

Press Release

Progress in International Reading Literacy Study (PIRLS) 2016
International Report (Hong Kong Section)

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Introduction and Methodology

The Progress in International Reading Literacy Study (PIRLS) provides an objective assessment of the reading comprehension attainment of Grade Four primary school students in countries worldwide. Organized by The International Association for the Evaluation of Educational Achievement (IEA) in the USA, PIRLS assesses primary school students' reading attainment, reading behaviour and attitudes towards literacy in some 50 countries and within-state regions globally.

Our research team of the Centre for The Advancement of Chinese Language Education and Research of the University of Hong Kong (CACLER, HKU) was commissioned by the Education Bureau of the Government of Hong Kong SAR to participate in implementing the PIRLS research in Hong Kong. The PIRLS 2016 survey presents objective evidence of Hong Kong primary school students' reading ability and how this compares against that of students of the same age around the world. It also enables educationists, schools and the general public to monitor the reading ability of Hong Kong primary school students over the years and to evaluate the impact of factors that have influenced performance.

Using a stratified random sampling system, 139 primary schools in Hong Kong were selected to participate in the research. At least one fourth-grade class in each school was then selected at random to take part. Two separate comprehension passages in the Chinese Language were then chosen as test material: one an information-giving passage (descriptions, instructions, data and tables), and the other a literary, narrative passage (stories, poems and fables).

The Hong Kong element of the PIRLS 2016 attainment survey was conducted from

March to June 2016. Students, their parents or guardians, Chinese Language teachers and school principals of the participating schools completed questionnaires that supplied information about the school the child attended, the reading syllabus and school curriculum, students and staff. The study sought to examine how students' attitudes towards reading, their home environment, school environment and pedagogy encountered in the classroom had influenced students' reading proficiency.

Some 139 primary schools took part in the research. The sample of Hong Kong personnel participating in the study comprised 3 533 students, 3 499 parents, 159 Chinese Language teachers and 138 school principals. Some 52% of the students were boys and 48% were girls.

The data from the tests and questionnaires in the 2016 research were compared against information gathered for the PIRLS rounds of testing for Hong Kong in 2001, 2006 and 2011.

Results

1. The international ranking of Hong Kong Primary 4 (P4) students' reading proficiency and the reading purposes and objectives encountered in school
 - 1.1 The average international test score for the PIRLS 2016 round of testing was set by the IEA at 500. The P4 students in Hong Kong, with an average test score of 569, came third amongst the schools taking part in the 2016 round of student assessment. Students from Russia came first, with an average score of 581, followed by students from Singapore with an average score of 576. Students from Chinese Taipei and Macao SAR ranked ninth and nineteenth respectively, with average scores of 559 and 546. The Hong Kong overall reading attainment score had fallen slightly from the figure in 2011. In PIRLS 2011, Hong Kong ranked first with an average score of 571, while in PIRLS 2006 they came second with an average reading score of 564. In the 2001 cycle of assessment, they had ranked fourteenth with an average score of 528, the same level as achieved by students from Russia and Singapore.
 - 1.2 In the 2016 cycle of assessment, Hong Kong P4 students gained an average score of 576 for their reading with understanding of informational texts, and

562 for comprehending literary texts. Their ability to comprehend informational texts was better than their ability to understand literary texts, possibly reflecting Hong Kong's standing as an information-rich city. In PIRLS 2011, Hong Kong P4 students scored 578 and 565 respectively for informational and literary texts. Although the overall score had dropped slightly compared with the PIRLS 2011 results, it is still markedly higher than the PIRLS 2001 and PIRLS 2006 scores - (2006: 570 in informational texts and 559 in literary texts; 2001: 537 in informational texts and 520 in literary texts).

- 1.3 In the 2016 round of assessment, Hong Kong P4 students gained an average score of 568 for their ability to use high-level reading skills (interpreting, integrating, and evaluating), and 568 for deploying low-level reading skills (retrieval and making straightforward inferences). In the 2011 round of testing, Hong Kong P4 students gained an average score of 578 for ability to use high-level reading skills and 562 for ability to use low-level reading skills. Compared with the 2011 results, the ability to use high-level reading skills significantly dropped, while the ability to apply low-level reading skills increased slightly. In the 2006 and 2001 cycles of testing, the average scores were 566 and 530 on tasks calling for the use of high-level reading skills, and 561 and 525 for using low-level reading skills.
- 1.4 In the 2016 round of assessment, the average reading score for the girls was better than that of the boys, with a score of 573 for girls and 564 for boys, a difference of 9 points, (much lower than the 19-point international average). Comparatively speaking, the girls scored 579 while the boys scored 563 in 2011, with a 16-point difference. In contrast, in 2006, the girls' average reading attainment score was 569 marks, 10 points higher than that of the boys (559 marks). This seems to suggest that the gender gap in reading ability in Hong Kong is narrowing, with girls' average reading attainment showing a decrease of 6-points.
- 1.5 PIRLS reports attainment at four points along the scale as international benchmarks: Advanced International Benchmark (625), High International Benchmark (550), Intermediate International Benchmark (475), and Low International Benchmark (400).

The proportion of low achievers in Hong Kong at or below the Intermediate International Benchmark (below 475: 7%) was the same as in 2011, while the

percentage of students at the Advanced International Benchmark end of the scale (625 or above: 18%) remained the same.

- 1.6 There was a slight decrease in the proportion of girls reaching the Advanced International Benchmark, from 21% in 2011 to 20% in 2016. In contrast, the proportion of boys scoring 475 or below fell slightly in 2016.
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2. Students' interest, motivation and confidence in reading

2.1 Students' attitudes toward reading were gauged based on their responses on the PIRLS questionnaire. The questionnaire had asked about three aspects of the students' reading attitudes: 'Students Like Reading', 'Students Engaged in Reading Lessons' and 'Students Confidence in Reading'.

2.2.1 Regarding students' interest in reading, 36% of the Hong Kong students who said that they 'very much liked' reading gained an average reading performance of 583 marks on the test. The percentage of students who said that they 'somewhat liked' reading was 44% and their average attainment was 567 marks. For the remaining 21% of the students (who had said that they did not like reading), their average score was 549, the lowest score for any group.

2.2.2 Regarding students' confidence in their reading, the average score was 596 for the 36% of the students who said that they were very confident in reading. For the 38% of respondents identified as being somewhat confident, the average score was 568. The average score was 534 for the 26% of students identified as not having much confidence in their reading. Hong Kong P4 students are, in fact, less confident about their reading ability compared with the international averages in neighboring Asian regions such as the Macao SAR, with students from Chinese Taipei also displaying the same disposition.

2.2.3 Regarding students' engagement in reading lessons, the 34% of Hong Kong P4 students identified as being 'very engaged' in reading lessons had an average score of 574. The 52% saying they were 'somewhat engaged' had an average score of 572. The 14% saying they were 'less than engaged' had an average score of 548. In this respect, Hong Kong ranked 50th among all participating countries or regions internationally, lower than Singapore, Chinese Taipei and the Macao SAR.

2.2.4 Combining the three indicators mentioned above (Students Like Reading, Students' Confidence in Reading and Students Engaged in Reading Lessons), the figures show that students tended to gain higher scores on the reading test when they recorded higher figures for these three categories. Students' positive scores in these areas would seem to have been an important predictor of their reading ability on the tests.

- 2.3 Whereas the presence of Hong Kong students was very evident in the top three tiers of the list in terms of reading attainment. Compared to the results in 2011, positive progress is apparent for Hong Kong students in terms of being 'engaged in reading lessons' (ranked 50th), 'confident in reading' (ranked 41st) and 'like reading' (ranked 33rd), with room for improvement. Students clearly need to be encouraged to read and be engaged in learning in a range of ways if they are to increase and maintain an interest in reading, inside and outside school.
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3. Reading curriculum and pedagogy

- 3.1 Regarding pedagogy, some teachers indicated that students actually enjoyed and were engaged in reading lessons. However, some students said they did not like or feel interested in what they read about in school and that they did not feel entirely involved in the reading classroom. One-third of the students (34%) said they were actively engaged in reading lessons, a figure that is much lower than the international average (60%). There is clearly a case for teachers to make reading lessons more interesting and enjoyable and to engage students more purposefully in reading lessons.
- 3.2 In terms of the resources teachers use in reading lessons, textbooks (sometimes coupled with worksheets) were still the most common resource material used in lessons, with a slight increase compared to the figure for 2011. As for the use of computer software or Internet materials in reading lessons, although there is an increase, analysis of the evidence gathered in PIRLS 2016 is not sufficiently comprehensive to establish with certainty whether more extensive use of information and communications technology (ICT) in lessons was definitely associated with higher literacy attainment.
- 3.3 Regarding the use of computers to assist teaching, 35% of the teachers said that there were computers available during reading lessons, their students having an average reading attainment of 572. In contrast, students without computer assistance in lessons scored 566 on average. At the same time, in terms of teachers using computers to engage in reading instruction related activities, over 75% said they would ask students to 'look up information' (76%) or 'read digital texts' (83%) using computers at least once a month. Furthermore, more than half said they would 'teach students strategies for reading digital texts' (54%) or 'ask students to write stories or other texts' (44%) at least once a month. Teachers seem to need more support in using computer hard and software to facilitate students' high-level reading strategy development.
- 3.4 Regarding the Medium of Instruction (MoI) in teaching Chinese Language, there is an increasing trend of using Putonghua as the Medium of Instruction of Chinese Language lessons in school. The two main reasons of using Putonghua instead of Cantonese are enhancing students' Putonghua proficiency and for students' better career prospect. All in all, there is no

significant difference in reading ability between students studying Chinese Language in Cantonese and Putonghua.

- 3.5 According to the PIRLS results, those schools organizing a variety of reading activities had a positive impact on students' reading attainment. These measures include reading lessons outside Chinese lessons, having a reading segment during morning or afternoon periods; book clubs; parents engaging in reading activities at home like 'story mom' and the presence of a cross-subject reading curriculum.
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4. Literacy activities at home, availability of educational resources at home and Hong Kong parents' reading interests

- 4.1 The data obtained showed that parents who frequently engaged children in early literacy activities before beginning primary school like reading, storytelling, singing and playing word (Chinese characters) games outside school had a positive impact on their children's reading attainment. The PIRLS 2016 survey also found that the more the students had engaged in literacy-related activities at home before entering school, the higher their subsequent reading attainment. Compared with the PIRLS 2011 data, six out of nine family reading activities had actually increased in frequency.

However, the frequency of Hong Kong parents conducting early literacy-related activities with children is still markedly lower than the international average (13% Hong Kong parents 'often' doing early literacy activities with their child; international average 39%).

- 4.2 Home educational resources in Hong Kong families seem to have risen slightly as indicated by a higher than international average in 2016. 21% of families in Hong Kong possess many educational resources, ranking 21st in the world, with a 20% international average. In the 2011 year, 12% of the families questioned belonged to this category, showing that there has been a marked increase of families having various educational resources at home from 2011 to 2016.
- 4.3 Academic research usually shows that family background and socio-economic status often influence students' reading ability. In the PIRLS 2016 survey, the family background and socio-economic status had little influence on students' reading attainment. Separating P4 students into different family income groups, students from families with the lowest family income (less than HK\$7,000 per month) scored an average of 568 on the test, while their peers from the highest income groups (HK\$63,001 or above per month) had an average score of 572. In the income group of 'Less than HK\$7,000', 17.3% of students reached the Advanced International Benchmark (scoring 625 or above). At the same time, for the income groups 'HK\$42,001-49,000' and 'HK\$56,001-63,000', 18.0% and 17.1% attained the Advanced International Benchmark respectively. This seems to show that the Hong Kong primary school education system provides a reasonable opportunity for every student.

Even students from 'average' families seem to have the chance to master language and practice reading skills outside school.

- 4.4 Hong Kong families generally do not possess many children's books in the home. 17% of the parents said that they had more than 100 books at home; 27% said they had 51-100 books; and 27% said they had 26-50 books at home. Compared with the 2011 data, only 11% of families said they had over 100 books, 17% claiming to have 51-100 books and 25% of them saying they had 26-50 books. The number of children's books at home had increased in 2016 compared to the figures for 2011. Analysis shows that students having more children's books at home tend to have significantly better reading attainment. According to the data from 2001, 2006, 2011 and 2016, the reading ability of students who had 51-100 children books at home has already reached Hong Kong average score, the Hong Kong average score in 2016 being 578.
- 4.5 According to PIRLS 2016 international averages, around one-third of parents were 'very liked' reading, while 51% of them said they had 'somewhat like' reading among all participating countries. Research shows that students with parents having more interest in reading scored 535 on the tests, significantly higher than that of parents who 'did not like' reading (17%, 488). Only 17% of parents in Hong Kong said that they themselves 'very liked' reading and that their children's reading attainment was significantly higher than that of others. Moreover, the proportion of parents with little interest in reading increased from 2011 (2011: 14%; 2016: 22%); the children of these parents having much lower reading attainment scores.
- 4.6 Furthermore, the data reveal a positive association between parental expectations about academic success and their children's reading achievement. Research shows that parents' expectation of children's academic achievement is an important factor influencing students' reading ability development, regardless of parents' education background and/or family income.
- 4.7 One common educational resource that parents provide for children is the hiring of after-school tutoring teachers to provide extra tuition. With over 60% of P4 experiencing at tutoring, the proportion is higher than it was in 2011. In PIRLS 2016, 58.5% of students with a family income of no more than 7,000 HK dollars said they had tutoring for different subjects in various forms.

However, the PIRLS results show that students with extra tuition (563) performed even poorer than peers who had not had any extra tutoring (582), indicating that tutoring has no particular advantage for students' reading attainment.

- 4.8 To conclude, student's reading ability relies not only on the child's school and the teacher, but also on the parental involvement. If parents wish to enhance their offspring's' reading ability, they need first to cultivate their own reading interests, habits and attitudes, setting a good example for their children in the hope of improving the reading environment at home. In addition, besides involving children in reading activities at a young age, parents should provide a variety of resources and children's books to develop and boost their offspring's reading ability.
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Conclusion and suggestions

- 5.1 Hong Kong students had a remarkable performance in PIRLS 2016, at the top three tiers of the list in terms of reading attainment, showing that schools, teachers, parents and the Education Bureau place considerable emphasis on enhancing students' reading ability.
- 5.2 The proportion of students scoring higher than the international average remains a higher ratio, as was the case in 2011. This is in large part an outcome of Hong Kong fostering advanced readers. In fact, there are not many very low achievers (students at Intermediate and Low International Benchmarks). In other words, individual differences among Hong Kong students are not as evident as in many other countries or regions, reflecting the overall outstanding achievement of Hong Kong schools.
- 5.3 Five main reasons why Hong Kong is able to maintain this reading advantage:
 - The stable proportion of Hong Kong P4 students reaching the Advanced International Benchmark.
 - The percentage of boys reaching the Advanced International Benchmark increased. The improvement in boys' reading attainment is helping to narrow the gender gap in reading ability levels.
 - Early home literacy activities are having a positive impact on students' reading attainment.
 - Diverse reading instruction activities in schools have positively influenced students' reading attainment.
 - Students' family background and socio-economic status have had a small influence on their reading attainment, showing that support from The Education Bureau and other stakeholders is effectively enhancing students' language and reading ability.
- 5.4 Hong Kong P4 students overall performed admirably in reading. However, the following should be noted in order to further enhance and develop students' language and reading ability:
 - The reading attainment of girls with outstanding performance in the past fell slightly in the PIRLS 2016 cycle.
 - Students scored lower than before on literary texts and high-level questions

(interpreting, integrating and evaluating process).

- 5.5 Even though Hong Kong students' reading attitudes and interests had improved from 2011, there is still room for improvement. Schools and families should seek to further develop students' attitudes towards reading in order to enhance their reading attainment. Innovative measures for promoting a reading culture should be introduced by reviewing current policies, focusing on cultivating students' reading interests and engagement in reading lessons.
- 5.6 According to current research, schools developing their own school-based language and reading curriculum have a positive impact on students' reading attainment. Hence, for the purpose of teachers addressing students' needs and enhancing the quality of learning and teaching, The Education Bureau and tertiary institutes could strengthen teacher professional development training with a focus on reading across the curriculum, eLearning of language and reading and self-directed learning.
- 5.7 It is becoming increasingly common to incorporate ICT usage in language lessons today. However, more research is needed into how best to incorporate eLearning and language subjects in lessons (especially reading instruction). Developing quality ICT teaching material, innovation pedagogy and assessment is needed to enhance the effectiveness of e-Teaching.
- 5.8 The PIRLS 2016 data showed that there was no significant difference between the reading attainment scores of students with or without after-school tutoring. Parents are advised to give more time for children to read and to spend more time listening to their child reading at home.
- 5.9 Parents' interest in reading can directly affect students' reading attitudes and attainment. However, research shows that Hong Kong parents' interest of reading ranked comparatively low internationally. Therefore, parents should be encouraged to cultivate a deep interest in reading. The Education Bureau could organize parent reading talks, encouraging parents to read, and teaching them how to engage in productive parent-child reading at home.

- 5.10 Regarding pedagogy, schools should improve and value the teaching skills of teachers who are responsible for language subjects and the promotion of reading. Students would then be more engaged in interesting and challenging lessons. It is also worth discussing ways for effectively incorporating ICT into the language curriculum and reading instruction in order to enhance the efficiency of reading instruction in Hong Kong primary schools.
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For more information about the Progress in International Reading Literacy Study 2016 (PIRLS) International Report (Hong Kong Section)

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