



# Labour Market Matters

## Special points of interest:

- Gender role model effects on University achievement are examined in study by Philip Oreopoulos and Florian Hoffmann
- Students with one extra year of high school education are found to make significantly higher wages than their counterparts

*“[The] study provided an opportunity to predict how classroom outcomes between males and females systematically differ depending on whether the instructor assigned to the class is male or female”*



**Florian Hoffmann**  
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## Does Professor Gender Influence University Achievement?

A novel study by Philip Oreopoulos and Florian Hoffmann attempts to shed light on a question that has likely crossed the minds of many involved in university-level education: can the gender of a professor influence university achievement? And if so, what are the implications for educational policies geared specifically to correcting gender imbalances that are prevalent in fields such as Engineering, which has an over-representation of male students and faculty, or Nursing which has an over-representation of female students and faculty? Will students of the under-represented gender entering such fields face a more difficult learning environment because their professors will likely be of the opposite gender? In their paper **A Professor Like Me: Influence of Professor Gender on University Achievement** (CLSRN Working Paper [no. 6](#)), Hoffmann and Oreopoulos seek to answer some of these questions.

The study is based on student and instructor data from the University of Toronto's Arts and Science Faculties covering the Fall and Winter school year periods between 1996 and 2005. The study focuses on data collected on 34,352 students that entered into full-time undergraduate programs from Ontario high schools, and analyzes the relative outcomes between the sexes from class to class, depending on whether a class was assigned a male or female instructor. Overall, the study found that students were approximately one percent less

likely to drop a class with a same-sex instructor (a ten percent change from the mean – which can account for up to ten percent of the drop-out rate), and relative grade performance was found to improve by under one grade percentage (or a one to five percent change from the average grade), with a same-sex instructor.

These results contrast with a previous study using similar methodology that found evidence of more pronounced gender effects at the primary school level. Hoffmann and Oreopoulos believe that the university level results were different because same-sex instructors may matter more at earlier developmental ages, when cognitive and non-cognitive abilities are developing more rapidly, and also because student-teacher interaction is more intensive at the primary school levels. University instructors do not typically interact on a one-on-one basis with students in large first year classes, the basis of the current study, so there is less chance of discrimination or favoritism on the basis of gender.

Gender role model influences on students pursuing subsequent courses were also evaluated for certain groups of students. Students with English as their mother tongue and taking social science courses were found to be somewhat more likely to take subsequent courses in related subjects taught by a same-sex instructor. Relative differences in male and female likelihood of taking related courses in subsequent years, and passing these courses, appear generally unaffected by whether a female or male teaches a first-year



**Philip Oreopoulos**  
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class.

Hoffmann and Oreopoulos' study provided an opportunity to predict how classroom outcomes between males and females systematically differ depending on whether the instructor assigned to the class is male or female. Gender role model effects are frequently considered when explaining gender differences in education. The results of Hoffmann and Oreopoulos' study indicate that while students do indeed react to an instructor's gender depending on their own gender, the overall significance of this impact is small. Overall, the study's findings indicate that those students assigned to an opposite or same-sex professor generally face no greater difficulty or advantage from instructor-gender role model effects, and that university students react only marginally to an instructor's gender.



Harry Krashinsky (Centre for Industrial Relations - University of Toronto)

**“[S]tudents who had received one less year of high school education received wages approximately ten percent lower than their counterparts one year after graduation”**



Krashinsky's study helps to illustrate how important each year of high school education is for future wage earnings. (Photo Source: University of British Columbia)

## Unique study use Ontario double cohort to estimate the benefits of one extra year of high school on future wage earnings

A high school education is widely accepted to be a very important determinant of future wage earnings. Evidence from the 2004 *Labour Force Survey (LFS)*\* showed that workers with less than a high school diploma were almost five times as likely to be working for minimum wage or less as workers with at least some post-secondary training. A wide body of literature supports the assertion that workers with at least some high school training are better off than those without any high school training, suggesting that each year of high school adds value to an individual's future wage-earnings potential.

**In How Would One Extra Year of High School Affect Wages? Evidence from a Unique Policy Change** (CLSRN Working Paper no. 20), Harry Krashinsky uses data on the post-secondary wage earnings of students from the Ontario double cohort to study the effect an extra year of high school can have on wage earnings. Krashinsky's analysis is based on a policy change undertaken by the Ontario government in 1999 to restructure its high school

program from five years of study (Grades 9 to 13) to four (Grades 9 to 12). This policy change led to Ontario graduating its first cohort of 4-year graduates, and last cohort of 5-year graduates in June of 2003. As these students left high school and entered the labour market at the same time, it was possible to compare the labour market outcomes of four- and five-year graduates and analyze the impact an extra year of education could have on earnings.

The study found that the students who had received one less year of high school education received wages approximately ten percent lower than their counterparts one year after graduation. Moreover, these effects persisted up to two years after graduation for less-able workers from the double cohort.

Unlike prior studies which have relied upon policy changes that have induced students to obtain more education, Krashinsky's study is unique in that it is based on a policy that caused students to obtain less education after it

was enacted. As assignment to the four- or five-year cohort is determined by birth year, the elimination of Grade 13 in Ontario offered an unparalleled opportunity to study the value each extra year of high school adds to future wage earnings. The two cohorts, which differed only by educational attainment and birth year, entered the labour market simultaneously and competed for the same jobs. This created a natural experiment with real-world “control” and “treatment” groups to compare and evaluate the value of an extra year of high school for future wage earnings.

Krashinsky's study allows insight into difficulties experienced by those who take fewer years of high school and provides convincing evidence of the wage earnings that accrue to each additional year of high school.

\* Statistics Canada: 2004 *Labour Force Survey*. Available at: <http://www.statcan.gc.ca/studies-etudes/75-001/comm/5018829-eng.pdf>

### Endnotes

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