

Public Seminar on “Meta-cognition in Learning and Teaching: Supporting Students’ Learning Needs”

**提升學生學會學習的能力：
國際比較研究的啓示**

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The Three Stages of the Education Blueprint for the 21st Century

- A review of the aims and goals of education (1999)
- A restructuring of the education system (2000)
- Reforms in teaching, learning and curriculum, and assessment within the education system in Hong Kong (2001)

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廿一世紀教育目標

教統會在1999年初，邀請公眾人士共同參與訂定香港在廿一世紀的教育目標，作為檢討香港教育制度的基礎。

公眾普遍認同香港在廿一世紀整體的教育目標應該是：

讓每個人在德、智、體、群、美各方面都有全面而具個性的發展，能夠一生不斷自學、思考、探索、創新和應變，有充分的自信，合群的精神，願意為社會的繁榮、進步、自由和民主不斷努力，為國家和世界的前途作出貢獻。

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Hong Kong Students Performance in International Studies

1. *Trends in International Mathematics and Science Study (TIMSS) 2003*
2. *Programme for International Student Assessment” (PISA) (2003, 2006)*
3. *Progress in International Reading Literacy Study (PIRLS) 2006*

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Table 5a. The Mathematics and Science Achievement of Students at the Fourth and Eighth Grade (Primary 4 and Secondary 2) in Hong Kong and Selected Countries/Economy (2003)

Students’ Mathematics Achievement in TIMSS (2003)			
At Grade 4		At Grade 8	
Country/ Economy	Average Score	Country/ Economy	Average Score
Singapore	594	Singapore	605
Hong Kong	575	Korea	589
Japan	565	Hong Kong	586
Chinese Taipei	564	Chinese Taipei	585
Belgium	551	Japan	570
Netherlands	540	Belgium	537

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Table 5b. The Mathematics and Science Achievement of Students at the Fourth and Eighth Grade (Primary 4 and Secondary 2) in Hong Kong and Selected Countries/Economy (2003)

Students’ Science Achievement in TIMSS (2003)			
At Grade 4		At Grade 8	
Country/ Economy	Average Score	Country/ Economy	Average Score
Singapore	565	Singapore	578
Chinese Taipei	551	Chinese Taipei	571
Japan	543	Korea	558
Hong Kong	542	Hong Kong	556
England	540	Estonia	552
United States	536	Japan	552

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Table 6a. Ranking of Hong Kong Students' Scientific Literacy in PISA Studies

Scientific Literacy			
PISA 2006		PISA 2003	
Country/Region	Mean Score	Country/Region	Mean Score
1 Finland	563	1 Finland	548
2 Hong Kong-China	542	2 Japan	548
3 Canada	534	3 Hong Kong-China	539
4 Chinese Taipei	532	4 Korea	538
5 Estonia	531	5 Liechtenstein	525
11 Korea	522	11 Canada	519
12 Slovenia	519	12 Switzerland	513
17 Macao-China	511	17 Hungary	503
20 Ireland	508	OECD average	496
OECD average	500	United States	491

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Table 6b. Ranking of Hong Kong Students' Mathematical Literacy in PISA Studies

Mathematical Literacy			
PISA 2006		PISA 2003	
Country/Region	Mean Score	Country/Region	Mean Score
1 Chinese Taipei	549	1 Hong Kong-China	550
2 Finland	548	2 Finland	544
3 Hong Kong-China	547	3 Korea	542
4 Korea	547	4 Netherlands	538
8 Macao-China	525	8 Belgium	529
9 Liechtenstein	525	9 Macao-China	527
18 Austria	505	18 Austria	506
19 Slovenia	504	19 Germany	503
20 Germany	504	20 Ireland	503
21 Sweden	502	OECD average	500
OECD average	498	Norway	495

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Table 6c. Ranking of Hong Kong Students' Reading Literacy in PISA Studies

Reading Literacy			
PISA 2006		PISA 2003	
Country/Region	Mean Score	Country/Region	Mean Score
1 Korea	556	1 Finland	543
2 Finland	547	2 Korea	534
3 Hong Kong-China	536	3 Canada	528
4 Canada	527	4 Australia	525
10 Sweden	507	10 Hong Kong-China	510
15 Japan	498	15 Macao-China	498
16 Chinese Taipei	496	16 Poland	497
18 Germany	495	18 United States	495
19 Denmark	494	OECD average	494
20 Slovenia	494	Denmark	492
21 Macao-China	492	Iceland	492
OECD average	492	Germany	491

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Table 7a. Ranking of Hong Kong's Fourth Grade Students in PIRLS 2006

PIRLS 2006			PIRLS 2001		
Rank	Countries / Regions	Mean Score	Rank	Countries / Regions	Mean Score
1	Russia	565	1	Sweden	561
2	Hong Kong	564	2	Netherlands	554
3	Canada (Alberta)	560	3	England	553
4	Singapore	558	4	Bulgaria	550
15	Denmark	546	14	Singapore	528
16	Canada (Nova Scotia)	542	14	Russia	528
17	Latvia	541	14	Hong Kong	528
18	United States	540	18	France	525
24	New Zealand	532	24	Slovenia	502
25	Slovak Republic	531		International mean	500
27	France	522	26	Cyprus	494
27	Slovenia	522	27	Republic of Moldova	492
32	Iceland	511	31	Argentina	420
	International mean	500	32	Islamic Republic of Iran	414

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What we have done so far since the year of 2000?

- In this **changing world of the 21st Century**, our younger generation needs to be equipped with a **broad based knowledge, high adaptability, independent thinking and the ability for life-long learning.**
- The Education Commission, in its *Reform Proposal for the Education System in Hong Kong* released in 2000, aptly made "*Learning for Life, Learning through Life*" the aim for the 21st Century.
- For the last seven years, Hong Kong has made **remarkable progresses in the education reforms** as recommended by the Reform Proposal (Education Commission, 2000).

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Major Initiatives of the Education Reform

- The Education Reform **initiatives are wide-ranging and intertwining.**
- There are **one focus with four areas of concern** and **seven major initiatives** in the blueprint of the Education Reform:
- The main focus is **student learning**, in which **students are motivated to learn and enable to learn how to learn.**

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The Seven Major Strategies are:

- I. initiating curriculum reform,
 - II. improving assessment mechanisms,
 - III. enhancing language education,
 - IV. providing a holistic support for schools,
 - V. promoting extensive professional development,
 - VI. improving student admission systems,
 - VII. increasing post-secondary education opportunities.
- The spirit of the Education Reform is "student-centred".*

(Education Commission, 2006, p.6)

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Mckinsey & Company's (2007) Study

- Aim: How the world's best-performing school systems come out on top?
- Conducted between May 2006 and March 2007, based on PISA 2003
- The first group--the world's top ten best-performing school systems: Australia, Belgium, Canada, Finland, Hong Kong, Japan, Netherlands, New Zealand, Singapore, and South Korea.
- The second group--those that are improving rapidly, e.g., U.S.A., England, Jordan and so forth. (Mckinsey, 2007, p. 10)

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What do they do to improve instruction?

1. *They get the right people to become teachers—*
 - *the quality of an education system cannot exceed the quality of its teachers.*
2. *They develop those people into effective instructors—*
 - *the only way to improve outcomes is to improve instruction.*
3. *They put in place systems and targeted support to ensure that every child is able benefit from excellent instruction—*
 - *the only way for the system to reach the highest performance is to raise the standard of every student.*

(Mckinsey, 2007, p. 13)

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The 27 areas in descending order of comparative importance to student learning

Highly Important	Important	Less Important
(1) Classroom management	(10) School culture	(19) Parent involvement policy
(2) Metacognitive processes	(11) Classroom climate	(20) Classroom implementation and support
(3) Cognitive processes	(12) Classroom instruction	(21) Student demographics
(4) Home environment / parental support	(13) Curriculum design	(22) Out of class time
(5) Student/teacher social interactions	(14) Academic interactions	(23) Program demographics
(6) Social/behavioral attributes	(15) Classroom assessment	(24) School demographics
(7) Motivational/affective attributes	(16) Community influences	(25) State level policies
(8) Peer group	(17) Psychomotor skills	(26) School policies
(9) Quantity of instruction	(18) Teacher/administrator decision making	(27) District demographics

Wang, Haertel, & Walberg (1993/1994, pp. 74-79)

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Robinson's (2007) meta-analysis of 26 studies of the effects of leadership on student outcomes

Leadership dimensions that have effects on student outcomes are:

- Establishing goals and expectations
- Strategic resourcing
- Planning, coordinating, and evaluating teaching and the curriculum
- Promoting and participating in teacher learning and development
- Ensuring an orderly and supportive environment

(Robinson, 2007, p. 8).

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