

# Intelligence MEMOS



From: David Johnson  
To: Canadians Concerned about Teacher Strikes  
Date: February 21, 2020  
Re: **DISADVANTAGED STUDENTS SUFFER FROM SCHOOL STRIKES**

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Do instructional days lost in Ontario elementary schools due to work stoppages reduce student learning? The evidence from another period with frequent strikes says quite clearly that more disadvantaged students experience poorer learning outcomes after strikes.

Between September 1998 and June 2003, there were 14 strikes and one lockout (all called strikes for convenience) in Ontario elementary schools between one and 16 days in length. I [presented](#) evidence on the effects of these strikes on student performance using the Education Quality and Accountability Office (EQAO) primary and junior assessments administered in the year of the strike (an earlier and slightly different version of the analysis of the same data appeared in [this C.D. Howe Institute paper](#)).

The outcome studied is the percent of students at schools with a level 3 or level 4 on the assessments in reading, writing and mathematics. For convenience, this is called the pass rate. The evidence that strikes reduced learning by some students is quite clear, if somewhat complicated to interpret.

The most important complication is that schools in Ontario vary widely in the background of their students. Some schools have better educated parents than other schools measured by the percentage of parents sending children to a school who have some university education.

The average school in this period had about 20 percent of parents with some university education. The level of pass rates varies by type of school due to parental education.

I want to be very careful to say that not all the variation in EQAO pass rates across schools is due to parental background. In [other work](#), I show about half the variation is due to parental background and half the variation is unexplained.

But it is very important to measure the effects of strikes relative to a school with the same level of parental education and then at different levels of parental education.

At schools with below average levels of parental education, strikes generate a large reduction in pass rates in the primary (Grade 3) reading and mathematics assessment and in the junior (Grade 6) mathematics assessment. (There are weaker and less precisely estimated positive effects of strikes in an advantaged school in the primary mathematics assessment and the junior writing and mathematics assessment.)

The negative effects on disadvantaged schools are quite large.

Here are illustrative calculations. Take a school where 12 percent of parents have some university education, below the average of 20 percent. Then a 10-day strike is estimated to reduce the pass rate in primary reading by 1.16 percentage points; in primary mathematics by 1.64 percentage points and in junior mathematics by 2.61 percentage points.

At an even more disadvantaged school with only 7 percent of parents with some university education, a 10-day strike is estimated to reduce the pass rate in primary reading by 1.91 percentage points; in primary mathematics by 2.85 percentage points and in junior mathematics by 4.1 percentage points.

Strikes reduce learning outcomes in the most disadvantaged schools by the largest amount.

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