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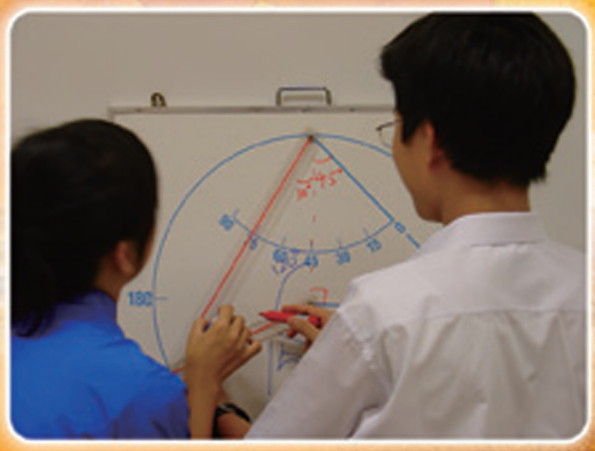
The Fourth HKPISA Report

PISA 2009 Executive Summary

From PISA 2000

To PISA 2009



MONITORING THE QUALITY AND EQUALITY OF EDUCATION IN HONG KONG FROM AN INTERNATIONAL PERSPECTIVE

從國際視野鑑察香港教育的質素與均等

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OVERVIEW OF PISA

1. The Programme for International Student Assessment (PISA) is a project initiated and coordinated by the Organisation for Economic Co-operation and Development (OECD). The primary goal of this international study is to assess how well 15-year-old students near the completion of compulsory education have acquired the knowledge and skills essential for meeting the challenges of our society. It then develops educational indicators to help governmental bodies and policy makers examine, evaluate, and monitor the effectiveness of the educational system at both national and school levels.

2. The PISA assessment takes place every three years starting from 2000, covering the three domains of reading, mathematical, and scientific literacy. PISA 2009 is the fourth cycle of this assessment, and the major focus is on reading literacy.

3. In PISA 2009, about 475,000 students from over 17,000 schools in 65 countries/regions took part in a two-hour test.

Table 1 Participating Countries/Regions in PISA 2009

OECD Countries			**Partner (Non-OECD) Countries / Regions**		
Australia	Hungary	Poland	Albania	Kazakhstan	Serbia
Austria	Iceland	Portugal	Argentina	Kyrgyzstan	Shanghai-China
Belgium	Ireland	Slovak Republic	Azerbaijan	Latvia	Singapore
Canada	Israel	Slovenia	Brazil	Liechtenstein	Thailand
Chile	Italy	Spain	Bulgaria	Lithuania	Trinidad and Tobago
Czech Republic	Japan	Sweden	Chinese Taipei	Macao-China	Tunisia
Denmark	Korea	Switzerland	Colombia	Montenegro	Uruguay
Estonia	Luxembourg	Turkey	Croatia	Panama	
Finland	Mexico	United Kingdom	Dubai (UAE)	Peru	
France	Netherlands	United States	Hong Kong-China	Qatar	
Germany	New Zealand		Indonesia	Romania	
Greece	Norway		Jordan	Russian Federation	

4. PISA has developed a framework describing the scope and dimensions of the assessment in each of the three domains of literacy. Each domain has three dimensions: the *knowledge* that students should acquire, the *processes* that need to be performed, and the *situation* in which knowledge and skills are applied or drawn on. In addition to the assessment of the three domains, PISA 2009 requires students and school principals to complete questionnaires. In Hong Kong, PISA also complements the perspectives of students and school principals by including an additional parent questionnaire. These data provide an outlook on parental involvement in children's education, as well as cognitive and non-cognitive aspects of student performance.

MAIN STUDY OF PISA 2009

5. The main study of PISA 2009 in Hong Kong was conducted from April to May 2009. A two-stage stratified sampling design is used. In the first stage, schools are stratified based on the type of school (government, aided and independent – international and DSS) and student academic intake[1] (high, medium and low ability). Schools from each stratum are systematically sampled with probabilities proportional to their enrollment size. The resulting school participation rate is 96.8% which meets the OECD standard. The distribution of schools is shown in Table 2.

Table 2 Number of Participating Schools in PISA 2009 Main Study in Hong Kong

Explicit Strata	Implicit Strata	Total Number of Schools	Number of Participating Schools
Government	High Ability	16	5
	Medium Ability	8	3
	Low Ability	7	2
	N/A	3	0
Aided	High Ability	120	44
	Medium Ability	120	41
	Low Ability	132	39
	N/A	3	0
Independent#	Local (DSS*)	54	15
	International	35	2
Total		**498**	**151**

#There is no implicit stratification for independent schools.

*DSS refers to schools under the Direct Subsidy Scheme.

6. In the second stage, 35 students of age 15 are randomly selected from each school in the sample. A total of 4,837 students from 151 schools are accepted for final analysis according to OECD sampling standard. Table 3 shows the grade distribution of the sampled students in Hong Kong.

Table 3 Distribution of Participating Students of PISA 2009 Main Study in Hong Kong

Grade/Form	Number of Participating Students	Proportion (%)
7/S1	85	1.8
8/S2	353	7.3
9/S3	1210	25.0
10/S4	3185	65.8
11/S5	4	0.1
Total	**4837**	**100**

[1] Student intake denotes the ability of Secondary 1 students admitted by school.

MAJOR FINDINGS

Quality and Equality

7. The findings derived from PISA 2009 sheds light on both the ***quality*** and ***equality*** of Hong Kong's educational system. Quality refers to the effectiveness of the educational system in fostering students' literacy skills. Equality refers to the benefit from education received by all students regardless of their socio-economic background.

8. In terms of overall quality, Hong Kong students perform well in the three assessment domains. From PISA 2000+[2], PISA 2003, PISA 2006 to PISA 2009, Hong Kong continues to rank among the top 10 in the three literacy domains. In PISA 2009, Hong Kong ranks fourth in Reading, third in Mathematics, and third in Science. Hong Kong's mean performances are significantly above the OECD averages.[3] Taking statistical significance into account, Hong Kong's Reading score of 533 is only significantly lower than that of Shanghai-China (first), but is not significantly different from those of Korea (second) and Finland (third). In Mathematics, Hong Kong gets a mean score of 555; only Shanghai-China (first) and Singapore (second) perform significantly better than Hong Kong. There is no statistical difference between Hong Kong and Korea (fourth). In Science, Hong Kong gets a mean score of 549, which is significantly lower than Shanghai-China's (first), similar to Finland's (second), but higher than those of all other participating countries / regions (see Appendix I).

9. As far as equality in the education system of Hong Kong is concerned, in PISA 2009, the disparities between high (95th percentile) and low (5th percentile) achievers in Reading and Science domains are relatively small (i.e. smaller than the OECD averages), while the disparity between high and low achievers in Mathematics is slightly greater than the OECD average. This suggests that Hong Kong students benefit fairly equally from quality education in Hong Kong regardless of their ability. Furthermore, economic, social and cultural status (ESCS) has only a relatively small impact on the literacy performance of Hong Kong students. The impact of socio-economic background on academic performance is expressed as "socio-economic gradient" in PISA.[4] The slope of the gradient line is an indicator of the extent of inequality in student performance attributable to socio-economic background. The modest slope of Hong Kong suggests that Hong Kong students perform equally well regardless of their socio-economic background. Having similar socio-economic background, Hong Kong's 15-year-olds score higher than students of many other countries/regions (see Appendix II).

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[2] The first cycle of PISA, PISA 2000, was conducted in 2000. Thirty-two countries/regions participated. Hong Kong and 10 other countries/regions joined in PISA 2000+, which was conducted in February 2002.

[3] In PISA 2009, the OECD averages are 493 in Reading, 496 in Mathematics, and 501 in Science, with standard deviations of 100.

[4] A steeper gradient indicates a greater impact of socio-economic background on student performance, which suggests more inequality.

10. The percentage of variation in academic performance remains quite large between secondary schools in Hong Kong.[5] This between-school variation is significantly related to the student intake ability and socio-economic segregations between schools. Despite these segregations, on average, Hong Kong's low achievers perform better in all three domains when compared to their counterparts in OECD countries. It can be posited that schools and teachers in Hong Kong are catering effectively for the learning needs of low achievers. On the other hand, the within-school variance in reading performance has risen significantly when compared with that in PISA 2000+, signifying an increased heterogeneity of students within school.

Student Achievement in Reading Literacy

11. In Reading, Hong Kong students perform similarly well in PISA 2009 (533) as in PISA 2006 (536). In comparison with PISA 2003, the reading performance in PISA 2009 is improved among both the low and high achievers, while the significant gain in performance when compared with PISA 2000+ is found only among the high achievers, indicating that the more proficient readers have made greater improvement.

12. In terms of the reading proficiency scale,[6] the majority of Hong Kong students attain Level 2 or above (91.7%), a percentage which is higher than the OECD average (81.4%). However, there is no significant difference in the percentage of students attaining Level 6, which is the highest level of reading proficiency, between Hong Kong (1.2%) and the OECD countries (0.8%). Despite its overall good performance, Hong Kong still lacks highly skilled readers (Levels 5 or above) when compared with other high performing countries. Moreover, we still have a certain amount (8.3%) of weak readers who are not able to reach Level 2, the baseline level of reading proficiency.

13. On the three subscales of Reading Literacy, that is, Accessing and Retrieving Information, Integrating and Interpreting, and Reflecting and Evaluating, Hong Kong students have done better in all of them than their counterparts in the OECD countries. Specifically, the respective percentages of Hong Kong students at Level 2 or above are 89.5%, 90.6% and 92%, while the corresponding OECD averages are all around 80% on each of the three subscales. Among the three subscales, Hong Kong students perform the best on reflecting and evaluating text. In comparison with PISA 2000+, there is a significant improvement in the Integrating and Interpreting subscale but no significant difference in performance on the other two subscales. Among the five continuous text types, Hong Kong students can handle *instruction* texts more effectively, whereas they do not handle *narration* and *argumentation* as well in comparison with OECD averages.

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[5] In Hong Kong, the percentages of total variations that lie between schools are 44.5% in reading, 45.7% in mathematics and 43.8% in science, which are slightly higher than the OECD averages of 41.7%, 42.2% and 42.2% in the three respective domains.

[6] In PISA 2009, two more levels are added to the old five-level reading proficiency scale used in the previous cycles of PISA, resulting in a seven-level proficiency scale. Level 6 is the highest level, while the old Level 1 is subdivided into Level 1a and Level 1b, with Level 1b a lower level than Level 1a.

14. Similarly with the previous PISA cycles, the gender difference in favour of girls in reading literacy is large (33 points), but lower than the OECD average of 39 points. Hong Kong girls perform significantly better than boys at all percentile points in Reading. The lower the percentile point, the bigger the difference. Specifically, at the 5th percentile, the difference in performance between boys and girls is 45, while at the 95th percentile, the difference has narrowed down to 23. Among the three reading subscales, significantly more girls than boys manage to attain Levels 4 and 5, whereas significantly more boys than girls attain Level 2 or below. These findings indicate that there is still a large gender gap in reading performance, especially at the lower end of the spectrum.

15. As for reading engagement, the percentage of Hong Kong students reporting reading for enjoyment has significantly increased, and students generally show a more positive attitude towards reading when compared with PISA 2000+. Among the three indices of reading engagement, that is, Enjoyment of Reading, Diversity in Reading, and Online Reading Activities, Enjoyment of Reading has the strongest impact on students' reading performance. Specifically, the more the students enjoy reading, the higher is the students' reading performance.

16. Compared with their good reading performance and positive profile of reading engagement, Hong Kong students' use of learning strategies and metacognition in reading is not satisfactory. While Hong Kong students have reported a high level of use of memorisation strategy, they do not frequently use the most effective control strategies. Also, the two metacognition indices of Hong Kong students are the lowest among those of East Asian students. In fact, it is the use of control strategies and metacognition, that is, awareness of understanding and remembering, and summarising strategies, which are the strongest predictors of reading performance.

Student Achievement in Mathematical Literacy

17. In Mathematical Literacy, Hong Kong students improve significantly from a mean score of 547 in PISA 2006 to a mean score of 555 in PISA 2009. This mean score is statistically similar to those in PISA 2003 (550) and PISA 2000+ (560). Hong Kong students outperform their counterparts in OECD countries at all percentile points.

18. Regarding gender difference among Hong Kong students, boys perform significantly better than girls. The 14-point gender gap is slightly higher than the OECD average gender gap (12 points). The gender gap in Mathematical Literacy has increased substantially from the 4-point gap in PISA 2003, but it is comparable to the 16-point gap in PISA 2006 and the 18-point gap in PISA 2000+.

Student Achievement in Science Literacy

19. Hong Kong students perform well in Science PISA 2009 (549) being similar to PISA 2006 (542). This mean score is significantly higher than those in PISA 2003 (539) and PISA 2000+ (541). When compared with the OECD average, Hong Kong students outperform their OECD counterparts at all percentile points.

20. In general, Hong Kong shows no significant gender difference in overall science performance and performance across different percentile points. However, gender differences exist in different scientific competencies. Specifically, boys tend to perform better in *explaining phenomena scientifically*, whereas girls are better at *identifying scientific issues*.

Parental Involvement, Investment and Perception

21. Consistent with the findings of the previous three cycles, home-based involvement is more commonly practiced than school-based involvement among the parents. Students who report higher levels of parental involvement at home perform better in reading but not in both mathematics and science. However, parental involvement in school has a significant and negative association with performance in reading, mathematics, and science, a finding which is consistent with that in PISA 2006.

22. As for parental investment, Hong Kong parents have under-invested in educational, cultural and material resources when compared with the parents from the OECD countries. Only the investment in reading materials by Hong Kong parents is slightly above the OECD average. Among the different kinds of investment, home educational and reading resources are found to have significant and positive effects on reading, mathematics and science performance.

23. Parents' perception of school quality, together with four new indices of parental involvement, are incorporated in the parent survey: parents' early support of child's reading in the first year of primary school, parents' current support of child's reading, motivational attributes of parents' own reading engagement, and parental involvement in their child's school. Hong Kong parents tend to provide less early and current support of their child's reading literacy, lower motivation of their own reading, lower perception of school quality and lower involvement in their child's school when compared with the OECD averages. Among these five indices, parents' perception of school quality has positive and the strongest associations with reading, mathematics and science performance. In particular, parents who report a higher level of school quality tend to have children who perform better in all three domains, and vice versa.

IMPLICATIONS AND RECOMMENDATIONS

For Policy Makers

24. Overall, Hong Kong students consistently perform quite well in all three domains of literacy. It can be posited that our educational system is effective in developing students' literacy without sacrificing equality. All students, regardless of their socio-economic background, can benefit from our educational system. However, the academic segregation between schools in Hong Kong remains high, notwithstanding the reform of the *Secondary School Places Allocation System (SSPA)*, specifically, the reduction of the allocation bands from 5 to 3, and the implementation of fine-tuning of the medium of instruction (MOI) for secondary schools. This is particularly unfavourable to the nurturing of a positive attitude toward life-long learning among young people. It is recommended that the *SSPA* and the policy on *Medium of Instruction* be constantly reviewed so as to reduce academic segregation among schools.

25. The increased variance of student ability within school warrants attention. This implies that teachers need more support and resource to cater for the wider individual learning differences. Improving teacher-student ratio, reallocating lesson time for conducting action research such as lesson study and peer learning, and providing training are useful measures for catering for individual learning differences.

26. It is worth capitalising on parental practices that have a positive influence on student learning. Apart from home-based involvement which is consistently proven to be useful for enhancing student reading performance, school-based involvement, which is underexploited, should be fostered. To overcome the problem-oriented view on school-based involvement, a communitarian view of schooling should be promoted by means of parent education and teacher education. In this way, parent's resources and expertise could be mobilised to support the all-round development of adolescents.

27. The impressive performance of Hong Kong students in reading is indisputable. However, the considerable gender difference with boys performing at the lower end of the scale is persistent and alarming. Therefore, helping boys to do better in reading and to enjoy the process of reading should be on the agenda for further improvement in reading literacy.

For Educators & Parents

28. The survey of student reading engagement and learning strategies indicates that a wide array of students' non-cognitive factors, such as enjoyment of reading, the use of control strategies, awareness of understanding and remembering, and summarising strategies, are positively associated with reading performance. We contend that the cognitive and the non-cognitive domains are inter-related and interacting with each other; both are important elements in nurturing future citizens.

29. Traditionally, Chinese reading class tends to focus on knowledge transmission and students are expected to develop their reading ability indirectly through intensive recitation of the prescribed texts. The current Chinese Language curriculum has moved in the right direction by centering on developing students' reading strategy. In fact, the teaching of "reading strategy" is included in the reading domain of the new curriculum guide. However, as shown by the present study, Hong Kong students' use of effective learning strategies, such as control strategies, and metacognition in reading is not satisfactory. Therefore, we suggest that educators and curriculum specialists formulate further action for the improvement of our students' strategic knowledge and their ability to use effective reading strategies.

30. Regardless of parents' socio-economic status, the findings support that home-based parental involvement in children's education is a promising avenue to enhance children's reading performance. Parents may support their children's learning by enhancing communication among family members, discussing their school life with the children and spending time just chatting with them. Parental involvement in school turns out to be negatively associated with student performance. This might be due to limited resources in terms of time and expertise, and inappropriate attitudes and values, which causes schools to limit their contact with parents only to critical situations. The proper role of home-school communication should be promoted in order to facilitate partnership rather than confrontation between school and parents. This partnership will lead to a more thorough understanding of the children, which is essential for providing the children with appropriate guidance and support.

31. Regarding home environment, parents should create an environment conducive to reading at home. Specifically, providing children with sufficient educational resources and reading materials at home is a highly rewarding investment for nurturing student learning. What is more, parents should become habitual readers themselves and be a role model of reading to students at home. In this regard, one objective of parent education we would propose is to promote a positive attitude towards reading among parents themselves.

32. Professional associations of teachers, governmental bodies, and the HKPISA Centre should seek more collaboration to reap the harvest available from the PISA research to improve curriculum and instruction.

For Future Research

33. PISA 2009 provides useful information about students' academic performance on the one hand, and various contextual factors on the other. These factors, to name but few, include students' immigration status, students' out-of-school learning time, gender differences in cognitive outcomes, reading engagement, learning strategies in reading, educational and career aspiration. All these themes are worthy of further investigation, and the relative contribution of different individual, familial and school factors should be explored in future.

34. The findings concerning students' overuse of memorisation strategy but underuse of the more effective control strategies and the two metacognition strategies, namely, awareness of understanding and remembering, and summarising, warrant the need for further investigation at classroom level. Longitudinal study and action research are recommended identify ways to enhance students' awareness of learning strategies and thus their acquisition of more effective learning skills beyond memorisation.

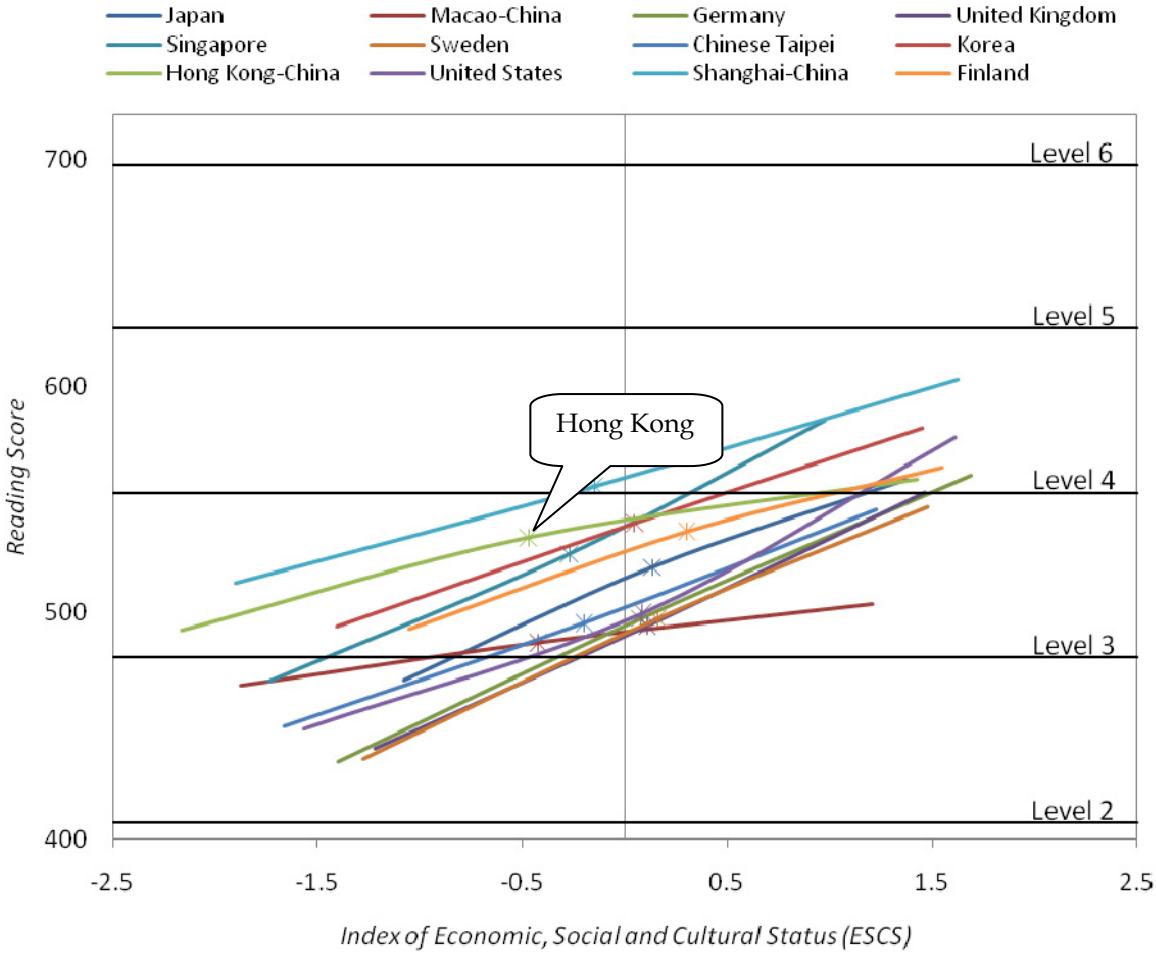
35. The finding concerning the negative association of school-based involvement of parents with student performance is similar to that of PISA 2006, suggesting that this undesirable condition is persisting. Further research is needed to help transform the nature of home-school interaction and parental participation, which has not improved during the past ten years.

Appendix I Performance of 15-Year-Old Students in Reading, Mathematical, and Scientific Literacy in PISA 2009

Reading			Mathematics			Science		
Countries / Regions	**Mean**	**S.E.**	**Countries / Regions**	**Mean**	**S.E.**	**Countries / Regions**	**Mean**	**S.E.**
Shanghai-China	556	(2.4)	Shanghai-China	600	(2.8)	Shanghai-China	575	(2.3)
Korea	539	(3.5)	Singapore	562	(1.4)	Finland	554	(2.3)
Finland	536	(2.3)	**Hong Kong-China**	**555**	**(2.7)**	**Hong Kong-China**	**549**	**(2.8)**
Hong Kong-China	**533**	**(2.1)**	Korea	546	(4.0)	Singapore	542	(1.4)
Singapore	526	(1.1)	Chinese Taipei	543	(3.4)	Japan	539	(3.4)
Canada	524	(1.5)	Finland	541	(2.2)	Korea	538	(3.4)
New Zealand	521	(2.4)	Liechtenstein	536	(4.1)	New Zealand	532	(2.6)
Japan	520	(3.5)	Switzerland	534	(3.3)	Canada	529	(1.6)
Australia	515	(2.3)	Japan	529	(3.3)	Estonia	528	(2.7)
Netherlands	508	(5.1)	Canada	527	(1.6)	Australia	527	(2.5)
Belgium	506	(2.3)	Netherlands	526	(4.7)	Netherlands	522	(5.4)
Norway	503	(2.6)	Macao-China	525	(0.9)	Chinese Taipei	520	(2.6)
Estonia	501	(2.6)	New Zealand	519	(2.3)	Germany	520	(2.8)
Switzerland	501	(2.4)	Belgium	515	(2.3)	Liechtenstein	520	(3.4)
Poland	500	(2.6)	Australia	514	(2.5)	Switzerland	517	(2.8)
Iceland	500	(1.4)	Germany	513	(2.9)	United Kingdom	514	(2.5)
United States	500	(3.7)	Estonia	512	(2.6)	Slovenia	512	(1.1)
Liechtenstein	499	(2.8)	Iceland	507	(1.4)	Macao-China	511	(1.0)
Sweden	497	(2.9)	Denmark	503	(2.6)	Poland	508	(2.4)
Germany	497	(2.7)	Slovenia	501	(1.2)	Ireland	508	(3.3)
Ireland	496	(3.0)	Norway	498	(2.4)	Belgium	507	(2.5)
France	496	(3.4)	France	497	(3.1)	Hungary	503	(3.1)
Chinese Taipei	495	(2.6)	Slovak Republic	497	(3.1)	United States	502	(3.6)
Denmark	495	(2.1)	Austria	496	(2.7)	Czech Republic	500	(3.0)
United Kingdom	494	(2.3)	Poland	495	(2.8)	Norway	500	(2.6)
Hungary	494	(3.2)	Sweden	494	(2.9)	Denmark	499	(2.5)
Portugal	489	(3.1)	Czech Republic	493	(2.8)	France	498	(3.6)
Macao-China	487	(0.9)	United Kingdom	492	(2.4)	Iceland	496	(1.4)
Italy	486	(1.6)	Hungary	490	(3.5)	Sweden	495	(2.7)
Latvia	484	(3.0)	Luxembourg	489	(1.2)	Austria	494	(3.2)
Slovenia	483	(1.0)	United States	487	(3.6)	Latvia	494	(3.1)
Greece	483	(4.3)	Ireland	487	(2.5)	Portugal	493	(2.9)
Spain	481	(2.0)	Portugal	487	(2.9)	Lithuania	491	(2.9)
Czech Republic	478	(2.9)	Spain	483	(2.1)	Slovak Republic	490	(3.0)
Slovak Republic	477	(2.5)	Italy	483	(1.9)	Italy	489	(1.8)
Croatia	476	(2.9)	Latvia	482	(3.1)	Spain	488	(2.1)
Israel	474	(3.6)	Lithuania	477	(2.6)	Croatia	486	(2.8)
Luxembourg	472	(1.3)	Russian Federation	468	(3.3)	Luxembourg	484	(1.2)
Austria	470	(2.9)	Greece	466	(3.9)	Russian Federation	478	(3.3)
Lithuania	468	(2.4)	Croatia	460	(3.1)	Greece	470	(4.0)
Turkey	464	(3.5)	Dubai (UAE)	453	(1.1)	Dubai (UAE)	466	(1.2)
Dubai (UAE)	459	(1.1)	Israel	447	(3.3)	Israel	455	(3.1)
Russian Federation	459	(3.3)	Turkey	445	(4.4)	Turkey	454	(3.6)
Chile	449	(3.1)	Serbia	442	(2.9)	Chile	447	(2.9)
Serbia	442	(2.4)	Azerbaijan	431	(2.8)	Serbia	443	(2.4)
Bulgaria	429	(6.7)	Bulgaria	428	(5.9)	Bulgaria	439	(5.9)
Uruguay	426	(2.6)	Romania	427	(3.4)	Romania	428	(3.4)
Mexico	425	(2.0)	Uruguay	427	(2.6)	Uruguay	427	(2.6)
Romania	424	(4.1)	Chile	421	(3.1)	Thailand	425	(3.0)
Thailand	421	(2.6)	Thailand	419	(3.2)	Mexico	416	(1.8)
Trinidad and Tobago	416	(1.2)	Mexico	419	(1.8)	Jordan	415	(3.5)
Colombia	413	(3.7)	Trinidad and Tobago	414	(1.3)	Trinidad and Tobago	410	(1.2)
Brazil	412	(2.7)	Kazakhstan	405	(3.0)	Brazil	405	(2.4)
Montenegro	408	(1.7)	Montenegro	403	(2.0)	Colombia	402	(3.6)
Jordan	405	(3.3)	Argentina	388	(4.1)	Montenegro	401	(2.0)
Tunisia	404	(2.9)	Jordan	387	(3.7)	Argentina	401	(4.6)
Indonesia	402	(3.7)	Brazil	386	(2.4)	Tunisia	401	(2.7)
Argentina	398	(4.6)	Colombia	381	(3.2)	Kazakhstan	400	(3.1)
Kazakhstan	390	(3.1)	Albania	377	(4.0)	Albania	391	(3.9)
Albania	385	(4.0)	Tunisia	371	(3.0)	Indonesia	383	(3.8)
Qatar	372	(0.8)	Indonesia	371	(3.7)	Qatar	379	(0.9)
Panama	371	(6.5)	Qatar	368	(0.7)	Panama	376	(5.7)
Peru	370	(4.0)	Peru	365	(4.0)	Azerbaijan	373	(3.1)
Azerbaijan	362	(3.3)	Panama	360	(5.2)	Peru	369	(3.5)
Kyrgyzstan	314	(3.2)	Kyrgyzstan	331	(2.9)	Kyrgyzstan	330	(2.9)
OECD average	*493*	*(0.5)*	*OECD average*	*496*	*(0.5)*	*OECD average*	*501*	*(0.5)*

Note: Shaded area indicates scores significantly different from those of Hong Kong.

Appendix II Relationship between Student Performance in Reading and ESCS in Twelve Countries/Regions



Note: The ESCS index for PISA 2009 is derived from three variables related to family background: highest parental education, highest parental occupation and number of home possessions.

PISA 概述

1. 學生能力國際評估計劃(PISA)由經濟合作與發展組織(OECD)發起及統籌，旨在評估接近完成普及教育的十五歲學童，對社會所需知識與技能掌握的情況，並建立教育指標，讓各國政府及政策制訂者審視、評價和監察國家和學校層面的教育成效。

2. PISA 自 2000 年起每三年舉行一次，研究覆蓋閱讀、數學、科學能力三大範疇。PISA 2009 是第四屆評估計劃，重點評估閱讀能力。

3. 在 PISA 2009，約 475,000 名學生參加了兩小時的測試，參與學校逾 17,000 所，來自 65 個國家和地區。

表一　PISA 2009 的參與國家或地區

OECD 成員國家			**夥伴 (非 OECD 成員) 國家/地區**		
澳洲	匈牙利	波蘭	阿爾巴尼亞	哈薩克斯坦共和國	塞爾維亞共和國
奧地利	冰島	葡萄牙	阿根廷	吉爾吉斯共和國	中國上海
比利時	愛爾蘭	斯洛伐克共和國	阿塞拜疆	拉脫維亞	新加坡
加拿大	以色列	斯洛文尼亞	巴西	列支敦士登	泰國
智利	意大利	西班牙	保加利亞	立陶宛	特立尼達和多巴哥
捷克共和國	日本	瑞典	中華台北	中國澳門	突尼西亞
丹麥	韓國	瑞士	哥倫比亞	黑山共和國	烏拉圭
愛沙尼亞	盧森堡	土耳其	克羅地亞	巴拿馬	
芬蘭	墨西哥	英國	杜拜（阿聯酋）	秘魯	
法國	荷蘭	美國	中國香港	卡塔爾	
德國	新西蘭		印度尼西亞	羅馬尼亞	
希臘	挪威		約旦	俄羅斯聯邦	

4. PISA 建構了一個架構，說明三個能力範疇的評估所涵括的內容與維度，而每個範疇均有三個維度：學生須具備的「知識」、需要進行的「過程」、以及運用或獲得知識技能的「處境」。除了評估三個範疇，PISA 2009 邀請學生和校長填寫問卷。在香港，PISA 還增設家長問卷，以補充學生和校長的看法和了解家長如何參與子女的教育、以及學生在認知和其他方面的表現。

5. 在香港，PISA 2009 正式測試於 2009 年 4 月至 5 月期間進行。研究採用二段分層抽樣方法，在第一階段，研究把學校按類型(官立、資助、私立學校──包括國際學校和直資學校)與收生成績[1] (高、中、低能力)分組，有系統地從學校組別中隨機抽選樣本學校，選中機率與學校的學生人數成正比例。得出的學校參與率爲 96.8%，符合 OECD 標準。表二顯示學校在各組的分佈。

表二　香港參加 PISA 2009 正式測試的學校分佈

顯層	隱層	學校總數	參與學校數目
官立學校	高能力	16	5
	中能力	8	3
	低能力	7	2
	(不適用)	3	0
資助學校	高能力	120	44
	中能力	120	41
	低能力	132	39
	(不適用)	3	0
私立學校#	本地 (直資*)	54	15
	國際學校	35	2
總數		**498**	**151**

私立學校沒有收生成績資料。
* 直資是參加直接資助計劃的學校。

6. 在第二階段，研究從每所參與學校隨機抽樣選取 35 名十五歲學生。根據 OECD 的抽樣標準，共有來自 151 所中學的 4,837 名學生獲納入最後的分析樣本。表三顯示了樣本中的學生年級分佈。

表三　香港參加 PISA 2009 正式測試的學生年級分佈

年級	參與學生人數	百分比 (%)
中一	85	1.8
中二	353	7.3
中三	1210	25.0
中四	3185	65.8
中五	4	0.1
總數	**4837**	**100**

[1] 收生成績指中一學生的入學成績。

重點研究結果

質素與均等

7. PISA 2009 研究結果爲本港教育系統的「質素」與「均等」兩方面帶來啓示。「質素」指教育系統培育學生基礎能力的成效；「均等」指教育系統讓不同社經背景的學生均能從教育中獲益。

8. 就整體質素而言，香港學生於三個評估範疇均表現良好。由 PISA 2000+[2]、PISA 2003、PISA 2006 至 PISA 2009，香港持續在三個範疇中穩據前十名。在 PISA 2009，香港在閱讀排名第四，在數學排名第三，在科學排名第三。香港的平均成績顯著高於 OECD 平均值[3]。若以統計學的顯著度作準，香港的閱讀分數(533 分)只顯著低於上海(第一名)，但與韓國(第二名)和芬蘭(第三名)無顯著差異。數學方面，香港的平均分數爲 555 分，只顯著低於上海(第一名)和新加坡(第二名)，但與韓國(第四名)並無顯著差異。科學方面，香港的平均分數爲 549 分，顯著低於上海(第一名)，而與芬蘭(第二名)的分數相若，但高於所有其他參與國家和地區(見附錄一)。

9. 就香港教育系統的均等而言，在 PISA 2009 的閱讀和科學範疇中的高分者(第 95 百分位數)和低分者(第 5 百分位數)之間的成績差距比其他參與國家和地區的差距相對較小(即較 OECD 平均值小)；但在數學範疇，高分者和低分者的成績差距則稍微大於 OECD 平均值。這個結果顯示，香港學生不論能力如何，都能大致均等地從香港的優質教育中獲益。此外，香港學生的社經及文化地位(economic, social and cultural status, ESCS)對能力表現的影響相對小。PISA 以「社經坡度」(socio-economic gradient)表示社經背景對學業成績的影響，坡度反映社經背景有多大程度導致學生能力表現的差異[4]。香港的社經坡度不大，反映無論學生社經背景如何，表現一樣出色。就相同社經背景的學生而言，香港十五歲學生的表現亦比其他許多參與國家和地區的學生較佳(見附錄二)。

10. PISA 2009 研究結果顯示，香港中學之間仍然存在著頗大的成績差距百分比[5]，這差距與學校之間的收生成績差異和社經地位差異有顯著關係。儘管如此，香港的低分者於三個評估範疇的表現仍較 OECD 國家和地區的低分者爲佳。由此可以推論，香港的學校和教師能有效地照顧低分者的學習需要。另一方面，香港學生閱讀成績的校內差異較 PISA 2000+ 的校內差異顯著上升，意味校內學生的能力差異程度有所增加。

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[2] 第一屆 PISA，即 PISA 2000，於 2000 年舉行，共有 32 個國家和地區參加。香港和其他 10 個國家和地區參加了於 2002 年 2 月舉行的 PISA 2000+。

[3] 在 PISA 2009，OECD 的閱讀平均分爲 493 分，數學平均分爲 496 分，科學平均分爲 501 分，而標準差爲 100 分。

[4] 坡度愈大，社經背景對學生表現的影響則較大，即較不平等。

[5] 香港學生表現的校間差異佔總差異的百分比，在閱讀方面爲 44.5%，在數學方面爲 45.7%，在科學方面爲 43.8%，略高於 OECD 平均值(分別爲 41.7%、42.2%、42.2%)。

閱讀能力表現

11. 閱讀能力方面，香港學生於 PISA 2009 表現良好(533 分)，與 PISA 2006 的表現相若(536 分)。與 PISA 2003 比較，PISA 2009 的低分者和高分者的閱讀表現均有提升；與 PISA 2000+比較，PISA 2009 則只有高分者的閱讀成績有顯著上升，顯示閱讀水平較高者進步較大。

12. 就閱讀能力水平而言[6]，大部分香港學生均能達到第二級或以上(91.7%)，此百分比高於 OECD 平均值(81.4%)。然而，對於閱讀能力最高級別第六級，香港學生的百分比(1.2%)與 OECD 國家(0.8%)並無顯著分別。儘管香港的整體閱讀表現出色，相對其他高閱讀水平的國家，香港仍缺乏精於閱讀(第五級或以上)的學生。此外，我們仍有相當數目閱讀能力較弱的學生(8.3%)，未能達到第二級，即基本水平的閱讀能力。

13. 在閱讀能力的三個分量表，即「擷取與檢索」(Accessing and Retrieving)、「整合和解讀」(Integrating and Interpreting)及「反思和評價」(Reflecting and Evaluating)，香港學生的表現均較 OECD 國家的出色。具體而言，香港學生達到第二級的百分比分別爲 89.5%、90.6%及 92%，而 OECD 國家對應的三個百分比均約爲 80%。在三個分量表中，香港學生於反思和評價文章方面表現最爲出色。相比起 PISA 2000+，香港學生在「整合和解讀」的表現顯著提升，在其餘兩個過程的表現則並無顯著分別。與 OECD 平均值比較，在五種文章體裁中，香港學生最善於處理「指示類」文章(*instruction*)，但在處理「記敍文」(*narration*)和「議論文」(*argumentation*)方面則較弱。

14. 性別差距方面，跟歷屆評估結果相若，女生與男生在閱讀上的差距達到 33 分，但低於 OECD 平均的 39 分。香港女生在所有百分位數的閱讀表現均較男生優異；百分位數愈低，性別差距則愈大。具體而言，第 5 百分位數的男生與女生的差距爲 45 分，在第 95 百分位數的差距則收窄至 23 分。在閱讀的三個分量表，女生達到第四和第五級的人數顯著比男生多，反之，第二級或以下的男生人數則顯著比女生多。結果顯示男女生的閱讀表現仍存著很大差距，低分者尤甚。

15. 閱讀投入感方面，學生對閱讀的態度明顯改善，與 PISA 2000+比較，香港學生表示喜愛閱讀的百分比明顯上升。閱讀投入感的三個指標中，即「閱讀興趣」(Enjoyment of Reading)、「多元閱讀」(Diversity in Reading)和「網上閱讀」(Online Reading Activities)，「閱讀興趣」對學生的閱讀表現影響最大。具體而言，學生對閱讀愈感興趣，閱讀能力愈高。

16. 相比良好的閱讀表現與正面的閱讀投入感，香港學生在運用學習策略和後設認知策略方面表現未如理想。香港學生大多運用記憶策略，卻少用最有效的控制策略。此外，香港學生的兩個後設認知策略指數爲東亞學生中最低。後設認知是對理解、牢記和撮要資料策略的自覺，而事實上，運用控制策略和後設認知策略，對學生的閱讀表現影響最大。

[6] PISA 2009 在 PISA 過去沿用的五級閱讀能力水平加入兩個級別，制定七級的閱讀能力水平，第六級最高，原有的第一級則細分爲第 1a 級和第 1b 級，第 1b 級最低。

數學能力表現

17. 數學能力方面，香港學生的平均分由 PISA 2006 的 547 分，顯著提升至 PISA 2009 的 555 分，後者與 PISA 2003 的 550 分和 PISA 2000+的 560 分在統計學上相若。此外，在所有百分位數，香港學生的表現均較 OECD 平均值爲佳。

18. 性別差異方面，香港男生的表現顯著較女生爲佳，兩者得分的差距爲 14 分，略高於 OECD 平均值 (12 分)。數學能力方面的性別差異從 PISA 2003 的 4 分大幅增加，但與 PISA 2006 的 16 分和 PISA 2000+的 18 分相若。

科學能力表現

19. 科學能力方面，香港學生於 PISA 2009 的表現良好(549 分)，與 PISA 2006 的表現相若(542 分)，分數比 PISA 2003(539 分)和 PISA 2000+(541 分)顯著提升；與 OECD 平均值比較，香港學生在所有百分位數的表現均較 OECD 學生出色。

20. 整體而言，在性別差異方面，香港男女生在整體科學能力及各百分位數的表現並無顯著差距，但在各個科學能力分項的表現則可見性別差異。具體而言，男生於「解釋科學現象」(*explaining phenomena scientifically*)的表現較佳，女生於「識別科學議題」(*identifying scientific issues*)的表現則較優異。

家長參與、資源投放與觀感

21. 在參與子女學習方面，香港家長在家庭爲本的參與較多，學校爲本的參與較少，結果跟前三屆的一致。資料顯示，當家長較多在家裏參與子女的學習，子女的閱讀表現會較佳，但數學和科學方面的影響並不顯著。可是，家長在學校的參與卻跟學生的閱讀、數學和科學表現呈顯著的負相關，這結果與 PISA 2006 的結果一致。

22. 資源投放方面，香港家長投放在教育、文化和物質的資源較 OECD 國家的家長爲低，只有投放在閱讀的資源稍高於 OECD 平均值。研究發現，各項資源中，家庭教育和閱讀資源對學生的閱讀、數學和科學表現均有顯著正面的影響。

23. PISA 2009 問卷也研究了家長對學校質素的觀感，更引入四項新的家長參與指標：家長早期(在子女讀小一時)對子女在閱讀方面的支援、家長現時對子女在閱讀方面的支援、家長個人閱讀的動機和家長在子女學校的參與。與 OECD 平均值比較，香港家長除了較缺乏早期和現時對子女閱讀的支援外，個人閱讀動機也較弱，對學校質素的觀感較負面，在子女學校的參與亦較低。五項家長參與指標中，家長對學校質素的觀感與子女的閱讀、數學和科學表現有最大的正相關；當家長較滿意子女的學校教育質素，子女在三個範疇的表現亦趨向較佳，反之亦然。

啓示及建議

給教育政策制訂者

24. 整體而言，香港學生在三個能力範疇持續有出色的表現。由此可以推論，香港的教育系統給學生提供了優質而均等的教育機會，在有效發展學生能力的同時，不會犧牲弱勢學生的學習機會，無論學生的社經背景如何，都能在教育系統中獲益。另一方面，儘管教育當局改革中一派位機制(SSPA)，把派位組別由五個減至三個，並且微調中學教學語言政策(MOI)，香港的中學之間仍然存在明顯的學能分隔現象，對於培養年輕人對終身學習的積極態度尤其不利。教育當局宜定期檢討「中一派位機制」及「中學教學語言政策」，以減低學校之間的學能分隔。

25. 校內學生能力差距增大，情況值得關注。學生能力差距增大意味著教師需要提供更多支援和投入更多資源，照顧學生之間日益擴大的學習差異。要處理學習差異的問題，可行的方法包括改善師生比例、把部分課堂時間調配予教師進行改善教學的行動研究，如課堂研究或同儕學習活動，和提供適當培訓等。

26. 家長參與有助子女學習，做法值得加以推廣。過去研究顯示，家庭爲本參與有助提升學生閱讀能力，而除了實踐家庭爲本參與，當局亦應促進尚未充分發揮作用的學校爲本參與。通過家長教育和教師培訓，提倡家校協作的意識，以扭轉問題爲本的取態，藉此動員家長的資源和專長，支援青少年的全人發展。

27. 香港學生在閱讀方面表現優異，能力無可置疑；然而，男生持續在閱讀方面大大落後於女生，情況卻令人憂慮。因此，提升男生的閱讀能力和培養閱讀興趣，實爲進一步提升學生閱讀能力的重要議題。

給教育工作者及家長

28. 學生的閱讀投入感和學習策略的調查顯示，很多非認知的因素均與學生的閱讀表現呈正相關，這些因素包括閱讀興趣、運用控制策略、理解和記憶的自覺及撮要資料的策略。認知和非認知的因素相輔相成，要培育未來的公民，兩者缺一不可。

29. 傳統的中文閱讀課大多偏重傳授知識，學生需要大量背誦範文，從而發展閱讀能力，而現時的中國語文課程則較著重培養學生的閱讀策略，發展方向正確。事實上，現時的中國語文課程指引已將「閱讀策略」納入閱讀教學範疇內。然而，從今屆評估可見，香港學生對於有效運用學習策略，如控制策略、後設認知策略，情況未如理想。因此，我們建議教育工作者和課程專家制訂方案，進一步提升學生對學習策略的認知和運用有效學習策略的能力。

30. 研究結果証明，無論家長的社經地位如何，家長在家裏參與子女的教育都是提升子女閱讀表現的有效途徑。家長可以加強家庭成員之間的溝通，與子女討論學校生活，抽空和子女閒聊，來促進子女的學習。研究發現，家長在學校的參與和學生成績呈負相關，相信這是由於學校在資源方面的限制，例如時間、專業知識、適當的態度和價值觀不足，以致學校

只有在事態嚴重時才聯絡家長。家校雙方應發展適當的家校溝通，促進家庭與學校之間的伙伴關係，而非對抗。良好的伙伴關係能使雙方更全面了解孩子，此乃給予孩子恰當輔導和支援的必需條件。

31. 家庭環境方面，家長應盡力把家庭營造成有利閱讀的環境。具體而言，爲子女提供充足的教育資源和讀物，對培養子女學習大有益處。除此以外，家長本身亦應養成閱讀習慣，以身作則。故此，我們建議提高家長的閱讀興趣須成爲家長教育的目標之一。

32. 教師專業組織、政府機構和本中心宜尋求更多的合作機會，充分利用 PISA 的研究成果來改善課程與教學，規劃進一步的研究。

給日後研究的啓示

33. PISA 2009 提供了有關學生的能力表現的資料，也提供了各種背景因素的資料，包括學生的移民身份、學生的校外學習時間、認知學習的性別差距、閱讀投入感、閱讀的學習策略、對學業和前途的期望等。這些主題都值得進一步研究，未來也應探討各項個人、家庭和學校因素對學習成效的相對影響。

34. 香港學生過度運用記憶策略，卻沒有充分運用較有效的控制策略和兩個後設認知策略，即對理解、牢記和撮要資料策略的自覺，值得進一步在課堂層面進行研究。報告亦建議展開縱向調查和行動研究，以了解如何提升學生對學習策略的認知和運用，幫助學生建立更有效的學習方法，不再停留在記憶爲主的學習方法。

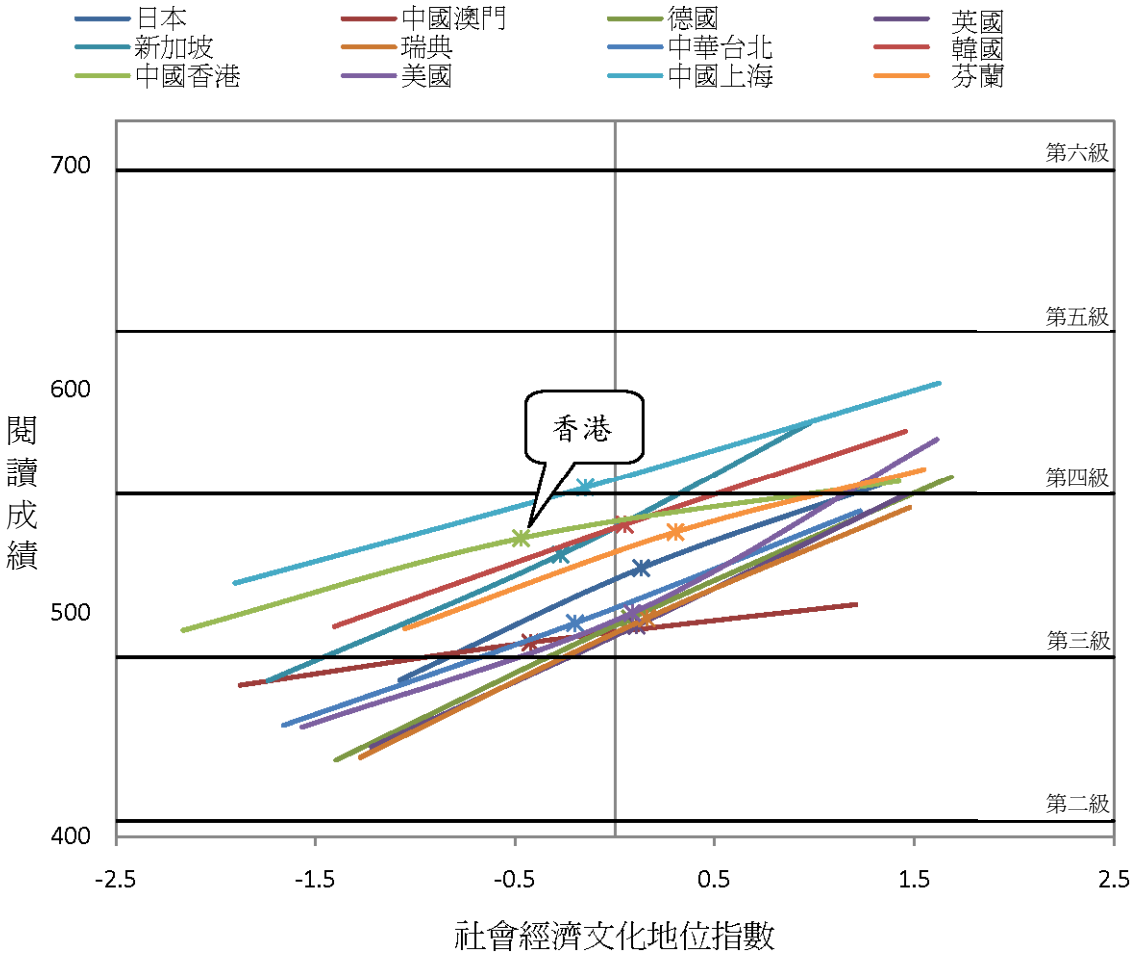
35. 家長的校本參與和學生成績呈現負相關，情況與 PISA 2006 相若，顯示不理想的情況仍然持續。過去十年，家校溝通和家長參與的性質沒有改善，有需要作進一步研究來改善問題。

附錄一　十五歲學生在 PISA 2009 的閱讀、數學和科學能力表現

閱　讀			數　學			科　學		
國家 / 地區	平均值	標準差	國家 / 地區	平均值	標準差	國家 / 地區	平均值	標準差
中國上海	556	(2.4)	中國上海	600	(2.8)	中國上海	575	(2.3)
韓國	539	(3.5)	新加坡	562	(1.4)	芬蘭	554	(2.3)
芬蘭	536	(2.3)	**中國香港**	**555**	**(2.7)**	**中國香港**	**549**	**(2.8)**
中國香港	**533**	**(2.1)**	韓國	546	(4.0)	新加坡	542	(1.4)
新加坡	526	(1.1)	中華台北	543	(3.4)	日本	539	(3.4)
加拿大	524	(1.5)	芬蘭	541	(2.2)	韓國	538	(3.4)
紐西蘭	521	(2.4)	列支敦士登	536	(4.1)	紐西蘭	532	(2.6)
日本	520	(3.5)	瑞士	534	(3.3)	加拿大	529	(1.6)
澳洲	515	(2.3)	日本	529	(3.3)	愛沙尼亞	528	(2.7)
荷蘭	508	(5.1)	加拿大	527	(1.6)	澳洲	527	(2.5)
比利時	506	(2.3)	荷蘭	526	(4.7)	荷蘭	522	(5.4)
挪威	503	(2.6)	中國澳門	525	(0.9)	中華台北	520	(2.6)
愛沙尼亞	501	(2.6)	紐西蘭	519	(2.3)	德國	520	(2.8)
瑞士	501	(2.4)	比利時	515	(2.3)	列支敦士登	520	(3.4)
波蘭	500	(2.6)	澳洲	514	(2.5)	瑞士	517	(2.8)
冰島	500	(1.4)	德國	513	(2.9)	英國	514	(2.5)
美國	500	(3.7)	愛沙尼亞	512	(2.6)	斯洛文尼亞	512	(1.1)
列支敦士登	499	(2.8)	冰島	507	(1.4)	中國澳門	511	(1.0)
瑞典	497	(2.9)	丹麥	503	(2.6)	波蘭	508	(2.4)
德國	497	(2.7)	斯洛文尼亞	501	(1.2)	愛爾蘭	508	(3.3)
愛爾蘭	496	(3.0)	挪威	498	(2.4)	比利時	507	(2.5)
法國	496	(3.4)	法國	497	(3.1)	匈牙利	503	(3.1)
中華台北	495	(2.6)	斯洛伐克共和國	497	(3.1)	美國	502	(3.6)
丹麥	495	(2.1)	奧地利	496	(2.7)	捷克共和國	500	(3.0)
英國	494	(2.3)	波蘭	495	(2.8)	挪威	500	(2.6)
匈牙利	494	(3.2)	瑞典	494	(2.9)	丹麥	499	(2.5)
葡萄牙	489	(3.1)	捷克共和國	493	(2.8)	法國	498	(3.6)
中國澳門	487	(0.9)	英國	492	(2.4)	冰島	496	(1.4)
意大利	486	(1.6)	匈牙利	490	(3.5)	瑞典	495	(2.7)
拉脫維亞	484	(3.0)	盧森堡	489	(1.2)	奧地利	494	(3.2)
斯洛文尼亞	483	(1.0)	美國	487	(3.6)	拉脫維亞	494	(3.1)
希臘	483	(4.3)	愛爾蘭	487	(2.5)	葡萄牙	493	(2.9)
西班牙	481	(2.0)	葡萄牙	487	(2.9)	立陶宛	491	(2.9)
捷克共和國	478	(2.9)	西班牙	483	(2.1)	斯洛伐克共和國	490	(3.0)
斯洛伐克共和國	477	(2.5)	意大利	483	(1.9)	意大利	489	(1.8)
克羅地亞	476	(2.9)	拉脫維亞	482	(3.1)	西班牙	488	(2.1)
以色列	474	(3.6)	立陶宛	477	(2.6)	克羅地亞	486	(2.8)
盧森堡	472	(1.3)	俄羅斯聯邦	468	(3.3)	盧森堡	484	(1.2)
奧地利	470	(2.9)	希臘	466	(3.9)	俄羅斯聯邦	478	(3.3)
立陶宛	468	(2.4)	克羅地亞	460	(3.1)	希臘	470	(4.0)
土耳其	464	(3.5)	杜拜（阿聯酋）	453	(1.1)	杜拜（阿聯酋）	466	(1.2)
杜拜（阿聯酋）	459	(1.1)	以色列	447	(3.3)	以色列	455	(3.1)
俄羅斯聯邦	459	(3.3)	土耳其	445	(4.4)	土耳其	454	(3.6)
智利	449	(3.1)	塞爾維亞共和國	442	(2.9)	智利	447	(2.9)
塞爾維亞共和國	442	(2.4)	阿塞拜疆	431	(2.8)	塞爾維亞共和國	443	(2.4)
保加利亞	429	(6.7)	保加利亞	428	(5.9)	保加利亞	439	(5.9)
烏拉圭	426	(2.6)	羅馬尼亞	427	(3.4)	羅馬尼亞	428	(3.4)
墨西哥	425	(2.0)	烏拉圭	427	(2.6)	烏拉圭	427	(2.6)
羅馬尼亞	424	(4.1)	智利	421	(3.1)	泰國	425	(3.0)
泰國	421	(2.6)	泰國	419	(3.2)	墨西哥	416	(1.8)
特立尼達和多巴哥	416	(1.2)	墨西哥	419	(1.8)	約旦	415	(3.5)
哥倫比亞	413	(3.7)	特立尼達和多巴哥	414	(1.3)	特立尼達和多巴哥	410	(1.2)
巴西	412	(2.7)	哈薩克斯坦共和國	405	(3.0)	巴西	405	(2.4)
黑山共和國	408	(1.7)	黑山共和國	403	(2.0)	哥倫比亞	402	(3.6)
約旦	405	(3.3)	阿根廷	388	(4.1)	黑山共和國	401	(2.0)
突尼西亞	404	(2.9)	約旦	387	(3.7)	阿根廷	401	(4.6)
印度尼西亞	402	(3.7)	巴西	386	(2.4)	突尼西亞	401	(2.7)
阿根廷	398	(4.6)	哥倫比亞	381	(3.2)	哈薩克斯坦共和國	400	(3.1)
哈薩克斯坦共和國	390	(3.1)	阿爾巴尼亞	377	(4.0)	阿爾巴尼亞	391	(3.9)
阿爾巴尼亞	385	(4.0)	突尼西亞	371	(3.0)	印度尼西亞	383	(3.8)
卡塔爾	372	(0.8)	印度尼西亞	371	(3.7)	卡塔爾	379	(0.9)
巴拿馬	371	(6.5)	卡塔爾	368	(0.7)	巴拿馬	376	(5.7)
秘魯	370	(4.0)	秘魯	365	(4.0)	阿塞拜疆	373	(3.1)
阿塞拜疆	362	(3.3)	巴拿馬	360	(5.2)	秘魯	369	(3.5)
吉爾吉斯共和國	314	(3.2)	吉爾吉斯共和國	331	(2.9)	吉爾吉斯共和國	330	(2.9)
OECD 平均值	*493*	*(0.5)*	*OECD 平均值*	*496*	*(0.5)*	*OECD 平均值*	*501*	*(0.5)*

註：有顏色部分顯示該國家/地區與香港有顯著分別。

附錄二　十二個國家或地區的學生閱讀表現與社會經濟文化地位的關係



註：PISA 2009 之社會經濟文化地位指數由三個家庭背景相關變數衍生出來，包括家長教育程度、家長職業類別及家庭所擁有的資源。

Acknowledgement

Aberdeen Baptist Lui Ming Choi College

Aberdeen Technical School

Assembly of God Hebron Secondary School

Baptist Wing Lung Secondary School

Belilios Public School

Bethel High School

Buddhist Hung Sean Chau Memorial College

Buddhist Mau Fung Memorial College

Buddhist Wong Wan Tin College

Canossa College

Carmel Bunnan Tong Memorial Secondary School

Carmel Pak U Secondary School

Cheng Chek Chee Secondary School of Sai Kung and Hang Hau District, N.T.

Cheung Chau Government Secondary School

Cheung Chuk Shan College

Cheung Sha Wan Catholic Secondary School

China Holiness College

Chinese Y.M.C.A. Secondary School

Ching Chung Hau Po Woon Secondary School

Christian Alliance College

Christian Alliance P.C. Lau Memorial International School

Christian Nationals' Evangelism Commission Lau Wing Sang Secondary School

Chung Sing Benevolent Society Mrs. Aw Boon Haw Secondary School

CNEC Christian College

Concordia Lutheran School

Concordia Lutheran School - North Point

Cumberland Presbyterian Church Yao Dao Secondary School

De La Salle Secondary School N.T.

Delia Memorial School (Broadway)

Delia Memorial School (Glee Path)

Delia Memorial School (Hip Wo)

Diocesan Boys' School

Elegantia College (Sponsored by Education Convergence)

F.D.B.W.A. Szeto Ho Secondary School

Gertrude Simon Lutheran College

Heung To Secondary School (Tseung Kwan O)

HHCKLA Buddhist Leung Chik Wai College

HHCKLA Buddhist Ma Kam Chan Memorial English Secondary School

HKMA David Li Kwok Po College

Ho Dao College (Sponsored By Sik Sik Yuen)

Ho Lap College (Sponsored By The Sik Sik Yuen)

Ho Ngai College (Sponsored By Sik Sik Yuen)

Hoi Ping Chamber of Commerce Secondary School

Hon Wah College

Hong Kong and Kowloon Kaifong Women's Association Sun Fong Chung College

Hong Kong Red Swastika Society Tai Po Secondary School

Hong Kong Sea School

Hong Kong Weaving Mills Association Chu Shek Lun Secondary School

Immanuel Lutheran College

Islamic Kasim Tuet Memorial College

Kau Yan College

Kiangsu-Chekiang College (Kwai Chung)

Kiangsu-Chekiang College (Shatin)

King's College

Kit Sam Lam Bing Yim Secondary School

Kowloon Tong School (Secondary Section)

Kowloon True Light Middle School

Kwun Tong Government Secondary School

Kwun Tong Kung Lok Government Secondary School

La Salle College

Lai King Catholic Secondary School

Ling Liang Church E Wun Secondary School

Ling Liang Church M H Lau Secondary School

Lingnan Dr. Chung Wing Kwong Memorial Secondary School

Lok Sin Tong Young Ko Hsiao Lin Secondary School

Lung Kong World Federation School Limited Lau Wong Fat Secondary School

Ma On Shan St. Joseph's Secondary School

Madam Lau Kam Lung Secondary School of Miu Fat Buddhist Monastery

Maryknoll Secondary School

Mu Kuang English School

Munsang College

Nam Wah Catholic Secondary School

New Asia Middle School

Newman Catholic College

Ng Yuk Secondary School

Ning Po No.2 College

Our Lady of The Rosary College

Pak Kau College

PAOC Ka Chi Secondary School

Po Leung Kuk C.W. Chu College

Po Leung Kuk Ma Kam Ming College

Po Leung Kuk Ngan Po Ling College

Po Leung Kuk Wai Yin College

Po Leung Kuk Yao Ling Sun College

Pok Oi Hospital Tang Pui King Memorial College

Queen Elizabeth School Old Students' Association Tong Kwok Wah Secondary School

Queen's College Old Boys' Association Secondary School

Raimondi College

Rhenish Church Pang Hok-Ko Memorial College

S.K.H. All Saints' Middle School

S.K.H. Bishop Baker Secondary School

S.K.H. Bishop Mok Sau Tseng Secondary School

S.K.H. Lam Kau Mow Secondary School

S.K.H. Li Fook Hing Secondary School

S.K.H. St. Benedict's School

S.K.H. Tang Shiu Kin Secondary School

S.K.H. Tsoi Kung Po Secondary School

Sacred Heart Canossian College

Shap Pat Heung Rural Committee Kung Yik She Secondary School

Shatin Pui Ying College

Shau Kei Wan East Government Secondary School

Sheung Shui Government Secondary School

Shi Hui Wen Secondary School

Shun Lee Catholic Secondary School

Shun Tak Fraternal Association Leung Kau Kui College

St. Stephen's Girls' College

St. Francis' Canossian College

St. Francis Xavier's College

St. Joseph's Anglo-Chinese School

St. Joseph's College

St. Margaret's Girls' College, Hong Kong

St. Mary's Canossian College

St. Paul's Secondary School

St. Peter's Secondary School

St. Stephen's Church College

St. Stephen's College

St. Teresa Secondary School

Stewards Pooi Tun Secondary School

Tack Ching Girls' Secondary School

Tak Sun Secondary School

The Bishop Hall Jubilee School

The Church of Christ in China Fung Leung Kit Memorial Secondary School

The Church of Christ in China Heep Woh College

The Church of Christ in China Kung Lee College

The Church of Christ in China Ming Yin College

The Church of Christ in China Mong Man Wai College

The Church of Christ in China Rotary Secondary School

The Church of Christ in China Tam Lee Lai Fun Memorial Secondary School

The Church of Christ in China Yenching College

The Hong Kong Chinese Christian Churches Union Logos Academy

The Hong Kong Sze Yap Commercial & Industrial Association Wong Tai Shan Memorial College

The Methodist Lee Wai Lee College

The Pentecostal Holiness Church Wing Kwong College

The Y.W.C.A. Hioe Tjo Yoeng College

Tin Ka Ping Secondary School

Tin Shui Wai Government Secondary School

Tin Shui Wai Methodist College

Tseung Kwan O Government Secondary School

Tsuen Wan Government Secondary School

Tsung Tsin Christian Academy

Tsung Tsin College

Tuen Mun Catholic Secondary School

Tung Chung Catholic School

Tung Wah Group of Hospitals Chen Zao Men College

Tung Wah Group of Hospitals Kap Yan Directors' College

Tung Wah Group of Hospitals Kwok Yat Wai College

Tung Wah Group of Hospitals Mrs. Wu York Yu Memorial College

Tung Wah Group of Hospitals Sun Hoi Directors' College

Tung Wah Group of Hospitals Wong Fut Nam College

United Christian College

United Christian College (Kowloon East)

Valtorta College

Victoria Shanghai Academy

Wah Yan College, Kowloon

Wong Shiu Chi Secondary School

Yan Chai Hospital Lan Chi Pat Memorial Secondary School

Yan Chai Hospital Lim Por Yen Secondary School

Yan Oi Tong Tin Ka Ping Secondary School

Ying Wa College

Yu Chun Keung Memorial College

Yuen Long Lutheran Secondary School

Yuen Long Merchants Association Secondary School

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Yee Fun MAN 文綺芬
Choi Wai TONG 湯才偉

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Ka Lok WONG 黃家樂

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Education Bureau, The Government of HKSAR	香港特別行政區政府 教育局

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