

OECD Programme for International Student Assessment  
*Monitoring Knowledge and Skills in the New Millennium*

Hong Kong PISA Project

Monitoring The Quality of Education in Hong Kong  
From An International Perspective



*Hong Kong*  
*November 2001*



# HK – PISA Project

## THE COLLABORATING PARTIES

### *INTERNATIONAL PARTIES*

1. OECD
2. PISA CONSORTIUM

### *HONG KONG PARTIES*

1. Hong Kong Institute of Educational Research (HKIER), CUHK
2. Education Department (ED) of HKSAR

*Sponsored by Quality Education Fund*



# (IEA, Reading Literacy 1995)

Country	Grade tested	Mean Age (in years)	Overall		Narrative		Expository		Documents	
			Mean (s.e.)	SD	Mean (s.e.)	SD	Mean (s.e.)	SD	Mean (s.e.)	SD
Finland	3	9.7	569 (3.4)	70	568 (3.0)	83	569 (3.1)	81	569 (4.0)	88
United States	4	10.0	547 (2.8)	74	553 (3.1)	96	538 (2.6)	80	550 (2.7)	81
Sweden	3	9.8	539 (2.8)	94	536 (2.6)	100	542 (2.7)	112	539 (3.2)	106
France	4	10.1	531 (4.0)	74	532 (4.1)	93	533 (4.1)	84	527 (3.9)	81
Italy	4	9.9	529 (4.3)	80	533 (4.0)	88	538 (4.0)	95	517 (4.9)	92
New Zealand	5	10.0	528 (3.3)	86	534 (3.5)	102	531 (3.1)	93	521 (3.3)	92
Norway	3	9.8	524 (2.6)	91	525 (2.8)	102	528 (2.3)	103	519 (2.8)	101
Iceland*	3	9.8	518 (0.0)	85	518 (0.0)	95	517 (0.0)	101	519 (0.0)	91
Hong Kong	4	10.0	517 (3.9)	71	494 (4.1)	87	503 (3.4)	72	554 (4.2)	89
Singapore	3	9.3	515 (1.0)	72	521 (1.1)	91	519 (1.0)	75	504 (1.0)	78
Switzerland	3	9.7	511 (2.7)	83	506 (2.6)	92	507 (2.7)	100	522 (2.8)	96
Ireland	4	9.3	509 (3.6)	79	518 (3.7)	94	514 (3.2)	89	495 (3.8)	84
Belgium/Fr	4	9.8	507 (3.2)	77	510 (3.3)	92	505 (2.8)	85	506 (3.5)	88
Greece	4	9.3	504 (3.7)	75	514 (3.8)	88	511 (3.6)	85	488 (3.8)	85
Spain	4	10.0	504 (2.5)	78	497 (2.4)	86	505 (2.3)	92	509 (2.7)	89
Germany/W	3	9.4	503 (3.0)	84	491 (2.8)	93	497 (2.9)	104	520 (3.2)	94
Canada/BC	3	8.9	500 (3.0)	80	502 (3.5)	96	499 (2.7)	94	500 (2.8)	86
Germany/E	3	9.5	499 (4.3)	84	482 (4.2)	93	493 (3.6)	103	522 (5.0)	96
Hungary	3	9.3	499 (3.1)	78	496 (2.9)	80	493 (3.1)	101	509 (3.5)	89
Slovenia	3	9.7	498 (2.6)	78	502 (2.7)	94	489 (2.5)	93	503 (2.5)	82
Netherlands	3	9.2	485 (3.6)	73	494 (3.3)	85	480 (3.4)	87	481 (3.9)	82
Cyprus	4	9.8	481 (2.3)	77	492 (2.4)	92	475 (2.3)	91	476 (2.1)	81
Portugal	4	10.4	478 (3.6)	74	483 (3.3)	81	480 (3.0)	84	471 (4.5)	92
Denmark	3	9.8	475 (3.5)	111	463 (3.4)	119	467 (3.5)	127	496 (3.6)	125
Trinidad/Tobago	4	9.6	451 (3.4)	79	455 (3.6)	91	458 (3.4)	93	440 (3.3)	82
Indonesia	4	10.8	394 (3.0)	59	402 (2.8)	66	411 (3.2)	77	369 (3.0)	66
Venezuela	4	10.1	383 (3.4)	74	378 (3.2)	86	396 (3.3)	91	374 (3.7)	84

\*Iceland tested all students, therefore no standard error was calculated.

s.e. = 1 standard error of sampling

	Mathematics Achievement Scale Score	Average Scale Score	Years of Formal Schooling	Average Age
Singapore		▲ 604 (6.3)	8	14.4
Korea, Rep. of		▲ 587 (2.0)	8	14.4
Chinese Taipei		▲ 585 (4.0)	8	14.2
Hong Kong, SAR <sup>†</sup>		▲ 582 (4.3)	8	14.2
Japan		▲ 579 (1.7)	8	14.4
Belgium (Flemish) <sup>†</sup>		▲ 558 (3.3)	8	14.1
Netherlands <sup>†</sup>		▲ 540 (7.1)	8	14.2
Slovak Republic		▲ 534 (4.0)	8	14.3
Hungary		▲ 532 (3.7)	8	14.4
Canada		▲ 531 (2.5)	8	14.0
Slovenia		▲ 530 (2.8)	8	14.8
Russian Federation		▲ 526 (5.9)	7 or 8	14.1
Australia		▲ 525 (4.8)	8 or 9	14.3
Finland		▲ 520 (2.7)	7	13.8
Czech Republic		▲ 520 (4.2)	9	14.4
Malaysia		▲ 519 (4.4)	8	14.4
Bulgaria		▲ 511 (5.8)	8	14.8
Latvia (LSS) <sup>1</sup>		▲ 505 (3.4)	8	14.5
United States		▲ 502 (4.0)	8	14.2
England <sup>†</sup>		● 496 (4.1)	9	14.2
New Zealand		● 491 (5.2)	8.5 to 9.5	14.0
<b>International Avg.</b>		<b>487 (0.7)</b>		<b>14.4</b>
Lithuania <sup>1*</sup>		● 482 (4.3)	8.5	15.2
Italy		● 479 (3.8)	8	14.0
Cyprus		▼ 476 (1.8)	8	13.8
Romania		● 472 (5.8)	8	14.8
Moldova		▼ 469 (3.9)	9	14.4
Thailand		▼ 467 (5.1)	8	14.5
Israel <sup>2</sup>		▼ 466 (3.9)	8	14.1
Tunisia		▼ 448 (2.4)	8	14.8
Macedonia, Rep. of		▼ 447 (4.2)	8	14.6
Turkey		▼ 429 (4.3)	8	14.2
Jordan		▼ 428 (3.6)	8	14.0
Iran, Islamic Rep.		▼ 422 (3.4)	8	14.6
Indonesia		▼ 403 (4.9)	8	14.6
Chile		▼ 392 (4.4)	8	14.4
Philippines		▼ 345 (6.0)	7	14.1
Morocco		▼ 337 (2.6)	7	14.2
South Africa		▼ 275 (6.8)	8	15.5

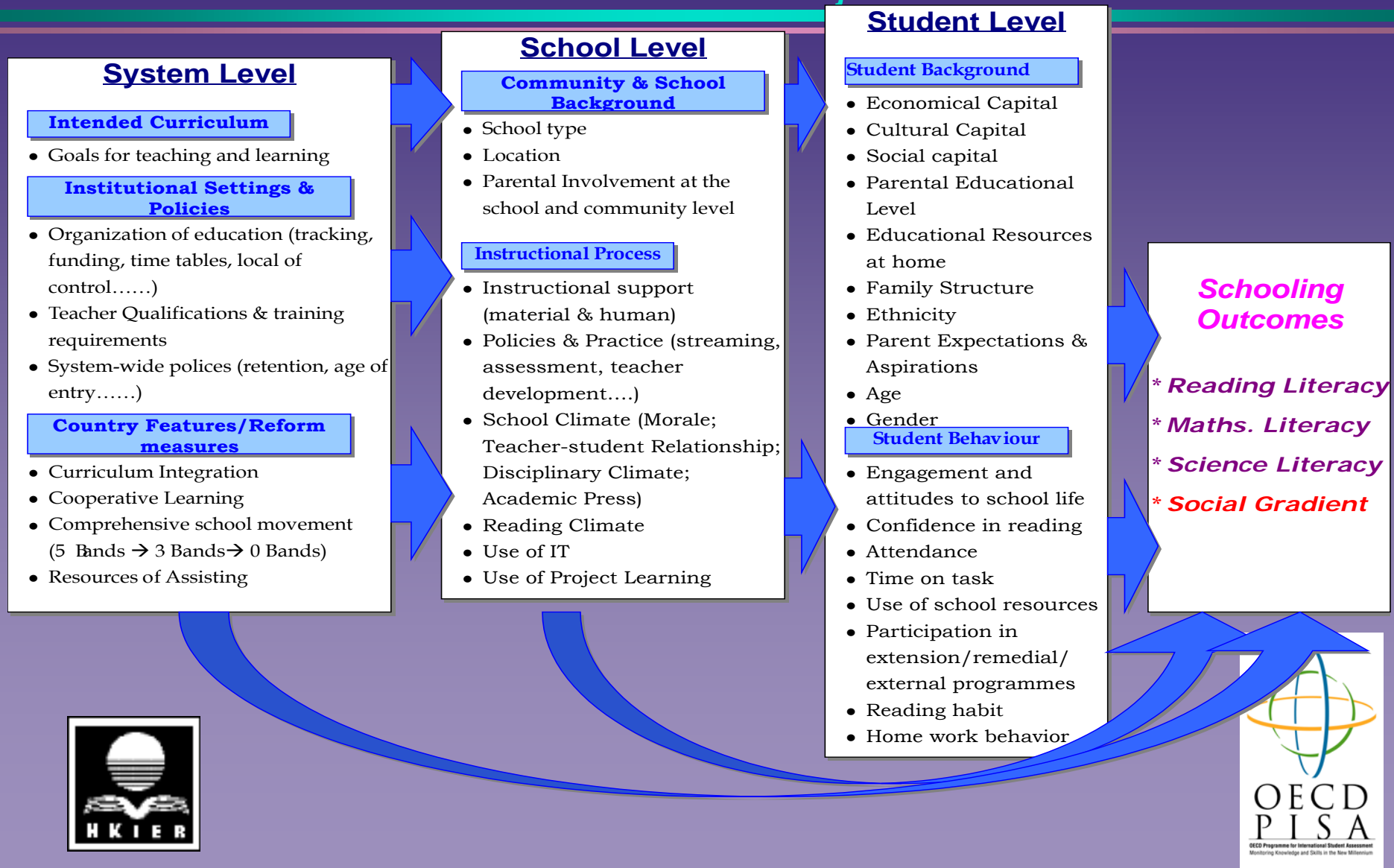
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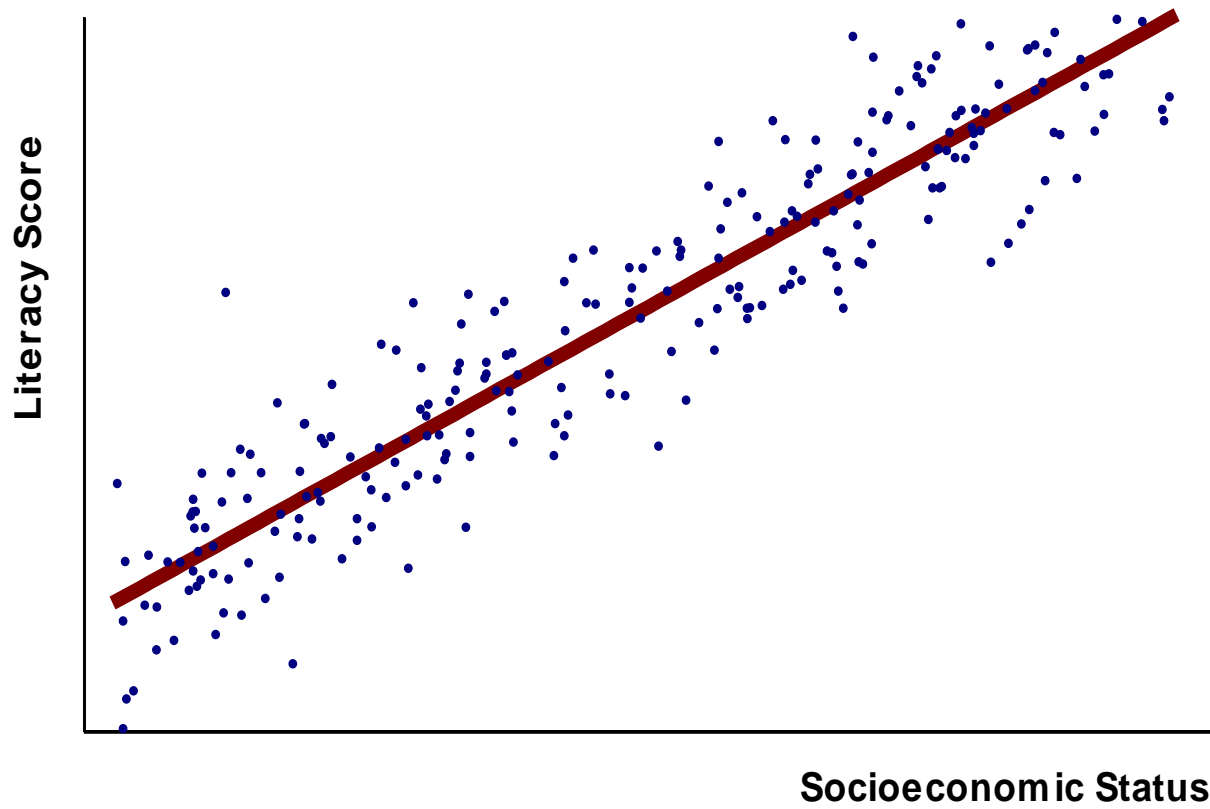
# HK-PISA Quality Indicators

- **Basic indicators** - A baseline profile of the competencies of students in reading, mathematics and sciences
- **Contextual indicators**-Analyses that identify key demographic, social, economic and educational determinants of student and school performance
- **Indicators on trends** designed to assess the effectiveness of educational reform policies

# Conceptual Framework of the HK – PISA Project

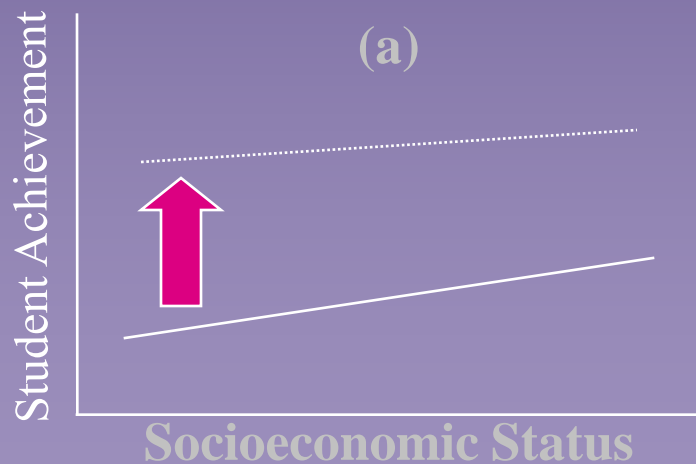
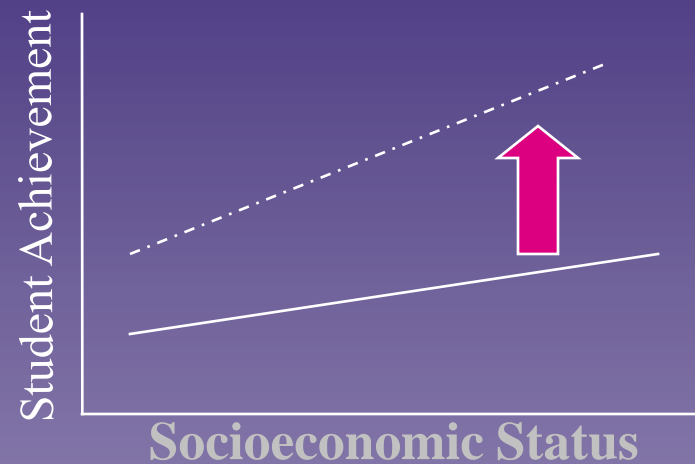
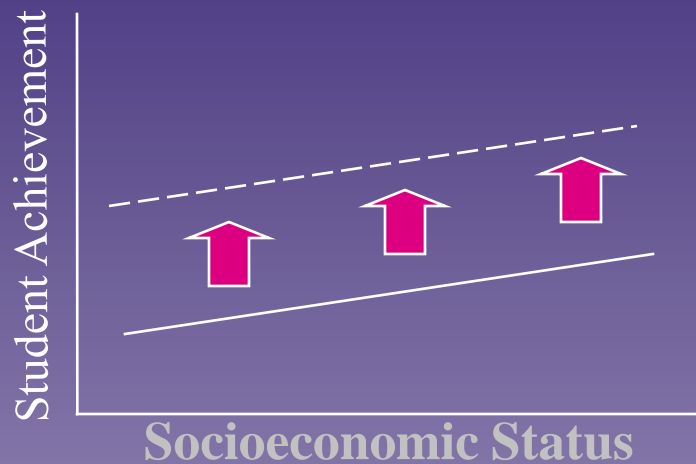


# Major Concern of PISA Project: Socioeconomic Gradient



**OECD  
PISA**  
OECD Programme for International Student Assessment  
Monitoring Knowledge and Skills in the New Millennium

# HK-PISA Project



**Figure 2.** A social policy with positive effects could (a) raise outcome levels evenly across the SES distribution, (b) raise outcomes more for those with high SES than for those of low SES, or (c) raise outcomes more for those low SES than for those of high SES.





# What makes PISA unique <sup>(4)</sup>?

- Tests **competencies for real-life situations** *and* not constrained by the common denominator of national curricula
- PISA 2000-2003: **Reading**, Mathematics and Science
- **Three cycles**: 2000-2003, 2003-2006 and 2006-2009.





# Basic Design of PISA (2)

- Age-based target population (*15 year-olds*)
- National samples of 150 schools with 5,000 - 10,000 students
- Two hours of testing time for each student
- Context questionnaires for the students, parents and schools





# HK-PISA Project Overview

- *October 2000 : Commemcement of HK-PISA Project*
- *October 2000-April 2001: International development of assessment materials*
- *May -July 2001: Field trial in 30 schools*
- *August 2001 -December 2001: Analysis and refinement of instruments*
- *January- February 2002: Main Survey in 150 schools*



# HKPISA Subject Expert Groups

## 1. Expert Committee on Reading:

Professor Shek Chun Ka Wai, Cecilia

Professor Sze Man-man

Professor Man Yee Fun, Evelyn

Professor Ho Wai kit

Professor Tse Shek Kam

## 2. Expert Committee on Mathematics :

Professor Wong Ka Ming

Professor Wong Ngai Ying

## 3. Expert Committee on Science:

Professor Yip Din Yan

Professor Cheung Sin Pui

# Reading Literacy

Reading Literacy  
by  
Prof. Shek Chun Ka Wai

# Scientific Literacy

Scientific Literacy

by

Prof. Yip Din Yan

# Mathematics Literacy

Mathematics Literacy

by

Prof. Wong Ka Ming

# Reliability Analysis

Reliability Analysis  
by  
Prof. Chiu Ming Ming



# Preliminary Analysis of Field Trial

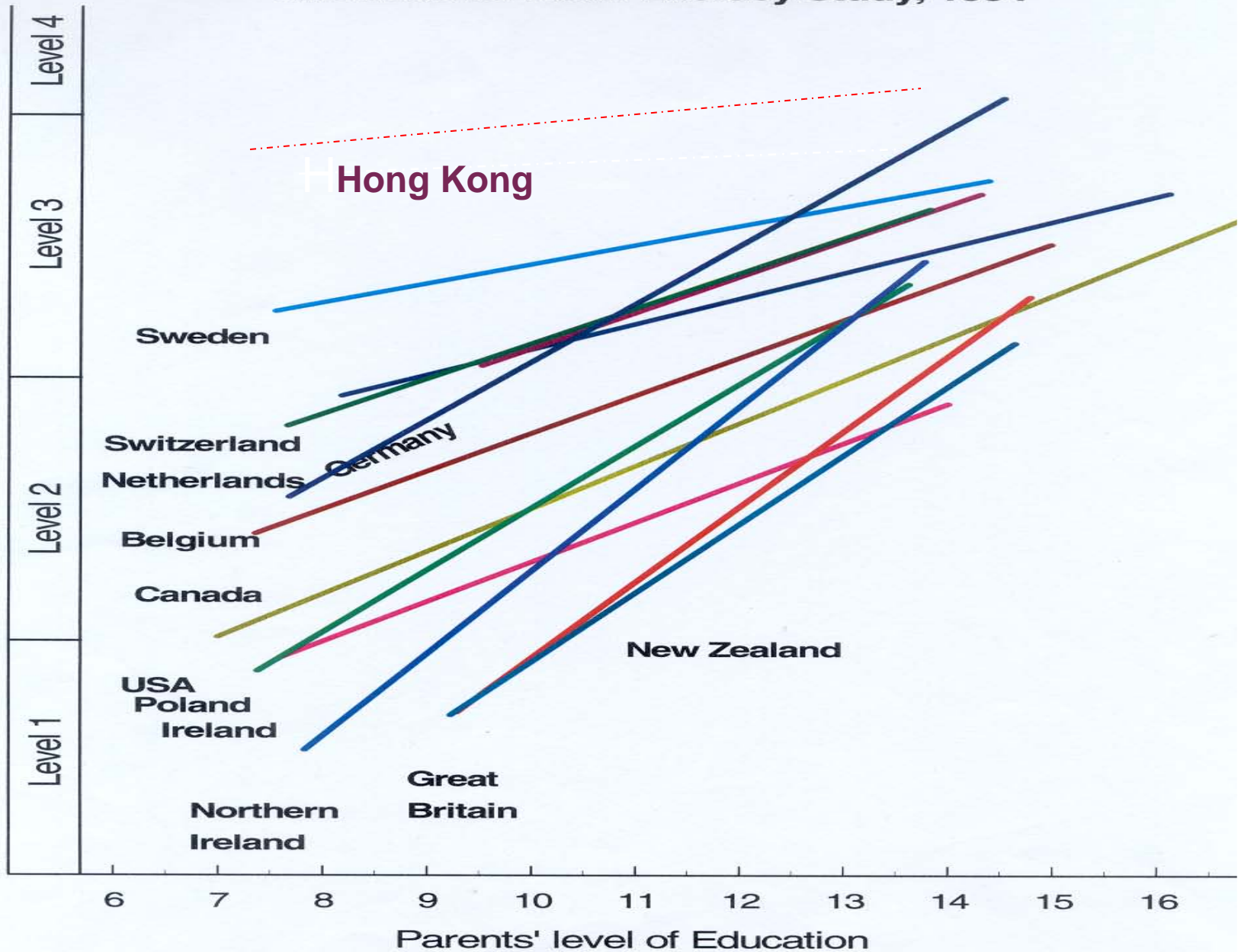
Preliminary Analysis

by

Prof. Ho Sui-chu

**Figure 2. Quantitative Literacy Scores for Youth Aged 16-25**

**International Adult Literacy Study, 1994**





# Significance of HK-PISA Project

- Inform schools, educators, parents and students their basic competencies in reading mathematics and sciences
- Facilitate policy makers in monitoring of achievement
- Motivate educational reform and school improvement





For more information about PISA, please contact the  
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OR

Visit the websites:

OECD-PISA : [www.pisa.oecd.org](http://www.pisa.oecd.org)

HK-PISA : [www.fed.cuhk.edu.hk/~hkpisa](http://www.fed.cuhk.edu.hk/~hkpisa)

