

Setting them up to fail?

Excellent school marks don't necessarily lead to excellent exam marks

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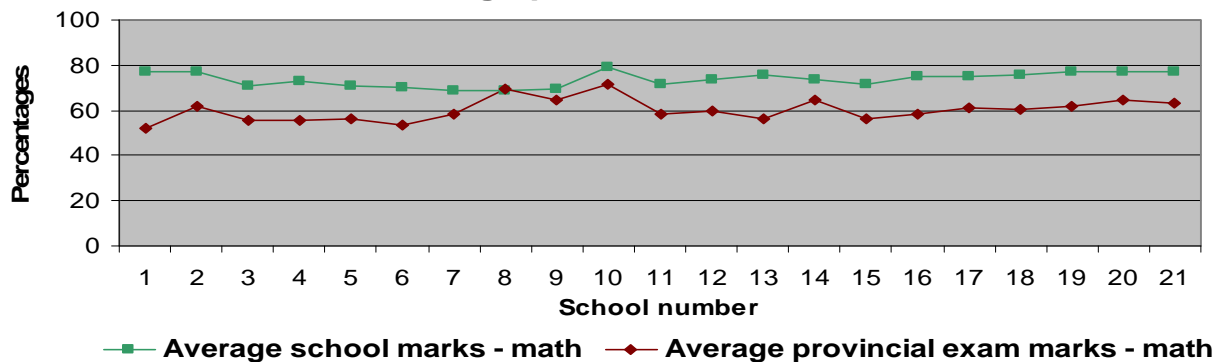
'How low can you go?' seems to be the prevailing approach of many high school math teachers when it comes to student expectations. This goes against every serious study which concludes that raising student expectations is the way to go if we want students to succeed.

Let's be clear: the practice of handing out excellent grades to students who don't always deserve these grades is not a new phenomenon. A wealth of literature discusses this phenomenon called grade inflation. Interestingly, the practice of grade inflation is usually discussed and criticized at the university level. But if grade

inflation is pervasive in universities what about in our high schools? Does it even exist? If so, how bad is it and what are its effects on student performance?

Mathematics scores in New Brunswick francophone high schools tell an interesting tale. A pattern emerges when one combines three consecutive years of average school marks (those which are completely decided by teachers) and provincial exam (PE) marks. Figure 1 shows the average school marks and the average PE marks for school years 2001-2002 to 2003-2004.¹

Figure 1: NB francophone average school marks and average provincial exam marks



¹ See Annex 1 for a complete list of New Brunswick francophone schools and their corresponding data.



It is easy to see that the school marks in all 21 high schools were higher than the provincial exam marks. The provincial average for school marks is 73.7 % while the average for PE marks is 60.1 % over the three years.

If the provincial exams are tailor made to reflect the provincial curriculum it seems appropriate to ask why the school marks are always higher than the provincial exam marks. Since teachers are required by law to teach the provincial curriculum shouldn't the teacher assigned marks be about the same as those on the provincial exams? Not necessarily.

While provincial exams do assess student performance based on the prescribed curriculum, these exams cannot, nor do they purport to, assess every student outcome in the curriculum. Clearly, teachers are in a better position than external exams when it comes to assessing some student outcomes. So while both ways of assessing students are perfectly acceptable, and necessary for different reasons, one must realize that they are measuring slightly different things. It follows then that the results may differ.

Another argument sometimes used to explain the lower provincial exam marks is that they span the whole course whereas the teacher assigned marks are made up of a series of short term tests and other work which cover only a small section of the curriculum. Since it is easier to remember only a small section of the curriculum instead of all of it the argument is made that it is not surprising that students do better on class tests than provincial exams. So the existence of a somewhat constant gap between teacher assigned grades and provincial exam grades should not be a surprise.

This analysis will focus on cases where the difference between teacher assigned grades and provincial exam grades lie outside the “normal” gap. We will show that grade inflation is a BIG problem and that higher standards not higher grades should be the goal.

“... grade inflation is generally seen to reflect on the teacher’s or on the school’s expectations... the higher the grade inflation the lower the expectations”

If it is somewhat normal to observe higher teacher assigned marks than those obtained on provincial exams then why all the fuss about grade inflation? Grade inflation is generally seen to reflect on the teacher’s or the school’s academic expectations towards the students; the higher the grade inflation the lower the expectations and vice-versa.

In the context of provincial exams and teacher assigned grades, grade inflation is defined as the difference between the teacher assigned marks and the results on a provincial exam for that particular course. For example, say a class has a teacher assigned average mark of 85 % and that same class has a 70 % average on the provincial exam we would say that there was 15 % grade inflation.

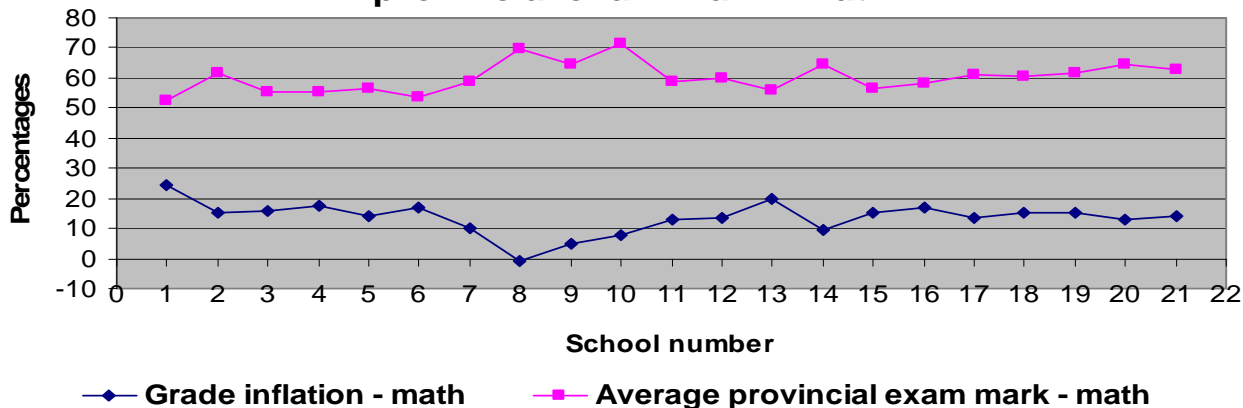
Now if high expectations are supposed to lead to high results and low expectations to low results we should see two things: 1) lower teacher assigned marks should lead to high achievement on the provincial exams, and 2) higher teacher assigned marks should lead to low achievement on provincial exams. So what do the data tell us?

We calculated the average grade inflation for grade 11 mathematics for each francophone and anglophone high school in New Brunswick as well as for the Math 3204 course in Newfoundland and Labrador. The New Brunswick francophone data is taken over three consecutive school years, 2001-2002 to 2003-

2004 as is the Newfoundland and Labrador data for school years 2002-2003 to 2004-2005. We only have two years of data for the New Brunswick anglophone schools, 2001-2002 to 2002-2003, an impact of the decision to eliminate provincial exams in the spring of 2004.

Not surprisingly, higher grade inflation points to lower provincial exam results. Of the 21 high schools, École Marie-Gaëtane has the highest grade inflation, at 24.7 %. With a provincial exam average of 52.3 % this school is also the least achieving school in the province. These observations are exactly what we should see if

Figure 2: NB francophone grade inflation and average provincial exam mark - math



Moreover, for nine anglophone schools data are only available for one of the two years. Due to these differences the New Brunswick francophone and the Newfoundland and Labrador data are more representative and stable. Nevertheless, the data tell the same story.

Figure 2 shows grade inflation and student performance on the grade 11 mathematics provincial exams for each of the 21 francophone high schools. The first observation is that both sets of points are practically mirror images of each other. This means that in general, lower grade inflation points to higher provincial exam results. This is most obvious in four schools; Polyvalente Louis-J-Robichaud, Polyvalent Mathieu-Martin, École Grande-Rivière and Polyvalente Roland-Pépin. Not only do these four schools have the lowest grade inflation with values ranging from -0.7 % to 9.3 % but they are also the four top performing schools on the grade 11 mathematics provincial exams.

the hypothesis of high expectations high results, low expectations low results is correct.

Anglophone data, while not as robust, show a somewhat similar visual pattern to the francophone data as seen in Figure 3.

Where grade inflation goes down, performance goes up

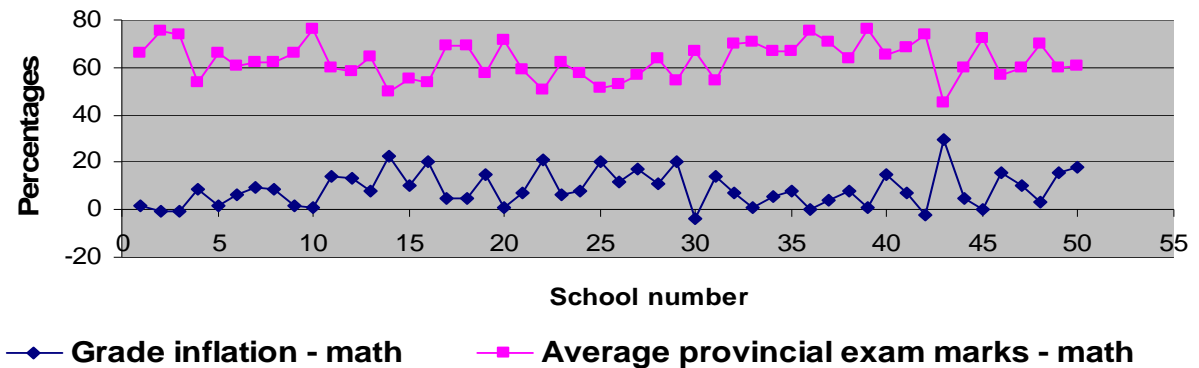


Visually, the most obvious case that stands out is that of Southern Victoria High School (school #43)² which clearly has the highest grade inflation at 29.5 % and the lowest achievement on the provincial exam at 45.5 %.

Not surprisingly, the two schools which showed the best performance on the provincial exams with an average of 76.0 % (Moncton High School, #10; and Canterbury High School, #39) show grade inflation at only 1.0 %. Clearly, the expectations towards students at these two schools are much more aligned to those of the provincial curriculum than they are at Southern Victoria High School.

² See Annex 2 for a complete list of New Brunswick anglophone schools and their corresponding data.

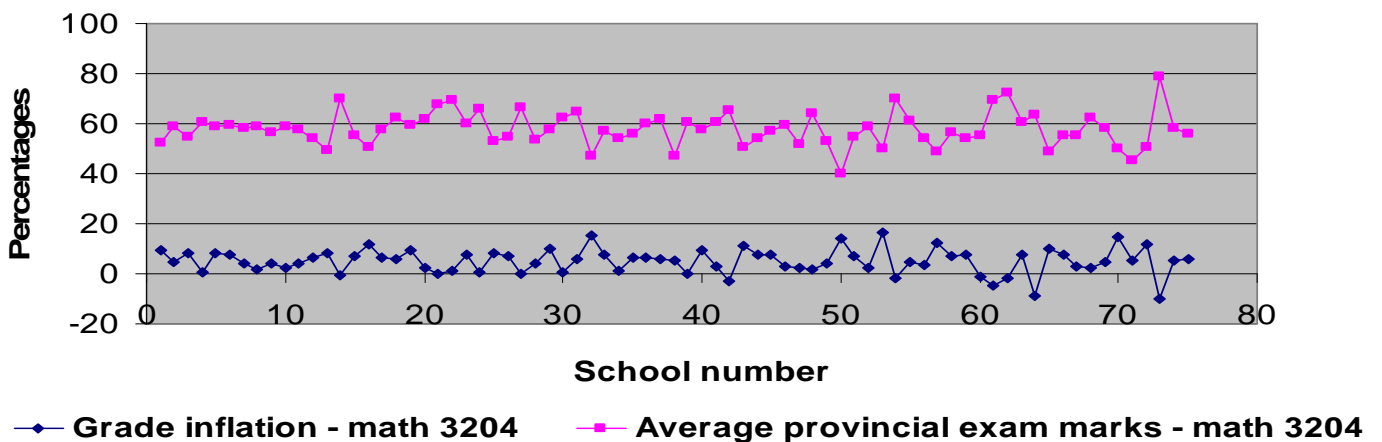
Figure 3: NB anglophone math grade inflation and average provincial exam marks



Predictably, the story unfolds in the same way in Newfoundland and Labrador. The most obvious case here is that of St. Joseph’s All Grade School (school #73)³ which actually shows grade *deflation* instead of grade inflation. In this case the school mark is 9.9 % LOWER than the provincial exam mark of 78.6 %, the best in the province.

At the other end of the spectrum, the two schools which have the most grade inflation (Cloud River Academy – school #53, St. Michael’s Regional High – school #50) have poor results on the mathematics 3204 provincial exams with averages over 3 years of 49.8 % and 39.9 % respectively.

Figure 4: NL math 3204 grade inflation and average provincial exam marks - math 3204



³ See Annex 3 for a complete list of Newfoundland and Labrador schools and their corresponding data. Only schools where data was available for 3 consecutive years are included in the Newfoundland and Labrador study.

So what you ask? Let's assume the following hypothetical situation to see the impact and seriousness of this situation. Suppose your child attends Canterbury High School and your nephew Southern Victoria High School, two high schools in the New Brunswick anglophone school system. Your child brings home a report card with a math mark of 75 % and your nephew a mark of 77 %. You would naturally assume that your child and your nephew are performing at about the same level in math. How would you explain that your child will probably score about 30 % less on the provincial exam while your nephew's mark will probably remain the same? Welcome to the world of grade inflation.

It is clear that grade inflation is alive and well in many New Brunswick and Newfoundland and Labrador high schools. It is also clear that grade inflation is much more prevalent in some high schools than others. Why can't all high schools have high expectations towards their students' performance? Could it be that assessment policies are either not clear or ignored? Might some schools reward students with marks for things that are not on the curriculum like attendance, class participation, doing homework and the like?

Although there will probably always be a gap between teacher assigned grades and provincial exam results each teacher must strive to be below that average gap by increasing their expectations towards student's performance.

Research has shown that students rise to the challenge as long as the challenge is fair. Moreover, there is also a wealth of research to support the fact that high expectations are especially beneficial to struggling students. And the opposite is true: teachers who don't expect much from their students get exactly that. So if we really want to improve student performance why not start by ensuring that we report what students have actually learned rather than inflating their grades which is really another way of telling students that all is OK when the opposite is true?

Inflating grades is a set-up for massive disappointment later on. Sooner or later reality will catch up to the students and "success" won't come so easy. The cost of failure may be as high as being forced to withdraw from post secondary institutions, loss of job opportunities, and even jobs themselves. These individual failures reflect an education system which fails students and society. Without a serious and concerted effort to change the practice of grade inflation everyone loses.

For many years our high school students have consistently ranked poorly in pan Canadian and international assessments. Instead of lowering the bar and asking *how low can you go?* teachers should raise the bar and work with students to see how high they can jump.



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Annex 1

School number	NB Francophone high schools	Average teacher assigned mark(%)	Average provincial exam mark (%)	Average grade inflation (%)
1	École Marie-Gaétane	77.0	52.3	24.7
2	Polyvalente A.-J.-Savoie	77.0	61.7	15.3
3	Polyvalente Louis-Mailloux	71.0	55.3	15.7
4	Polyvalente Marie-Esther	72.7	55.3	17.3
5	Polyvalente W.-Arthur-Losier	70.7	56.3	14.3
6	Centre La fontaine	70.3	53.7	16.7
7	Polyvalente Clément-Cormier	68.7	58.7	10.0
8	Polyvalente Louis-J.-Robichaud	69.0	69.7	-0.7
9	Polyvalente Mathieu-Martin	69.7	64.7	5.0
10	École Grande-Rivière	79.3	71.3	8.0
11	Polyvalente Thomas-Albert	71.3	58.7	12.7
12	Cité-des-Jeunes-A.-M. Sormany	73.3	59.7	13.7
13	École Aux quatre vents	76.0	56.0	20.0
14	Polyvalente Roland-Pépin	73.7	64.3	9.3
15	École Régionale-de-Baie-Sainte-Anne	71.7	56.3	15.3
16	École Secondaire Assomption	75.0	58.3	16.7
17	Polyvalente Mgr-Marcel-François-Richard	74.7	61.3	13.3
18	École secondaire Népisguit	75.7	60.3	15.3
19	École Sainte-Anne	77.0	61.7	15.3
20	École Samuel-de-Champlain	77.3	64.3	13.0
21	Carrefour Beausoleil	77.0	63.0	14.0
	Provincial average	73.7	60.1	13.6

NB: Marks are three year averages of the 2001-2002, 2002-2003 and 2003-2004 results for the grade 11 mathématiques régulier course.

Annex 2

School number	NB anglophone high schools	Average teacher assigned mark(%)	Average provincial exam mark (%)	Average grade inflation (%)
1	Miramichi Valley High School	68.0	66.0	2.0
2	North & South Esk Regional High School	75.0	75.5	-0.5
3	Blackville School	72.5	73.5	-1.0
4	Doaktown Consolidated High School	63.0	54.0	9.0
5	Upper Miramichi Regional High School	68.0	66.0	2.0
6	Stanley Regional High School	67.5	61.0	6.5
7	James M. Hill Memorial High School	71.5	62.0	9.5
8	Tantramar Regional High School	71.0	62.5	8.5
9	Harrison Trimble High School	68.0	66.0	2.0
10	Moncton High School	77.0	76.0	1.0
11	Bernice MacNaughton High School	74.0	60.0	14.0
12	Riverview High School	71.0	58.0	13.0
13	Petitcodiac Regional School	72.5	64.5	8.0
14	J.M.A. Armstrong/Salisbury Middle School	73.0	50.0	23.0
15	Caledonia Regional High School	65.5	55.0	10.5
16	Sussex Regional High School	73.5	53.5	20.0
17	Rothsay High School	74.5	69.5	5.0
18	Kennebecasis Valley High School	73.5	69.0	4.5
19	Belleisle Regional High School	72.0	57.5	14.5
20	Hampton High School	72.5	71.5	1.0
21	Saint John High School	66.5	59.0	7.5
22	Simonds High School	71.5	50.5	21.0
23	St. Malachy's Memorial High School	69.0	62.5	6.5
24	Harbour View High School	65.5	57.5	8.0
25	Fundy High School	71.5	51.0	20.5
26	Grand Manan Community School	64.0	52.5	11.5
27	Campobello Island Consolidated School	74.0	57.0	17.0
28	Sir James Dunn Academy	75.0	64.0	11.0
29	St. Stephen High School	75.0	54.5	20.5
30	Minto Memorial High School	63.5	67.0	-3.5
31	Cambridge-Narrows School	68.5	54.5	14.0
32	Chipman Forest Avenue School	77.0	70.0	7.0
33	Oromocto High School	71.5	70.5	1.0

34	Fredericton High School	72.5	67.0	5.5
35	Leo Hayes High School	74.5	66.5	8.0
36	McAdam High School	75.5	75.0	0.5
37	Harvey High School	74.5	70.5	4.0
38	Nackawic Senior High School	72.0	64.0	8.0
39	Canterbury High School	77.0	76.0	1.0
40	Hartland High School	80.5	65.5	15.0
41	Woodstock High School	75.5	68.0	7.5
42	Carleton North Senior High School	72.0	74.0	-2.0
43	Southern Victoria High School	75.0	45.5	29.5
44	Tobique Valley High School	65.0	60.0	5.0
45	Dalhousie Regional High School	72.5	72.0	0.5
46	Sugarloaf Senior High School	72.5	56.5	16.0
47	Bonar Law Memorial School	69.5	59.5	10.0
48	Bathurst High School	73.0	70.0	3.0
49	John Caldwell School	75.5	59.5	16.0
50	Saint Mary's Academy	79.0	61.0	18.0
	Provincial average	71.8	63.0	8.8

NB: Marks are the averages of 2 consecutive school years (2001-2002 to 2002-2003) in grade 11 mathematics.

Annex 3

School number	Newfoundland and Labrador high schools	Average teacher assigned mark(%)	Average provincial exam mark (%)	Average grade inflation (%)
1	Prince of Wales Collegiate	62.1	52.6	9.5
2	O'Donel High	64.1	59.1	5.0
3	Holy Spirit High	63.2	55.0	8.3
4	Holy Heart High School	60.8	60.3	0.5
5	Marystown Central High	67.3	59.0	8.3
6	Ascension Collegiate	66.7	59.2	7.5
7	Gonzaga High School	62.6	58.4	4.2
8	Mount Pearl Senior High	60.7	59.1	1.6
9	Exploits Valley High	60.8	56.7	4.1
10	Bishops College	61.0	58.9	2.2
11	Booth Memorial High School	61.9	57.8	4.1
12	Queen Elizabeth Regional High School	60.8	54.4	6.4
13	Holy Trinity High School	57.8	49.6	8.3
14	Carbonear Collegiate	69.3	69.9	-0.6
15	Herdman Collegiate	62.5	55.3	7.3
16	Regina High School	62.2	50.7	11.5
17	St. Kevin's High	63.9	57.7	6.2
18	Roncalli Central High	68.6	62.6	6.1
19	Crescent Collegiate	68.7	59.1	9.6
20	Lewisporte Collegiate	64.4	62.0	2.4
21	Menihek High School	68.0	67.9	0.1
22	Discovery Collegiate	70.3	69.2	1.1
23	Gander Collegiate	67.6	59.7	7.9
24	Clarenville High School	66.3	65.9	0.4
25	Baccalieu Collegiate	61.2	53.0	8.2
26	Stephenville High	62.0	55.0	7.1
27	Laval High	66.7	66.4	0.3
28	Mealy Mountain Collegiate	57.7	53.4	4.3
29	St. James' Regional High School	67.6	57.7	10.0
30	Leo Burke Academy	62.7	62.2	0.5
31	Pasadena Academy	70.8	64.7	6.1
32	Elwood High School	62.7	47.3	15.3
33	Baltimore School	64.6	56.8	7.8
34	Botwood Collegiate	55.1	53.8	1.2
35	Indian River High School	62.2	55.6	6.7
36	Appalachia High School	66.4	60.2	6.2
37	John Burke High School	67.7	61.9	5.7
38	Jane Collins Academy	52.6	47.0	5.6
39	Mobile Central High School	61.0	60.9	0.2
40	Glovertown Academy	66.7	57.5	9.3
41	Roncalli Central High	63.4	60.8	2.7
42	Heritage Collegiate	62.1	65.0	-2.9
43	Fogo Island Central Academy	61.5	50.4	11.1
44	St. Lawrence Academy	61.7	53.9	7.8
45	St. Bonaventure's College	64.5	56.9	7.6
46	New World Island Academy	62.4	59.5	2.9
47	Baie Verte Collegiate	54.2	52.0	2.3

48	J.M. Olds Collegiate	65.5	63.9	1.6
49	Smallwood Academy	56.9	52.7	4.2
50	St. Michael's Regional High	54.3	39.9	14.4
51	Harriot Curtis Collegiate	61.5	54.7	6.8
52	Lester Pearson Memorial High	60.9	58.6	2.3
53	Cloud River Academy	66.3	49.8	16.5
54	Templeton Academy	68.7	70.2	-1.5
55	Dorset Collegiate	65.6	61.1	4.5
56	Piccadilly Central High	57.6	54.2	3.4
57	Riverwood Academy	61.3	48.9	12.4
58	St. Catherine's Academy	63.1	56.3	6.8
59	Long Range Academy	62.1	54.3	7.8
60	Valmont Academy	54.0	55.1	-1.1
61	Gros Morne Academy	64.6	69.5	-4.9
62	Dunne Memorial Academy	70.7	72.3	-1.6
63	Belanger Memorial School	68.4	60.6	7.8
64	St. Joseph's Academy	54.8	63.3	-8.5
65	Fatima Academy	58.8	49.0	9.8
66	Mountain Field Academy	62.7	55.3	7.4
67	Stella Maris Academy	58.0	55.3	2.7
68	Viking Trail Academy	64.5	62.4	2.1
69	Grandy's River Collegiate	62.8	58.0	4.8
70	Christ the King School	65.0	50.3	14.7
71	E.A. Butler	50.6	45.3	5.4
72	Cape John Collegiate	62.5	50.8	11.7
73	St. Joseph's All Grade	68.7	78.6	-9.9
74	Holy Cross School Complex	64.0	58.4	5.6
75	Main River Academy	61.9	55.9	6.0
	Provincial average	62.9	57.8	5.0

NB: Marks are the averages of 3 consecutive school years (2002-2003 to 2004-2005) in mathematics 3204.