# 數據講教育
# EdData Speaks

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Topic: SES(1)

# 家裡有錢可保你考第一？
# DOES FAMILY INCOME GUARANTEE FIRST IN ACADEMIC ACHIEVEMENT?

一項以三萬位家長及學童為對象的研究顯示，雖然學童的家庭收入、父母教育水平及職業地位有所不同，但也能獲取相近的學業成績。

Results from a survey with 30,000 students and parents showed that students, despite coming from families of different income groups, parental educational levels and job statuses, achieved similar academic results.

## 家庭收入及家長教育水平對學業影響輕微

現今香港社會不少父母擔心自己收入低、學歷低、職位低，令子女早在出生時已注定「輸在起跑線上」，成績不如他人。

這個想法是真的嗎？

## Limited Effects of Family Income and Parental Educational Level

Nowadays, many parents are worried that their low income, educational level and job status cause their children to be academically disadvantaged and 'lose at the starting line'.

But is that really the case?


香港中文大學教育心理學系一項研究顯示，家庭收入、父母教育水平及職業地位較高的學童在學術表現上只佔輕微優勢，結果與經濟合作與發展組織（OECD）於2006 年、2009 年、2012 年所進行的國際學生能力評估計劃（PISA）之研究結果一致，兩項研究均顯示在香港，家庭收入、父母的教育水平及職業地位對學生的學業成就影響不大。

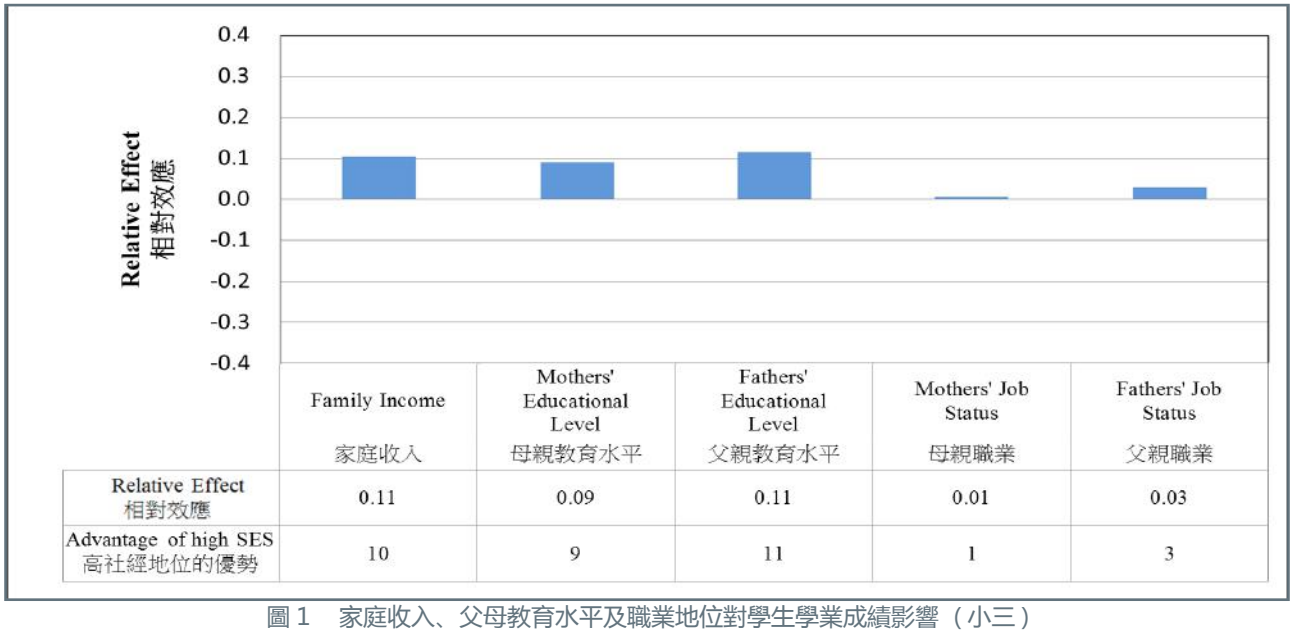
例如，在香港小三學生中，父母收入及教育水平較高的學生在學術整體表現，相比來自一般家庭學生的得分只高約 9 到 11 分（以全香港學生平均 500 分的總學業能力測驗計算）。

而家長的職業地位對於學生學業成績幾乎毫無幫助，即使父母職業地位較高，學生亦僅有 1 到 3 分（以全香港學生平均 500 分的學業總能力測驗計算）的極小優勢。

According to a research conducted by the Educational Psychology Department of the Chinese University of Hong Kong, family income, parental educational level and job status had only a minor effect on students' academic achievement. The research results are consistent with those of the OECD Program for International Student Assessment (PISA) research in 2006, 2009 and 2012. Both of them showed that family income, parental educational level and job status had little effect on Hong Kong students' total academic achievement.

For example, Primary 3 students who came from families with higher income and parental educational level scored 9 to 11 points (on the Hong Kong average being 500-point total achievement test scale) higher than students from average families.

The difference caused by parents' job status was even less marked. Students who had parents with a higher job status only scored 1 to 3 points (Hong Kong average being 500 points) above average.




| | Family Income 家庭收入 | Mothers' Educational Level 母親教育水平 | Fathers' Educational Level 父親教育水平 | Mothers' Job Status 母親職業 | Fathers' Job Status 父親職業 |
|---|---|---|---|---|---|
| Relative Effect 相對效應 | 0.11 | 0.09 | 0.11 | 0.01 | 0.03 |
| Advantage of high SES 高社經地位的優勢 | 10 | 9 | 11 | 1 | 3 |

圖 1　家庭收入、父母教育水平及職業地位對學生學業成績影響（小三）

Figure 1　Effects of Family Income, Parental Educational Level and Job Status on Students' Academic Achievement (Primary 3)

**註：**

1. 相對效應為社會經濟地位對總學業成績影響的標準化 beta 值。
2. 家庭收入（或父母教育水平）較高之學生（即 100 個學生中，排名第 16 位之學生）較位列中間的學生（排名第 50 位之學生）（即社會經濟地位一個標準差之分別），在學業成績的分數差距。

Note.

1. Relative effects are standardized beta weights of each socioeconomic status (SES) variables on the total academic achievement score.
2. Advantage in academic achievement points between students with high income (16th position among 100 students) and middle (50th) family income (or parental educational level, etc.)(i.e., difference in 1 standard deviation of SES).

# 教育機會均等排名香港全球第二

教育的其中一項目標，是不論貧富地為所有學生提供平等的競爭機會，香港作為一個崇尚自由平等的城市，教育能否為學生提供平等的競爭機會，是不少人關心的議題。

根據 PISA 的研究，香港致力為所有孩童創造公平的教育環境，現已是全球最公平教育體系之一。在 2006 年及 2009 年的排名，香港都優於新加坡、法國、美國等 50 多個國家。在 2012 年 PISA 研究的 65 個參加國家中，香港教育機會均等度（貧富間教育機會差異少）名列第二位。

**註：**

1. 高水平組是指高於平均數一個標準差，即相當於 100 個學生中排名第 16 位。
2. 學業成績於全港系統性評估預試研究獲得。隨機抽取樣本包括 15,000 位家長及 15,000 位小三、小六及中三學生。
3. 上述數據分析基於平均數 500、標準差 100 的量尺（同 PISA 所用量標尺一致）。
   - 3.1 一般而言，按照 Cohen（1988），20 分的效應較小，50分的效應中等，80分的效應較大。
   - 3.2 每個年級的效應隨教育階段的不同而有差異，據估計每個學年學生會提升大約 0.1 至 0.8 個標準差（e.g., Bloom, Hill, Black & Lipsey, 2008）。假設，我們取一學年可以提升 0.33 個標準差，也即是大約 3 個學年的成績差異相當於 1 個標準差，如果 1 個標準差是 100 分，33 分大約相當於 1 學年的成績提升效應。
   - 3.3 在 100 個學生中，排名第 16 的學生（成績為 600 分）比排名第 84 的學生（成績為 400 分）高 200 分。

# Hong Kong ranks 2nd in the World in Educational Equity

One of the aims of education is to provide students an equal opportunity for success in spite of their background. Being a city that values equality and freedom, many Hong Kong people are concerned with whether the local education system is able to foster an environment for fair competition.

In the PISA study, Hong Kong was seen to have one of the fairest education systems in the world, ranking above Singapore, France, America and 50 other countries in 2006 and 2009. In 2012, she ranked second in educational equity (minor difference in academic opportunities between rich and poor families) among the 65 countries that participated in the study.

Note.

1. High Ability is defined as one standard deviation from the mean, which is at the top 16th position among 100 students.
2. All academic achievement scores are taken from pilot research with the Territory-wide System Assessment. A random sample of a total of 15,000 parents and 15,000 students at Primary 3, Primary 6 and Secondary 3 level participated.
3. In the scale used in the above analyses, Mean of Hong Kong student performance= 500, Standard Deviation (SD) = 100 (identical to the scale used in PISA).
   - 3.1 In general, according to Cohen (1988), an effect of 20 points is small, 50 points is medium and 80 points is large.
   - 3.2 The advancement in each grade year differs at different stages of education. It is estimated that students may advance around 0.1 to 0.8 SD for each year of education (e.g., Bloom, Hill, Black & Lipsey, 2008).Take one academic year to be equal to 0.33 SD, for example, a change of 1 SD would be approximately equal to 3 years of education, and 33 points would be equivalent to an effect of one year of education.
   - 3.3 In 100 students, the two students at 16th (score = 600) and 84th (score = 400) positions differ by 200 points .

**參考 References**


Cohen, J. (1988). *Statistical power analysis for the behavioral sciences.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Bloom, H. S., Hill, C. J., Black, A. R., & Lipsey, M. W. (2008). Performance trajectories and performance gaps as achievement effect-size benchmarks for educational interventions. *Journal of Research on Educational Effectiveness, 1,* 289-328.

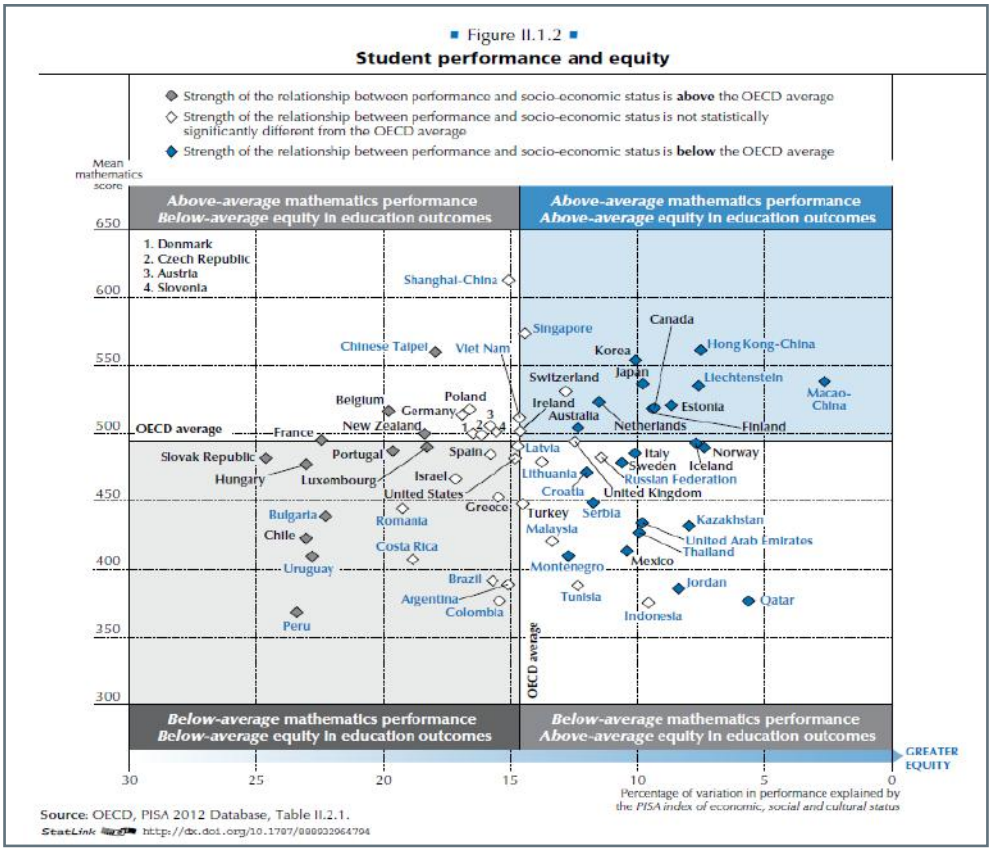




圖 2　學生學業表現與教育均等度

Figure 2　Student Performance and Equity

**資料來源** Taken From:

Figure II.1.2, in OECD (2013). PISA 2012 Results: Excellence through equity: Giving every student the chance to succeed (Volume II). PISA, OECD Publishing.

Despite not being able to identify each and every contributor to the corresponding issue of the reports, it should be noted that a team of research staff and student helpers mostly from the Chinese University of Hong Kong has helped to identify the research questions, conduct analyses, write up results, prepare graphs, proofread drafts, and finish the artworks.

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