3
98	43	$\blacksquare$	Paul Kane	St. Albert	6.6	6.9	148	135		Lindsay Thurber	Red Deer	6.1	5.3
98		_	W P Wagner	Edmonton	6.6	6.8	148		n/a	Fairview	Fairview	6.1	n/a
98	61		Calvin Christian	Coalhurst	6.6	6.5	148		n/a	Nelson Mandela	Calgary	6.1	n/a
98		_	Canmore Collegiate	Canmore	6.6	6.4	148		n/a	Central High Sedgewick	Sedgewick	6.1	n/a
98		_	Sundre	Sundre	6.6	6.2	148		n/a	Stirling	Stirling	6.1	n/a
98	83		McNally	Edmonton	6.6	6.2	164		_	Rimbey	Rimbey	6.0	6.7
98 00	100		Archbishop Oscar Romero	Edmonton	6.6	6.0	164		_	Notre Dame Collegiate	High River	6.0	5.9
98	114		Jasper	Jasper	6.6	5.8	164	IUD	_	Hilltop	Whitecourt	6.0	5.9

Ra	nk Last			-0ve	erall rat	ing– Last	Ra	nk Last			-	Overall ra	ting– Last
2022/ 2023	5		School name	City	2022/ 2023	5 yrs	2022/ 2023	5		School name	City	2022/ 2023	
164	114	_	Wainwright	Wainwright	6.0	5.8	230	143	_	Victoria	Edmonton	4.8	5.0
164	123	_	Sturgeon	Sturgeon County	6.0	5.6	230	156		James Fowler	Calgary	4.8	4.1
164	129	_	Richard F Staples	Westlock	6.0	5.4	230	n/a	n/a	St. John Paul II	Grande Prairie	4.8	n/a
164	129	_	Crescent Heights	Medicine Hat	6.0	5.4	230	n/a	n/a	Redwater	Redwater	4.8	n/a
164	152		Forest Lawn	Calgary	6.0	4.5	234	141	_	La Crete	La Crete	4.7	5.1
172	61	_	Vimy Ridge	Edmonton	5.9	6.5	234	145	_	Roland Michener	Slave Lake	4.7	4.9
172	65	<u></u>	Eagle Butte	Dunmore	5.9	6.4	234	145	_	Willow Creek	Claresholm	4.7	4.9
172	65	•	Edmonton Christian	Edmonton	5.9	6.4	234	156		Beaverlodge	Beaverlodge	4.7	4.1
172 172	92 129	_	Father Patrick Mercredi Bonnyville	Fort McMurray	5.9 5.9	6.1 5.4	234	<u>n/a</u> 52	n/a	Wheatland Crossing	Standard	4.7	<u>n/a</u> 6.7
172	n/a	n/a	Coronation	Bonnyville Coronation	5.9	n/a	239	152		Calgary Academy Collegiate Harry Collinge	Calgary Hinton	4.6	4.5
172	n/a	n/a	Provost	Provost	5.9	n/a	239	158		Drumheller	Drumheller	4.6	4.0
172	n/a	n/a	Trochu Valley	Trochu	5.9	n/a	239	161		Winston Churchill	Lethbridge	4.6	3.7
172	n/a	n/a	St. Gabriel	Edmonton	5.9	n/a	243	147		Camrose	Camrose	4.5	4.8
181	65	_	W. G. Murdoch	Crossfield	5.8	6.4	243	165		Grande Cache	Grande Cache	4.5	3.3
181	n/a	n/a	Spruce View	Spruce View	5.8	n/a	243	n/a	n/a	St. Mary's	Taber	4.5	n/a
181	n/a	n/a	Acme	Acme	5.8	n/a	246		n/a	Gus Wetter	Castor	4.4	n/a
181	n/a	n/a	La Rose Sauvage	Calgary	5.8	n/a	246		n/a	County Central	Vulcan	4.4	n/a
181		n/a	Calgary Islamic	Calgary	5.8	n/a	246		n/a	Coalhurst	Coalhurst	4.4	n/a
186	75	•	Hunting Hills	Red Deer	5.7	6.3	249	155	n/a	Grande Prairie Glendon	Grande Prairie	4.3 4.3	4.2
186 186	83 92	<b>T</b>	Mayerthorpe Bellerose	Mayerthorpe St. Albert	5.7 5.7	6.2 6.1	249 249		n/a	Bentley	Glendon Lacombe	4.3	n/a n/a
186	119	_	Holy Trinity	Fort McMurray	5.7	5.7	252	147	II/a	Parkland	Edson	4.2	4.8
186	125		Father Lacombe	Calgary	5.7	5.5	252	161		Brooks	Brooks	4.2	3.7
186	147		J Percy Page	Edmonton	5.7	4.8	252	163	_	Northstar	Red Deer	4.2	3.6
186	n/a	n/a	Airdrie	Airdrie	5.7	n/a	252		n/a	St. Joseph Catholic	Edmonton	4.2	n/a
186	n/a	n/a	Kitscoty	Kitscoty	5.7	n/a	252	n/a	n/a	Calmar	Calmar	4.2	n/a
186	n/a	n/a	Oilfields	Black Diamond	5.7	n/a	252	n/a	n/a	Lamont	Lamont	4.2	n/a
195	105	_	Lethbridge Collegiate	Lethbridge	5.6	5.9	252	n/a	n/a	Picture Butte	Picture Butte	4.2	n/a
195	129		Ponoka	Ponoka	5.6	5.4	259	164		Eastglen	Edmonton	4.1	3.5
195	138		Glenmary	Peace River	5.6	5.2	259		n/a	Gerard Redmond	Hinton	4.1	<u>n/a</u>
198 198	n/a	n/a n/a	McTavish Consort	Fort McMurray Consort	5.5 5.5	n/a	261 262	n/a 159	n/a	Plamondon High Level	Plamondon High Level	4.0 3.8	n/a 3.9
200	n/a 83	TI/ d	McCoy	Medicine Hat	5.4	<u>n/a</u> 6.2	262		n/a	Hines Creek	Hines Creek	3.8	n/a
200	n/a		St. Joseph	Red Deer	5.4	n/a	264	n/a		Grimshaw	Grimshaw	3.7	n/a
200	n/a	n/a	St. André Bessette	Fort Saskatchewan		n/a	265	n/a		Ignite Centre	Edmonton	3.6	n/a
200	n/a	n/a	CWAA	Calgary	5.4	n/a	265	n/a	n/a	E. H. Walter	Paradise Valley	3.6	n/a
204	114	_	Edge	Calgary	5.3	5.8	265	n/a	n/a	St. Thomas Aquinas	Provost	3.6	n/a
204	125	_	Barrhead	Barrhead	5.3	5.5	268		n/a	Foothills Digital	Okotoks	3.5	n/a
204	138	—	Lester B. Pearson	Calgary	5.3	5.2	268	n/a	n/a	Duchess	Duchess	3.5	n/a
204		n/a	Spirit River	Spirit River	5.3	n/a	270		n/a	J. T. Foster	Nanton	3.4	n/a
204	n/a		Pigeon Lake	Falun	5.3	n/a	271	151	×.	Calgary Academy	Calgary	3.3	4.6
204	n/a 138	n/a	Daysland St. Joseph's	Flagstaff Brooks	5.3	<u>n/a</u> 5.2	271 273	168 159		E W Pratt St. Joseph	High Prairie Grande Prairie	3.3	1.8 3.9
210 210	152	_	St. Joseph's J A Williams	Lac La Biche	5.2	4.5	273		√ n/a	Paul Rowe	Manning	3.1	n/a
210	n/a	n/a	Alix-MAC	Lacombe	5.2	n/a	273		n/a	Grand Trunk	Evansburg	3.1	n/a
210		n/a	Prairie Christian	Three Hills	5.2	n/a	273		n/a	St Isidore	Sherwood Park		n/a
210	n/a		Bassano	Bassano	5.2	n/a	277			Fort McMurray	Fort McMurray	2.9	2.4
210	n/a	n/a	Senator Gershaw	Bow Island	5.2	n/a	277		n/a	Cold Lake Outreach	Cold Lake	2.9	n/a
216	141	_	Edwin Parr	Athabasca	5.1	5.1	279		n/a	Black Gold Beaumont	Beaumont	2.8	n/a
216		n/a	Gateway Academy	Whitecourt	5.1	n/a	280		_	Queen Elizabeth	Edmonton	2.7	2.6
218	119	—	Matthew Halton	Pincher Creek	5.0	5.7	281	169		Hope Christian	Vulcan	2.5	1.3
218	147		Peace River	Peace River	5.0	4.8	281		n/a	Buck Mountain	Buck Lake	2.5	n/a
218		n/a	Alexandre-Taché	St. Albert	5.0	n/a	283		n/a	Immaculate Heart of Mary	Fort McMurray	2.3	n/a
218	n/a	n/a	Kinuso	Kinuso	5.0	n/a	283		n/a	Delburne Centralized	Delburne	2.3	n/a
218 218	n/a n/a		St. Jerome's J. C. Charyk Hanna	Vermilion Hanna	5.0 5.0	n/a n/a	285 286		n/a n/a	Thorhild Central Livingstone Range	Thorhild Fort Macleod	2.0 1.5	n/a n/a
224	135	11/ d	Kate Andrews	Coaldale	4.9	5.3	287		n/a	Summit West	Okotoks	0.8	n/a
224	143	_	Chinook	Lethbridge	4.9	5.0	288		n/a	Strathmore Store Front	Strathmore	0.7	n/a
224	n/a		Georges P Vanier	Donnelly	4.9	n/a	289		n/a	Lakeside Outreach	Slave Lake	0.1	n/a
224	n/a	n/a	Michaëlle-Jean	Edmonton	4.9	n/a	290		n/a	Amiskwaciy	Edmonton	0.0	n/a
224	n/a	n/a	Breton	Breton	4.9	n/a	290		n/a	Mistassiniy	Wabasca	0.0	n/a
224	n/a	n/a	Foothills	Calgary	4.9	n/a	290	n/a	n/a	Ashmont	Ashmont	0.0	n/a

# Appendix: Calculating the Overall rating out of 10

The *Overall rating out of 10* is intended to answer the question, "In general, how is the school doing, academically compared with other schools in the *Report Card*?" The following is a simplified description of the procedure used to convert the raw indicator data into the *Overall rating out of 10*.

1 Course by course, the average diploma examination marks and failure rates for each school were standardized by calculating *Z*, which is defined by:

$$Z = (X - \mu) / \sigma$$

where X is the individual school's result,  $\mu$  is the mean of the all-schools distribution of results, and  $\sigma$  is the standard deviation of the same all-schools distribution.

- 2. The *School vs exam mark difference* for each course was calculated using the raw data and then standardized as described in step 1 above.
- 3 The course-by-course standardized data were then aggregated to produce weighted average indicator values. The weighting used was the number of student course completions in each course at the school relative to the total number of student course completions at the school.
- 4 These weighted average results were then re-standardized.
- 5 The *Gender gap* indicators were calculated using the raw data and then standardized as described in step 1 above.
- 6 The Courses taken per student, Diploma completion rate, and Delayed advancement rate indicators were calculated using the raw data and then standardized as described in step 1 above.
- The eight standardized indicator results were then combined to produce a weighted average summary standardized score for the school. The weightings used in these calculations were Average exam mark—20%, Percentage of exams failed—20%, School vs exam mark—10%, English 30 gender gap—5%, Math 30 gender gap—5%, Courses taken per student—20%, Diploma completion rate—10%, and Delayed advancement rate—10%. In instances when fewer than two Gender gap indicators could be calculated, Gender gap results did not contribute to the Overall rating. In such instances, the School vs exam mark difference was weighted at 20%. Similarly, when the Delayed advancement rate could not be calculated, the Diploma completion rate was weighted at 20%.

8 This summary standardized score was re-standardized.

This standardized score was converted into an *Overall rating* between 0 and 10 as follows:

- 9 The maximum and minimum standardized scores were set at 2.2 and -3.29 respectively. Scores equal to, or greater than, 2.2 received the highest overall rating of 10. This cut-off was chosen because it allows more than one school in a given year to be awarded 10 out of 10. Scores of equal to, or less than, -3.29 received the lowest overall rating of 0. Schools with scores below -3.29 are likely to be outliers, a statistical term used to denote members of a population that appear to have characteristics substantially different from the rest of the population. We chose, therefore, to set the minimum score so as to disregard such extreme differences.
- 10 The resulting standardized scores were converted into Overall ratings according to the formula:

$$OR = \mu + (\sigma * StanScore),$$

where OR is the resulting Overall rating,  $\mu$  is the average calculated according to the formula:

$$\mu = (OR_{min} - 10 (Z_{min}/Z_{max}))/(1 - (Z_{min}/Z_{max})),$$

where  $\sigma$  is the standard deviation calculated according to the formula:

$$\sigma = (10 - \mu)/Z_{max},$$

and StanScore is the standardized score calculated in (8) above and adjusted as required for minimum and maximum values as noted in (9) above. As noted in (9) above,  $OR_{min}$  equals zero,  $Z_{min}$  equals –3.29; and  $Z_{max}$  equals 2.2.

11 Finally, the derived *Overall rating* is rounded to one place of the decimal to reflect the significant number of places of the decimal in the original raw data.

Note that the *Overall rating out of 10*, based as it is on standardized scores, is a relative rating. That is, in order for a school to show improvement in its *Overall rating*, it must improve more than the average. If it improves but at a rate less than the average, it will show a decline in its rating.

### **About the authors**

#### **Max Shang**

Max Shang is an Economist at the Fraser Institute. Prior to joining the Institute, Max worked for the Food and Agriculture Organization of the United Nations as a statistician and University of Guelph as senior research associate. His past research work has been published in leading academic journals including Canadian Journal of Agricultural Economics and Computational Statistics. He holds a Ph.D. in Food, Agricultural and Resource Economics from the University of Guelph.

#### **Peter Cowley**

Peter Cowley is a Senior Fellow and former Director of School Performance Studies at the Fraser Institute. He has a B.Comm. from the University of British Columbia (1974). In 1994, Mr Cowley independently wrote and published *The Parent's Guide*, a popular handbook for parents of British Columbia's secondary-school students. The Parent's Guide web site replaced the handbook in 1995. In 1998, Mr Cowley was co-author of the Fraser Institute's *A Secondary Schools Report Card for British Columbia*, the first of the Institute's continuing series of annual reports on school performance. This was followed in by *The 1999 Report Card on British Columbia's Secondary Schools, Boys, Girls, and Grades: Academic Gender Balance in British Columbia's Secondary Schools*, and *The 1999 Report Card on Alberta's High Schools*. Since then, Mr Cowley has co-authored all of the Institute's annual Report Cards. Annual editions now include Report Cards on elementary and secondary schools in British Columbia, Alberta, and Ontario and on secondary schools in Quebec.

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#### ISSN / ISBN

1707–2395 Studies in Education Policy (English online edition) 1492–1863 Studies in Education Policy (English print edition)

#### Date of issue

2024

#### **Typsetting**

Nick Murphy

#### Cover design

Peng Wei

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