

香港學生在 PISA2015 閱讀評估的結果

劉潔玲

香港中文大學課程與教學系



PISA2015 閱讀卷的評估架構

- 閱讀不是PISA2015的主要評估項目。
- PISA2015沿用**PISA2009**對閱讀素養的**定義和評估架構**，只是題目較少。
- 自PISA2009開始分開印刷文本及電子文本的測驗，PISA 2015最大的改動是大部分參與國家/地區只採用**電腦方式**作答，取消了紙本方式，但**閱讀考材和題目跟PISA2012的印刷文本測驗一樣**。

PISA2015 閱讀卷的評估架構

- **閱讀素養 (reading literacy) 的定義**
 - 對文本內容的理解、運用、反思及投入，以實現個人目標、增進知識、發展潛能，並投身社會 (OECD, 2009)。
 - 同時強調不同認知層次的閱讀能力和情意範圍的閱讀素養。
 - 強調閱讀對個人和社會發展的功能，所測量的是學生在不同學科和生活應用上的閱讀能力。

PISA2015 閱讀卷的評估架構

- **閱讀的過程 (Aspect)**
 - (1) 進入及檢索 (access and retrieve) :
 - 檢索信息 (retrieve information)
 - (2) 理解文本 (integrate and interpret)
 - 形成概要理解 (form a broad understanding)
 - 闡釋文本 (develop an interpretation)
 - (3) 反思及評價 (reflect and evaluate)
 - 反思及評價內容 (content of text)
 - 反思及評價形式 (form of text)

PISA2015 閱讀卷的評估架構

- 閱讀的文本 (Text)
 - 劃分標準：文本展示的空間 (text display space)、格式 (text format) 和類型 (text type)
 - 文本展示的空間：
 - 固定文本 (Fixed text): PISA2015只採取此類文本
 - 互動文本 (Dynamic text): PISA2015不考

PISA2015 閱讀卷的評估架構

- 閱讀的文本
 - 文本的格式
 - 連續文本 (continuous texts)
 - 非連續文本 (non-continuous texts)
 - 混合文本 (mixed texts)
 - 多元文本 (multiple texts)



Table 3.3 Desired distribution of reading items, by text format

Text format	Percentage of total items
Continuous	60
Non-continuous	30
Mixed	5
Multiple	5
Total	100

(from *PISA2015 Assessment Framework*, p. 53)

PISA2015 閱讀卷的評估架構

- 閱讀的文本
 - 文本的類型
 - 描述 (description)
 - 記敘 (narration)
 - 說明 (exposition)
 - 議論 (argumentation)
 - 指示 (instruction)
 - 交流 (transaction)

PISA2015 閱讀卷的評估架構

- 閱讀的情景 (Situation)
 - 為個人用途而閱讀
 - 為公共用途而閱讀
 - 為工作用途而閱讀
 - 為教育用途而閱讀

Table 3.2 Desired distribution of reading items, by situation

Situation	Percentage of total items
Personal	30
Educational	25
Occupational	15
Public	30
Total	100

(from *PISA2015 Assessment Framework*, p. 51)

PISA2015 閱讀卷的試題形式

- 共13篇閱讀材料，44條閱讀題目，分佈在不同的考卷內。
- **題目類型**
 - 不需要專家編碼的題目：包括選擇題、複雜選擇題、封閉式回應題
 - 需要專家編碼的題目：包括開放式回應題和簡短回應題



PISA2015 閱讀表現的報告

- 為方便比較各地學生的表現，OECD會將學生的分數轉換為標準分，**以500為平均分**。
- 由於PISA2015並非以閱讀為主要的測量項目，OECD只提供閱讀素養的總分，並沒有其他分項的平均分。
- 為了讓各地的教育工作者瞭解學生的具體閱讀水平，OECD會將學生的分數劃分為幾個等級，對每個等級的表現作具體描述，自PISA2009開始將五等水平擴展至**七等水平**。

劃分各閱讀水平等級的分數

Proficiency Levels	Literacy Scores
6	More than 698
5	626 – 698
4	553 – 625
3	481 – 552
2	408 – 480
1a	335 – 407
1b	262 – 334
Below 1b	Below 262

Figure 3.2 Summary description of the seven levels of reading proficiency in PISA 2015

Level	Lower score limit	Characteristics of tasks
6	698	Tasks at this level typically require the reader to make multiple inferences, comparisons and contrasts that are both detailed and precise. They require demonstration of a full and detailed understanding of one or more texts and may involve integrating information from more than one text. Tasks may require the reader to deal with unfamiliar ideas, in the presence of prominent competing information, and to generate abstract categories for interpretations. Reflect and evaluate tasks may require the reader to hypothesise about or critically evaluate a complex text on an unfamiliar topic, taking into account multiple criteria or perspectives, and applying sophisticated understandings from beyond the text. A salient condition for access and retrieval tasks at this level is precision of analysis and fine attention to detail that is inconspicuous in the texts.
5	626	Tasks at this level that involve retrieving information require the reader to locate and organise several pieces of deeply embedded information, inferring which information in the text is relevant. Reflective tasks require critical evaluation or hypothesis, drawing on specialised knowledge. Both interpretative and reflective tasks require a full and detailed understanding of a text whose content or form is unfamiliar. For all aspects of reading, tasks at this level typically involve dealing with concepts that are contrary to expectations.
4	553	Tasks at this level that involve retrieving information require the reader to locate and organise several pieces of embedded information. Some tasks at this level require interpreting the meaning of nuances of language in a section of text by taking into account the text as a whole. Other interpretative tasks require understanding and applying categories in an unfamiliar context. Reflective tasks at this level require readers to use formal or public knowledge to hypothesise about or critically evaluate a text. Readers must demonstrate an accurate understanding of long or complex texts whose content or form may be unfamiliar.
3	480	Tasks at this level require the reader to locate, and in some cases recognise the relationship between, several pieces of information that must meet multiple conditions. Interpretative tasks at this level require the reader to integrate several parts of a text in order to identify a main idea, understand a relationship or construe the meaning of a word or phrase. They need to take into account many features in comparing, contrasting or categorising. Often the required information is not prominent or there is much competing information; or there are other text obstacles, such as ideas that are contrary to expectation or negatively worded. Reflective tasks at this level may require connections, comparisons and explanations, or they may require the reader to evaluate a feature of the text. Some reflective tasks require readers to demonstrate a fine understanding of the text in relation to familiar, everyday knowledge. Other tasks do not require detailed text comprehension but require the reader to draw on less common knowledge.
2	407	Some tasks at this level require the reader to locate one or more pieces of information, which may need to be inferred and may need to meet several conditions. Others require recognising the main idea in a text, understanding relationships, or construing meaning within a limited part of the text when the information is not prominent and the reader must make low level inferences. Tasks at this level may involve comparisons or contrasts based on a single feature in the text. Typical reflective tasks at this level require readers to make a comparison or several connections between the text and outside knowledge, by drawing on personal experience and attitudes.
1a	335	Tasks at this level require the reader to locate one or more independent pieces of explicitly stated information; to recognise the main theme or author's purpose in a text about a familiar topic, or to make a simple connection between information in the text and common, everyday knowledge. Typically the required information in the text is prominent and there is little, if any, competing information. The reader is explicitly directed to consider relevant factors in the task and in the text.
1b	262	Tasks at this level require the reader to locate a single piece of explicitly stated information in a prominent position in a short, syntactically simple text with a familiar context and text type, such as a narrative or a simple list. The text typically provides support to the reader, such as repetition of information, pictures or familiar symbols. There is minimal competing information. In tasks requiring interpretation the reader may need to make simple connections between adjacent pieces of information.

(from PISA2015
Assessment
Framework, p.59)

香港學生的閱讀表現

閱讀測驗的整體結果

- PISA2015 香港學生的閱讀素養綜合分數為527。
- 全球排名第2位，僅次於新加坡。

Country/Region	Rank	Mean	S.E.	Significance
Singapore	1	535	(1.6)	▲
Hong Kong-China	2	527	(2.7)	--
Canada	3	527	(2.3)	○
Finland	4	526	(2.5)	○
Ireland	5	521	(2.5)	○
Estonia	6	519	(2.2)	▼
Korea	7	517	(3.5)	▼
Japan	8	516	(3.2)	▼
Norway	9	513	(2.5)	▼
New Zealand	10	509	(2.4)	▼
Germany	11	509	(3.0)	▼
Macao-China	12	509	(1.3)	▼
.....				
Chinese Taipei	23	497	(2.5)	▼
China (B-S-A-Q)	27	494	(5.1)	▼

閱讀測驗的整體結果

- 香港學生在PISA2015的總分比PISA2012顯著退步了，只顯著高於PISA2003，但跟PISA2000+、2006及2009則沒有顯著差異。

Year	Mean	S.E.	Rank	Diff with 2015
PISA2015	527	(2.7)	2	--
PISA2012	545	(2.8)	2	▲
PISA2009	533	(2.1)	4	n.s.
PISA2006	536	(2.4)	3	n.s.
PISA2003	510	(3.7)	10	▼
PISA2000+	525	(2.9)	6	n.s.

閱讀測驗的整體結果

- 與PISA2012比較，大部分東亞國家/地區在PISA2015的閱讀總分均下跌了；西方國家則有些退步了，有些進步了。

Country/Economy	PISA 2000+	PISA 2003	PISA 2006	PISA 2009	PISA 2012	PISA 2015
	Rank (mean)					
Singapore	-	-	-	5 (526)	3 (542)	1 (535)
Hong Kong-China	6 (525)	10 (510)	3 (536)	4 (533)	2 (545)	2 (527)
Canada	2 (534)	3 (528)	4 (527)	6 (524)	9 (523)	3 (527)
Finland	1 (546)	1 (543)	2 (547)	3 (536)	6 (524)	4 (526)
Ireland	5 (527)	7 (515)	6 (517)	21 (496)	7 (523)	5 (521)
Estonia	-	-	13 (501)	13 (501)	11 (516)	6 (519)
Korea	7 (525)	2 (534)	1 (556)	2 (539)	5 (536)	7 (517)
Japan	9 (522)	15 (498)	15 (498)	8 (520)	4 (538)	8 (516)
Norway	14 (505)	12 (500)	25 (484)	12 (503)	22 (504)	9 (513)
New Zealand	3 (529)	6 (522)	5 (521)	7 (521)	13 (512)	10 (509)
Macao-China	-	16 (498)	21 (492)	28 (487)	18 (509)	12 (509)
Chinese Taipei	-	-	16 (496)	23 (495)	8 (523)	23 (497)
China (B-S-J-G) ^a	-	-	-	-	-	27 (494)

不同能力學生的閱讀表現

- 與以往歷屆PISA比較，香港不同成績水平的學生在PISA2015都比2012顯著退步了，但跟其他大部分的屆別沒有顯著的差異。
- 各成績水平學生的退步幅度相近。

Percentile	Difference [#]				
	2015-2000+	2015-2003	2015-2006	2015-2009	2015-2012
5th	3	17	-18	-8	-19
10th	-1	15	-15	-6	-18 *
25th	-4	13	-11	-9	-19 *
50th	-1	14	-9	-8	-19 **
75th	3	18 **	-7	-5	-17 **
90th	8	24 ***	-4	-3	-16 *
95th	10	27 ***	-4	-2	-16 *

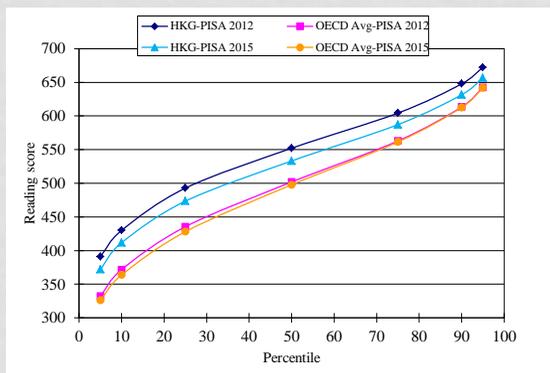
不同能力學生的閱讀表現

- 香港學生在歷屆各等級的人數比例變化不大，但與PISA2012比較，PISA2015在第四和五等級的人數比例顯著減少了；相反，第一及二等的比例卻顯著增加了。

Proficiency Level	Difference [#]				
	2015-2000+	2015-2003	2015-2006	2015-2009	2015-2012
6	--	--	--	-0.1%	-0.7%
5	0.9%	4.7%	-2.4%	-0.8%	-4.5% ***
4	-2.3%	1.9%	-3.0%	-2.9% *	-4.0% *
3	-1.0%	-3.0%	0.6%	0.7%	2.9%
2	1.0%	-1.9%	1.6%	2.1%	3.8% **
1 / 1a	0.5%	-1.6%	1.1%	0.4%	1.7% *
Below 1/1b	-0.6%	-1.4%	0.7%	0.5%	0.7%
Below 1b	--	--	--	0.1%	0.1%

不同能力學生的閱讀表現

- 香港不同成績水平學生的分數均較OECD的平均分為高，但跟PISA2012比較，跟OECD的差距縮窄了。
- 香港最高百分值的學生跟OECD的差距不大。



不同能力學生的閱讀表現

- 香港學生在高等級的比例較OECD為高，在低等級的比例較OECD為低，但第六等學生人數的比例與OECD沒有顯著差異。

	Hong Kong	OECD Average	Difference (HK - OECD)
Level 6	1.1%	1.1%	0.0%
Level 5	10.4%	7.2%	3.2% ***
Level 4	29.0%	20.5%	8.5% ***
Level 3	32.1%	27.9%	4.2% ***
Level 2	18.1%	23.2%	-5.1% ***
Level 1a	7.0%	13.6%	-6.6% ***
Level 1b	2.0%	5.2%	-3.2% ***
Below Level 1b	0.3%	1.3%	-1.0% ***

不同能力學生的閱讀表現

- 在首10名國家/地區之中，香港第六等級學生的比例是最低的，反映出香港尖子學生的比例較其他高閱讀水平國家/地區為少。

Country/Economy	Mean	Level 2	Level 3	Level 4	Level 5	Level 6	Level 5 & 6#
	Score	%	%	%	%	%	%
Singapore	535	16.9	26.2	27.4	14.7	3.6	18.4
Hong Kong-China	527	18.1	32.1	29.0	10.4	1.1	11.6
Canada	527	19.0	29.7	26.6	11.6	2.4	14.0
Finland	526	17.6	29.7	27.9	11.7	2.0	13.7
Ireland	521	21.0	31.8	26.4	9.4	1.3	10.7
Estonia	519	21.6	31.4	25.4	9.7	1.4	11.0
Korea	517	19.3	28.9	25.5	10.8	1.9	12.7
Japan	516	19.8	30.5	26.0	9.5	1.3	10.8
Norway	513	20.4	28.5	23.9	10.1	2.1	12.2
New Zealand	509	20.6	26.5	22.0	11.0	2.6	13.6

不同性別學生的閱讀表現

- 香港女生在歷屆PISA的閱讀成績均高於男生，但香港學生的性別差異比OECD的國際平均值為小。
- 香港男女生在PISA2015的成績都比2012下跌了。

	Hong Kong			OECD Average		
	Boys (B)	Girls (G)	Diff. (B - G)	Boys (B)	Girls (G)	Diff. (B - G)
PISA 2015	513	541	-28***	483	517	-32***
PISA 2012	533	558	-25***	478	515	-38***
PISA 2009	518	550	-33***	474	513	-39***
PISA 2006	520	551	-31***	473	511	-38***
PISA 2003	494	525	-32***	477	511	-34***
PISA 2000	518	533	-16***	485	517	-32***

不同性別學生的閱讀表現

- 女生在大部分組別的閱讀成績均比男生為高。
- 成績愈低的組別，差異愈大男女生的成績差異愈大。

Percentile	Girls		Boys		Difference# (Girls - Boys)
	Score	S.E.	Score	S.E.	
5th	398	(7.3)	355	(6.8)	43 ***
10th	434	(5.8)	393	(6.3)	42 ***
25th	491	(5.2)	457	(5.3)	34 ***
50th	547	(4.0)	518	(4.0)	28 ***
75th	597	(3.8)	575	(3.3)	23 ***
90th	639	(4.2)	622	(4.2)	17 **
95th	662	(4.6)	648	(4.5)	15 *
Whole Population	541	(3.6)	513	(3.4)	28 ***

PISA2015 結果總結

- 香港學生在PISA2015的閱讀評估**表現理想**，排名和分數均高於大部分參與評估的國家/地區。
- 香港自PISA2006開始，閱讀評估的分數一直比首兩屆(2000+及2003)較為理想，其中以PISA2012表現最好，但**今屆成績有所回落**，比PISA2012顯著下跌了，只高於PISA2003，與其他屆別則沒有顯著差異。

PISA2015 結果總結

- 不同成績水平及性別的學生在PISA2015的退步幅度相近。
- 香港**尖子學生的比例**一直比其他閱讀成績優秀的國家/地區為低，在PISA2015香港高等級學生的比例更比上屆下跌了，而低等級學生的比例卻上升了。
- 香港**女生的閱讀能力較男生為高**，性別差距在歷屆變化不大。

PISA2015 結果分析

- 香港學生在歷屆PISA的閱讀評估**一直表現優秀**，反映本港培養學生閱讀素養的措施和教學有一定的成效。
- 香港學生在**PISA2015的閱讀總分比PISA2012明顯下跌**，兩屆的測驗題目完全一樣，成績下跌的可能原因包括：
 - 參與測試的學生轉變了。
 - PISA2015全部轉用電腦方式考核。

PISA2015 結果分析

- 解釋學生在閱讀成績下跌時須**注意**：
 - 除了PISA2012之外，香港學生在PISA 2015的閱讀成績並未比其他屆別顯著為低，反映學生成績並非嚴重倒退。
 - 閱讀並非PISA2015的主要評估項目，現有數據難以完全確定學生退步的原因。
 - PISA2015的電腦測試只有固定文本，跟香港學生真實的電子閱讀情境不同。

政策及教學建議

- 繼續採取一直行之有效的措施和教學模式，培養學生的閱讀習慣和不同層次的閱讀能力。
- 不應只局限在中文科培養學生的閱讀，應思考如何加強跨學科的閱讀教學。
- 照顧個別差異，思考如何在閱讀的範疇進行拔尖補底。
- 配合學習的需要，讓學生多掌握不同的中文輸入方法。