



***Education 2030***  
***Preparation for the Future:***  
**Our Strength and Weakness**

KIT-TAI HAU  
The Chinese University of Hong Kong

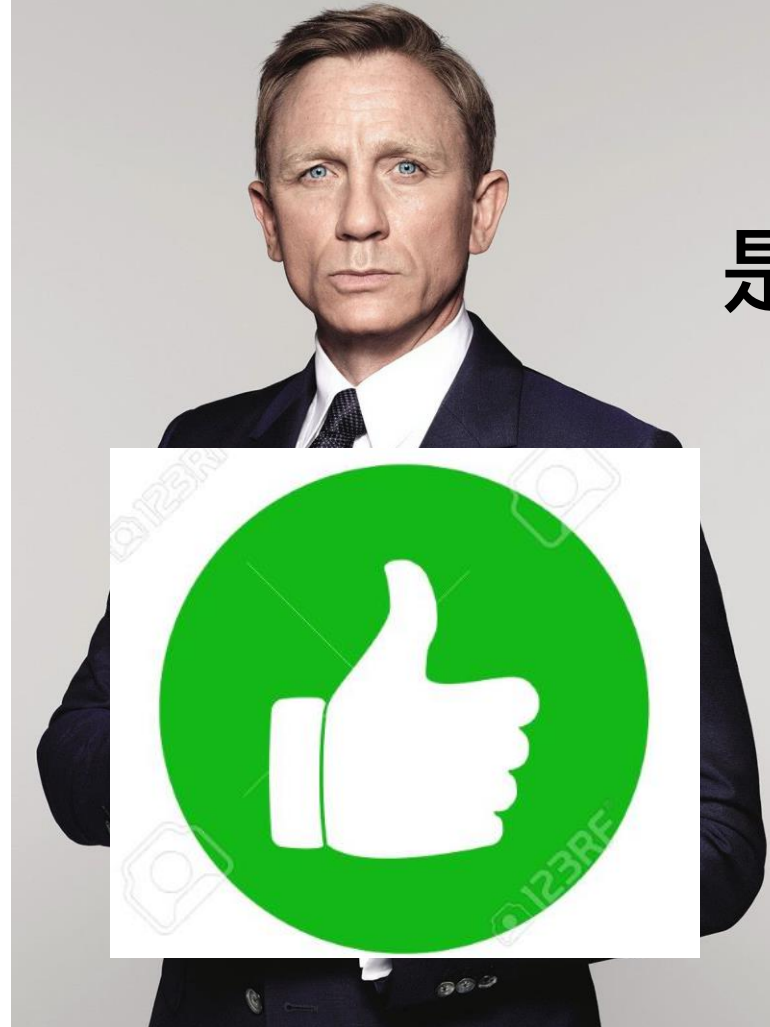
# I. Background: Importance of Professionalism (clear right/wrong)

## “Legal” advice from a colleague in Law on Student boycotting class ?

不是扮友好

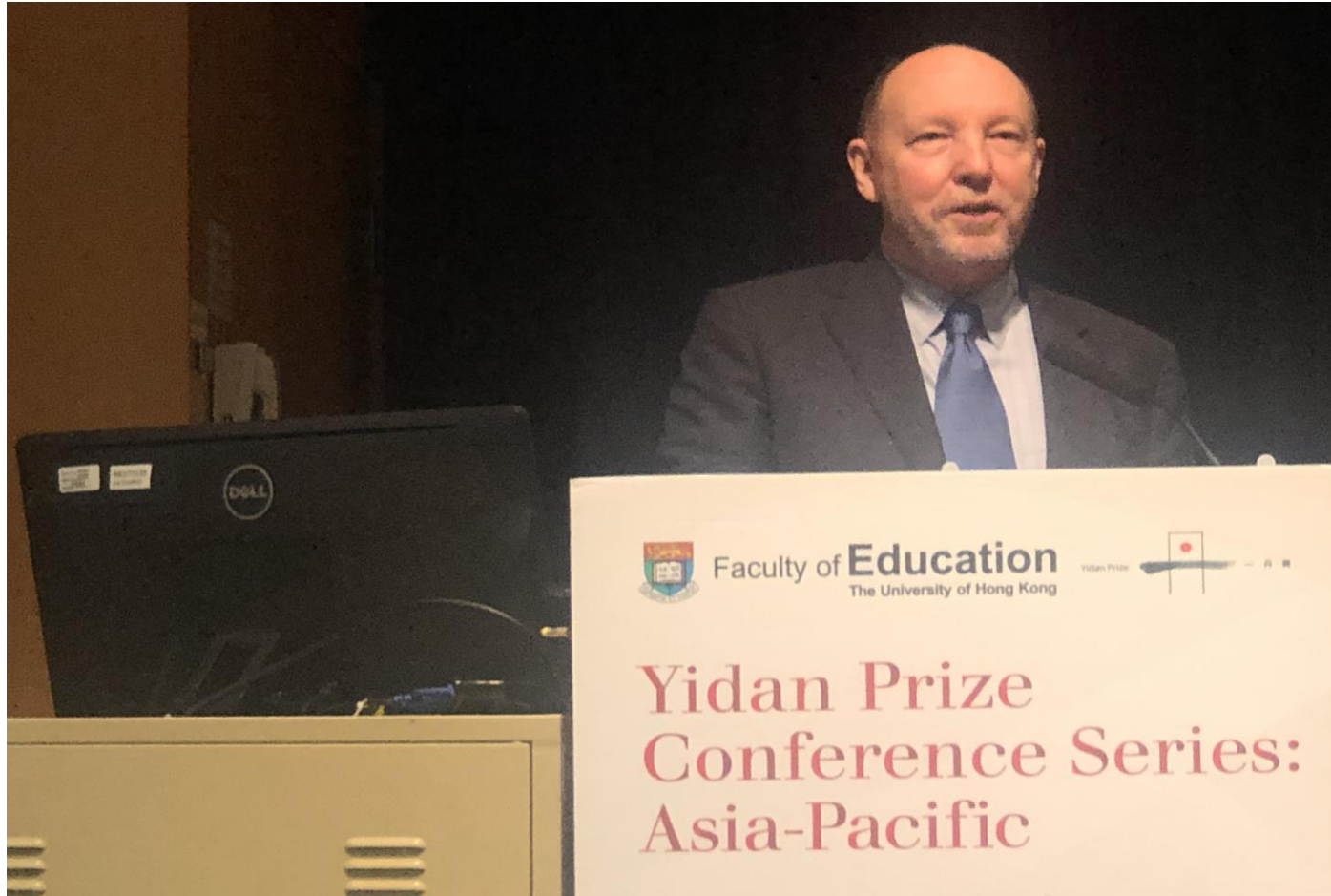


是要更專業



# I. Background: Is Education a Craft or a Science?

Prof Larry Hedges – Yitan Prize 2018 Laureate said:



- **Music/Art/Cookery:** a craft, advancement from practitioners
- **Medicine:** a science, advancement from researchers rather than practitioners
- **Education: ??**



# I. Education: Working on “beliefs”: Prof Kirsti Lonka – Learning & Teaching Expo 2018 (12 Dec opening keynote), U of Helsinki, wait....

## What are the characteristics of Finnish teachers?

- Very professional?
- Like extensive project work?
- Value comments than marks?

### 芬兰教育心理学教授，纠正关于芬兰教育的7大误区

2018  
12/15  
15:12

加港教育  
企鵝号

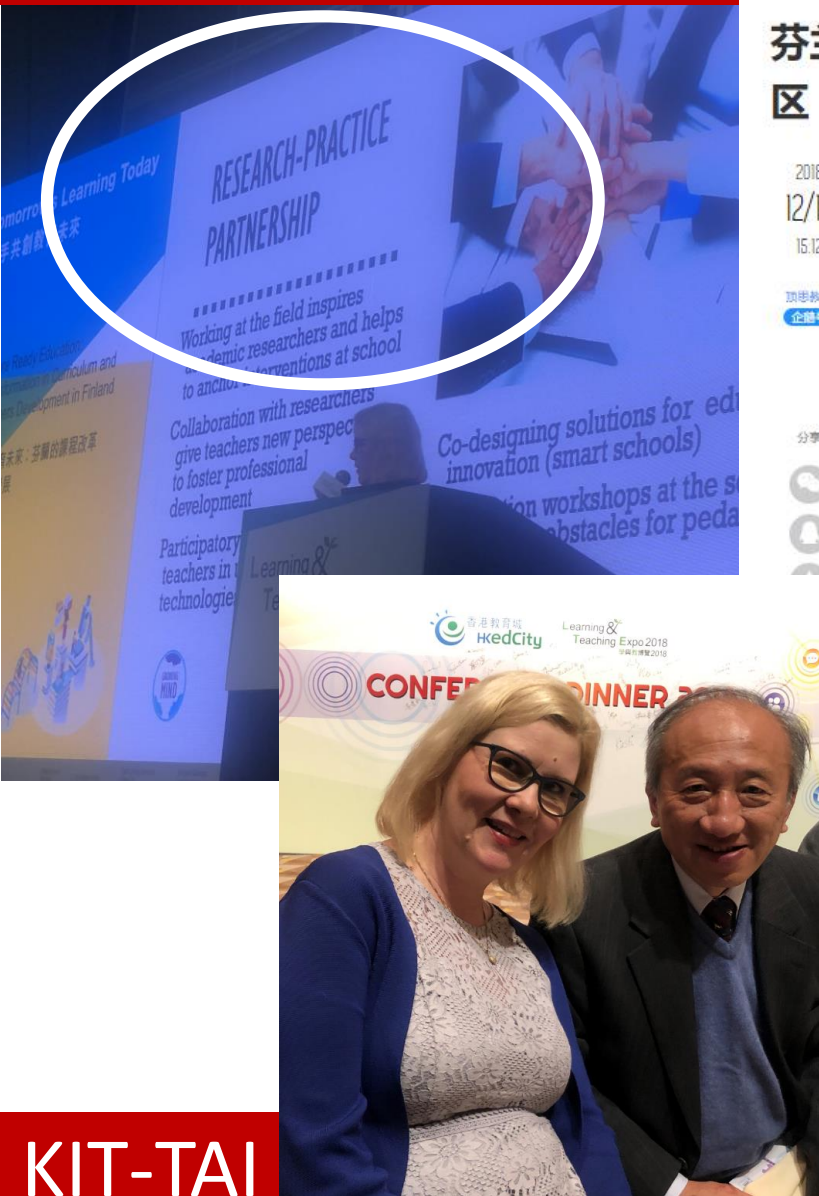
芬兰的学生能力，长期位于国际评估PISA的十名以内，一直是全球教育的范例。有关芬兰教育的传说不绝于耳，芬兰人自己是如何看待的？

文 | Sarah

编 | Jack

芬兰的学生能力，长期位于国际评估PISA的十名以内，一直是全球教育的范例。有关芬兰教育的传说不绝于耳，没有标准化考试，不对学校进行检查，不强调管控和竞争，甚至学校取消分科、使用“现象教学”法.....

这些因素究竟是促成全民教育成功的必然、亦或是偶然？芬兰人自己又是如何看待教育的？带着这些疑问，笔者慕名聆听了赫尔辛基大学教育心理学Kirsti Lonka教授在香港学与教博览会上的主旨演讲。





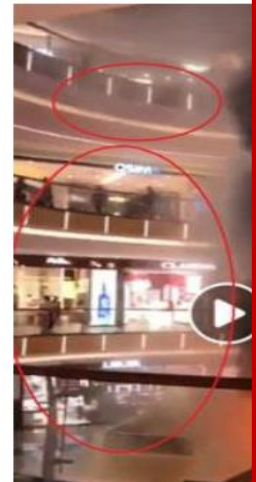


# I. Education: Our Problems – sadly data/facts are NOT important: 2019.10.20 OECD Director of Education, Andreas Schleicher said

港聞

2019年10月23日 星期三

有圖有  
社國際  
增核證



- Post-truth world
- Young people do not rely on teachers to get information
- Truth/fact lose currency
- Like-minded people polarize
- Some said: Even renowned scientists rely on Facebook



# I. Education: Finland (2019.10.19 news) uses IT? Project learning useful? Beliefs? Facts? wait.....

推電子化教育 記錄學習過程

另外，Silander也建議香港推行電子化教育。他稱，芬蘭學校利用電腦為學生製作學習履歷，學生可記錄整個學習過程，讓教師在過程予以協助和回饋。不過，電子化並非只是一台手提電

腦，他  
式不變  
主力推展電子化教育的芬蘭著名教育學者兼電腦科學家Pasi Silander，早前到港主持研討會，  
他接受本報訪問指出，芬蘭運用「主題式教學」（或「現象教學法」），概念跟香港「跨學  
科」學習相近，讓學生圍繞一主題研究，從中學到不同知識。他比喻學習為薄餅，不能只學習  
其中一角，需拼合多塊才會完整。他舉例以「人類」為主題，當中涉及生物學、心理學和社會  
學，每部分也環環相扣，教師不再劃分科目，單向提供資訊，反而讓學生發掘知識，「學會自  
行學習」。





# I. Education: Finland Phenomenological Teaching Useful, Finland Dropping?

体育 汽车 房产 旅游 教育 时尚 科技 财经 娯

芬兰最新研究: 现象式教学不适合所有学生, 数字化课堂在阻碍学习

Finland Professors  
IT & project learning

Finland's education system is failing. Should we look to Asia?

Finland  
question

KEVIN

< 搜狐 首页 · 教育

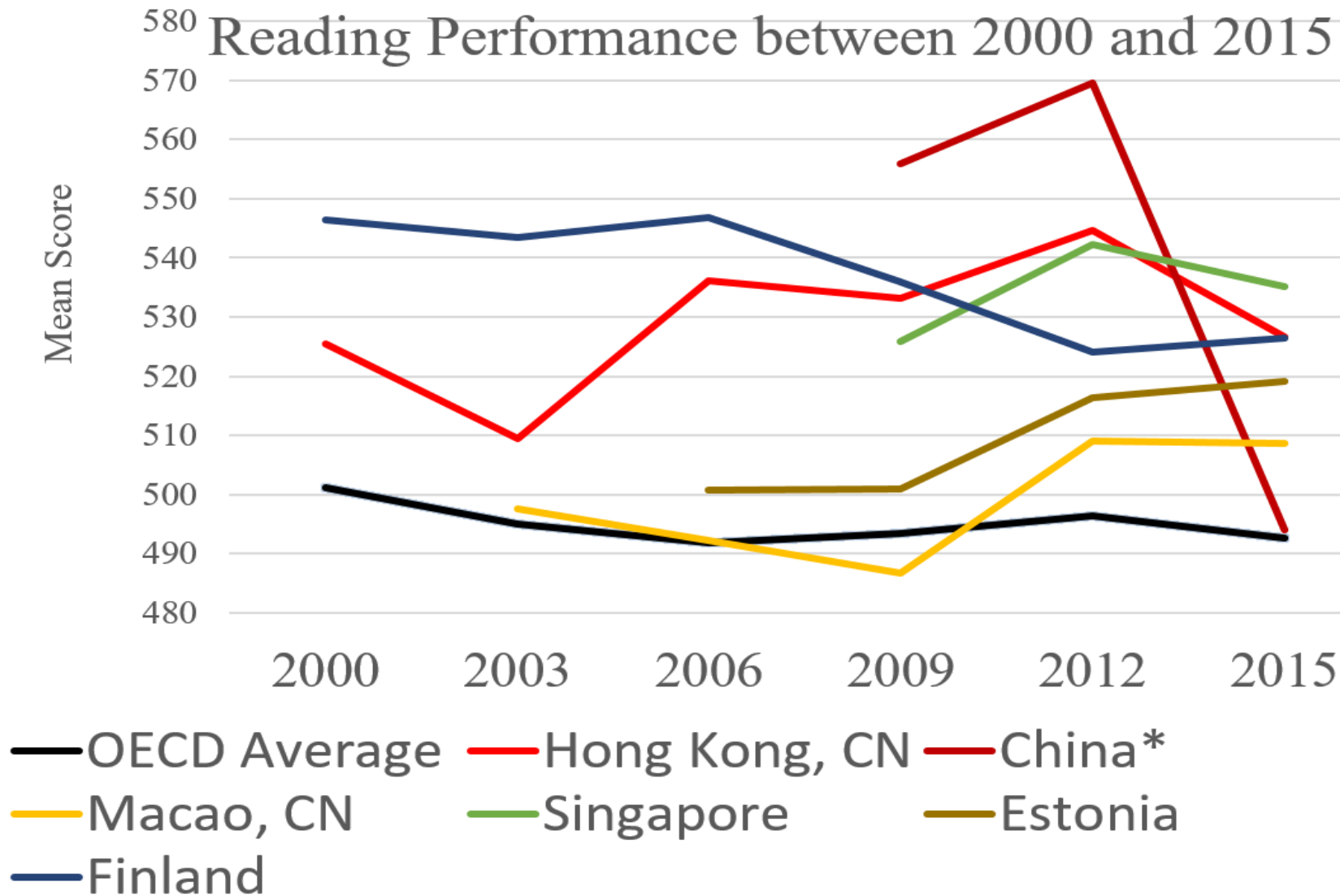
宫主大人2

【环球】芬兰正在从世界最佳教育体系走向衰落? 教育专家回应新课改12大质疑





## II. HK Problems: Data showed Reading -- HK and other high performing economies

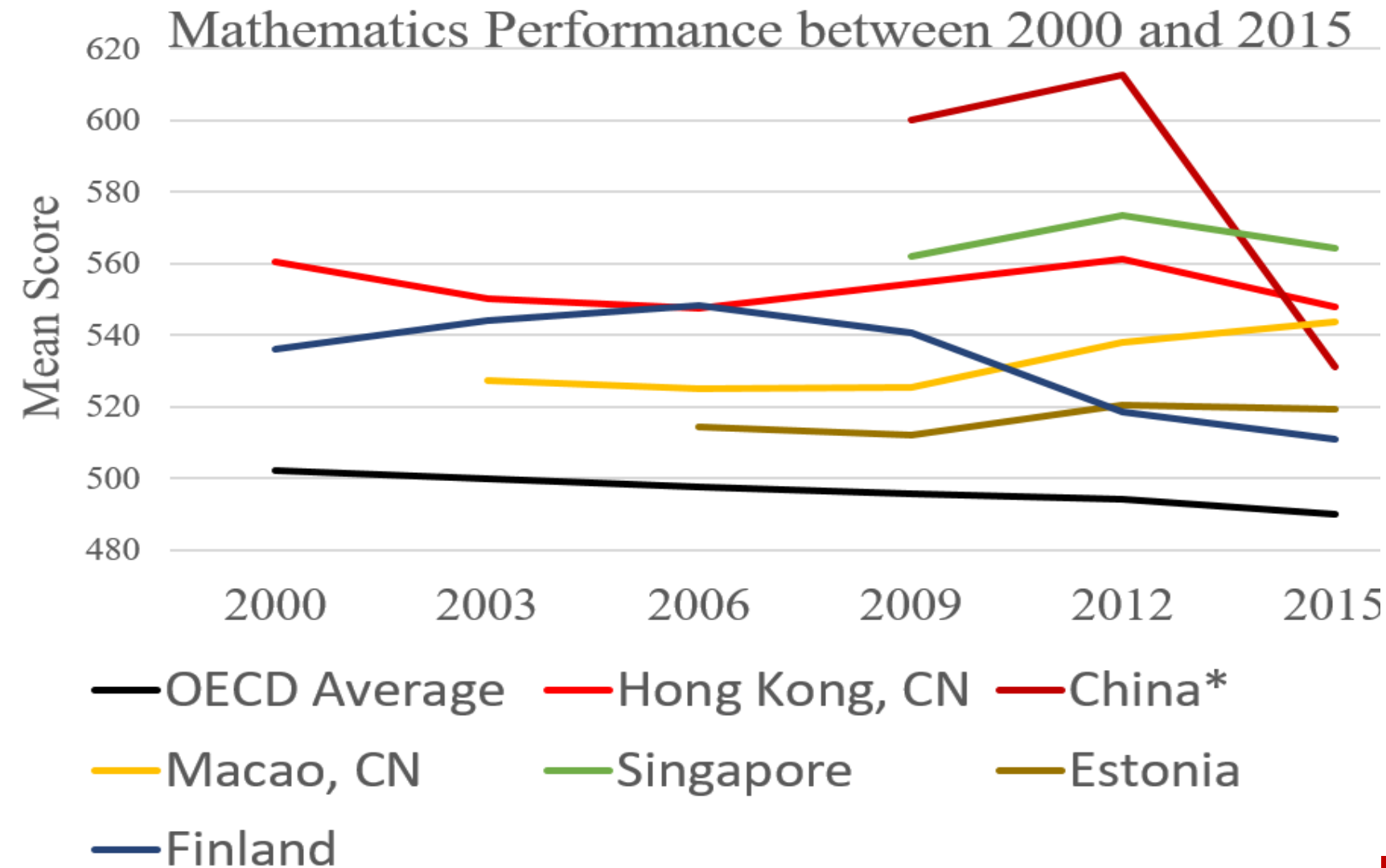


- HK: high, max at 2012, fluctuate
- Singapore: rising, took over HK
- Macao, Estonia: rising, easily catching
- Finland: dropped, dropping = HK
- Our Problem: 学如逆水行舟
- Only political debate, nothing Educational





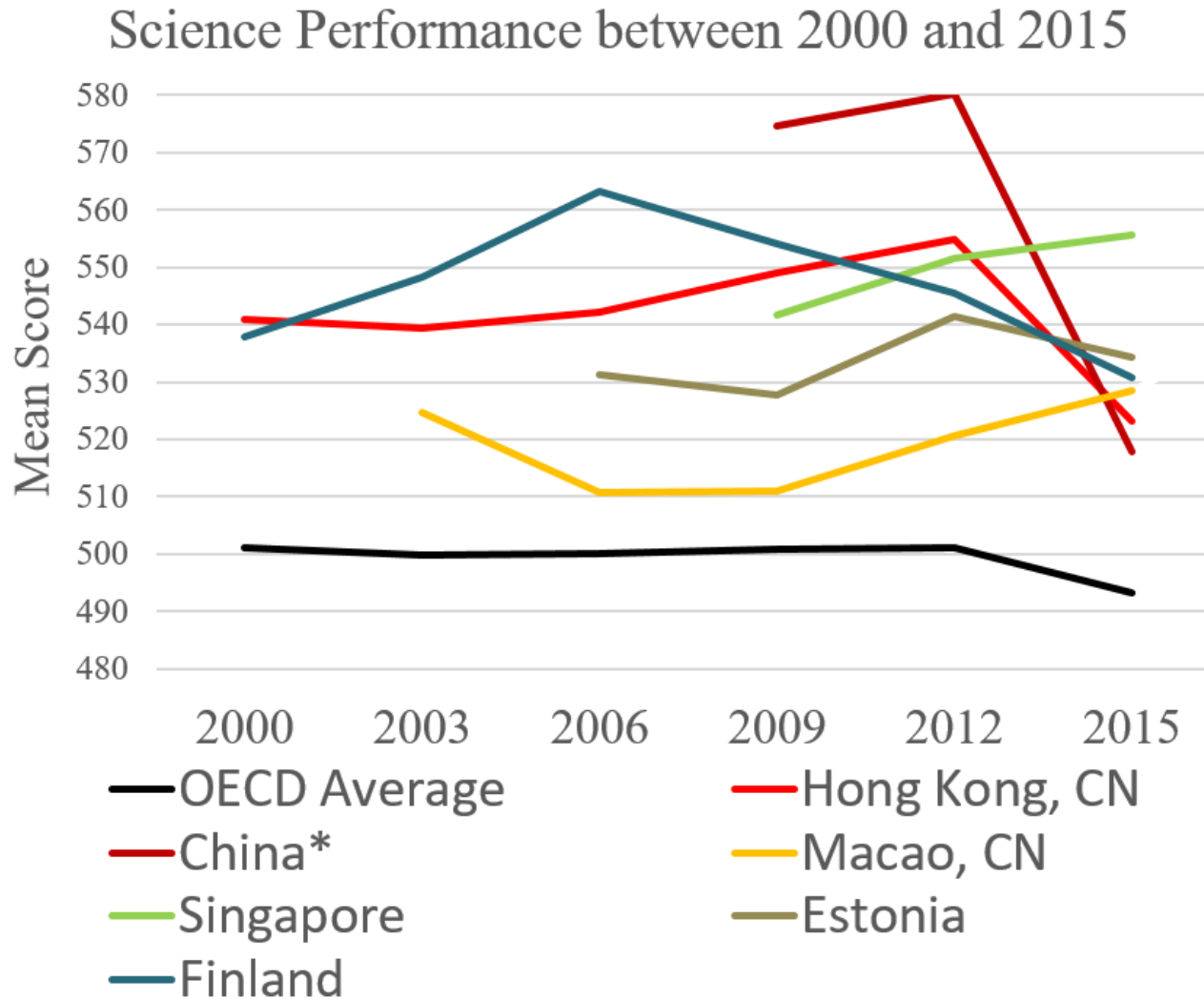
## II. HK Problem: Datq showed Maths -- HK stagnant, bypassed by others



- HK: high, fluctuates
- Singapore: rising, took over HK
- Macao, Estonia: rising, catching /may take over
- Finland: dropped, dropping, much lower than HK
- 学如逆水行舟
- HK Stagnant, turns engine to other things



## II. HK Problem: Data showed Science – Serious drop after reform

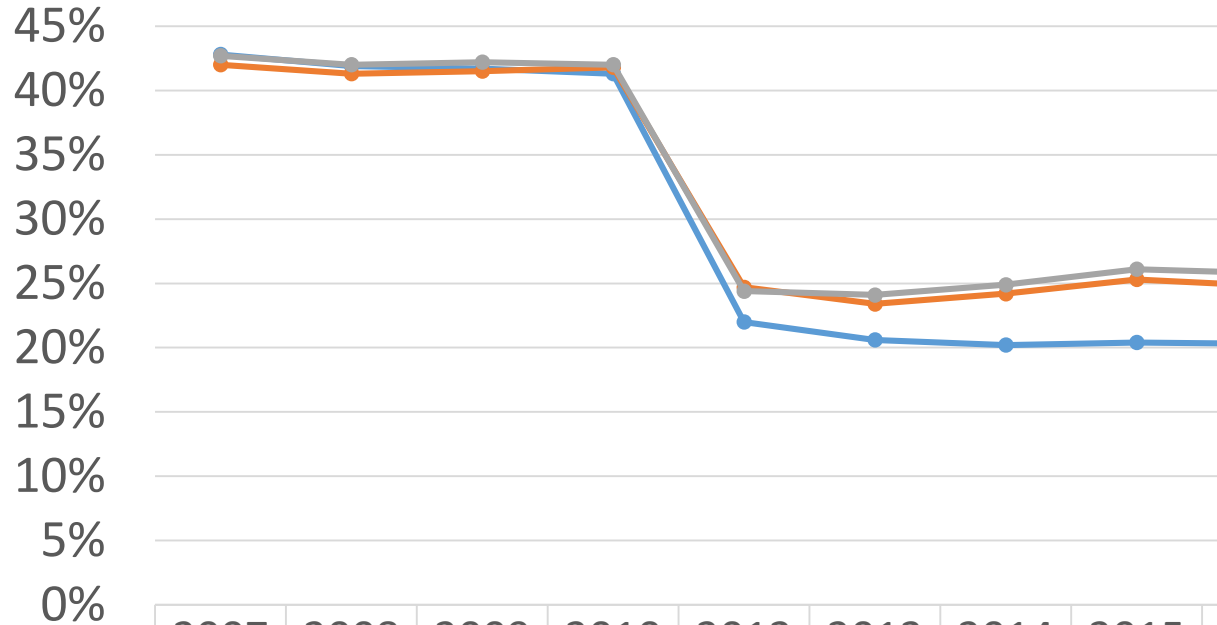


- HK: high, max at 2012, dropped substantially recently, too few students study Science
- Singapore: rising, took over HK
- Macao, Estonia: rising, taking over
- Finland: peaked 2006, still dropping, = HK
- No energy to reform
- Overridden by other political interest



## II. Data Shows: Problems of Science, LS and Chinese Language

% of Candidates in Phy, Chem, Bio



Physics	43%	42%	42%	41%	22%	21%	20%	20%	20%
Chem	42%	41%	42%	42%	25%	23%	24%	25%	25%
Biology	43%	42%	42%	42%	24%	24%	25%	26%	26%

The Learning & Teaching  
Critical Thinking Skills:  
Scenario Analysis  
(Senior Secondary)

(Translated version)  
(Chinese version produced by Kelly KU, Kit-tai HAU, and Irene T.)

Personal, Social and Humanities Education Section,  
Curriculum Development Institute, Education Bureau  
2011

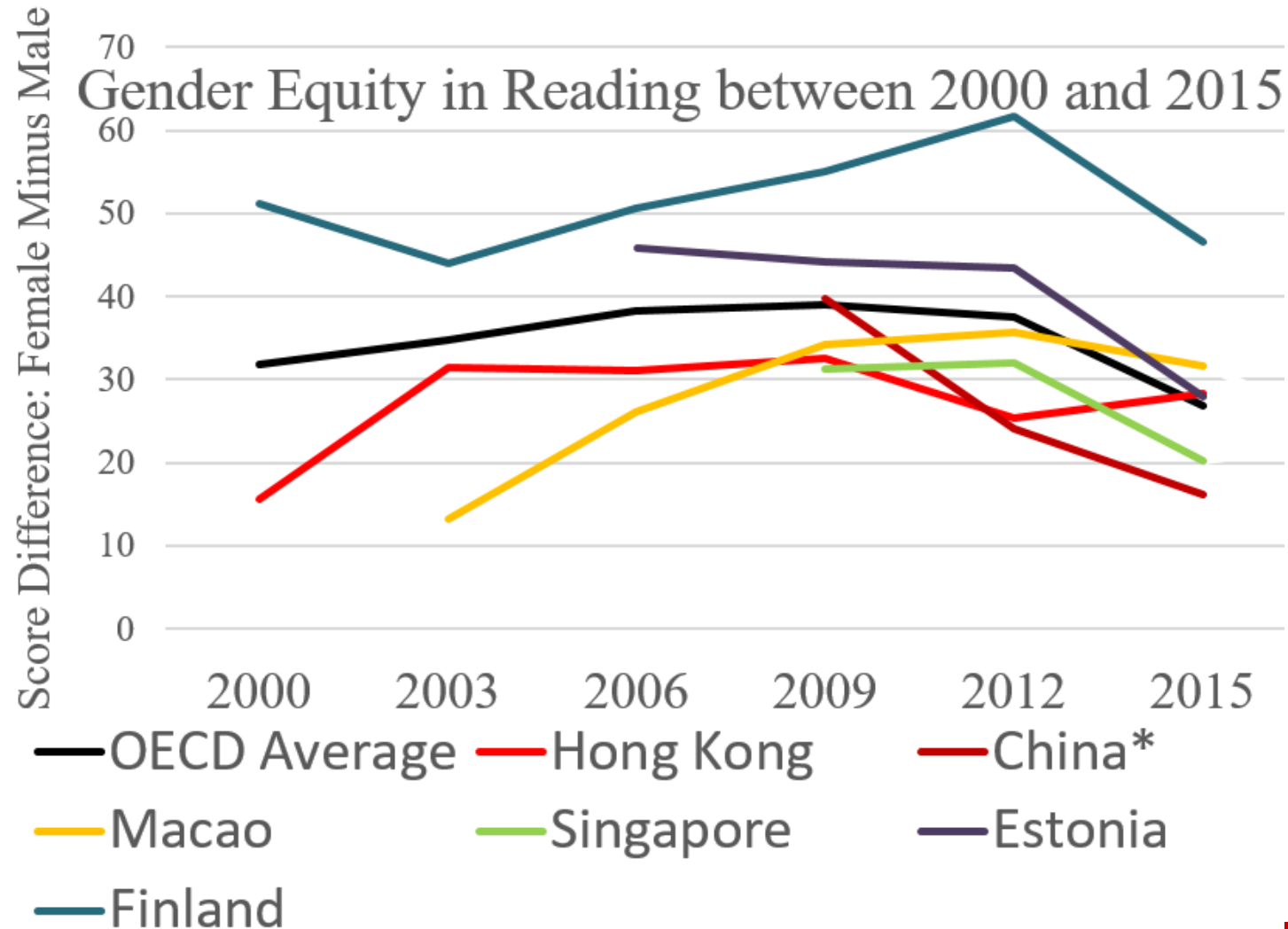
Core competence:  
Chinese language (as  
mother tongue)

- 语文结构与运用
- 思维发展与提升
- 审美鉴赏与创造
- 文化传承与理解





### III. Data Shows: HK good in gender equity but worrying: boys' less focus/hard working now



#### Reading

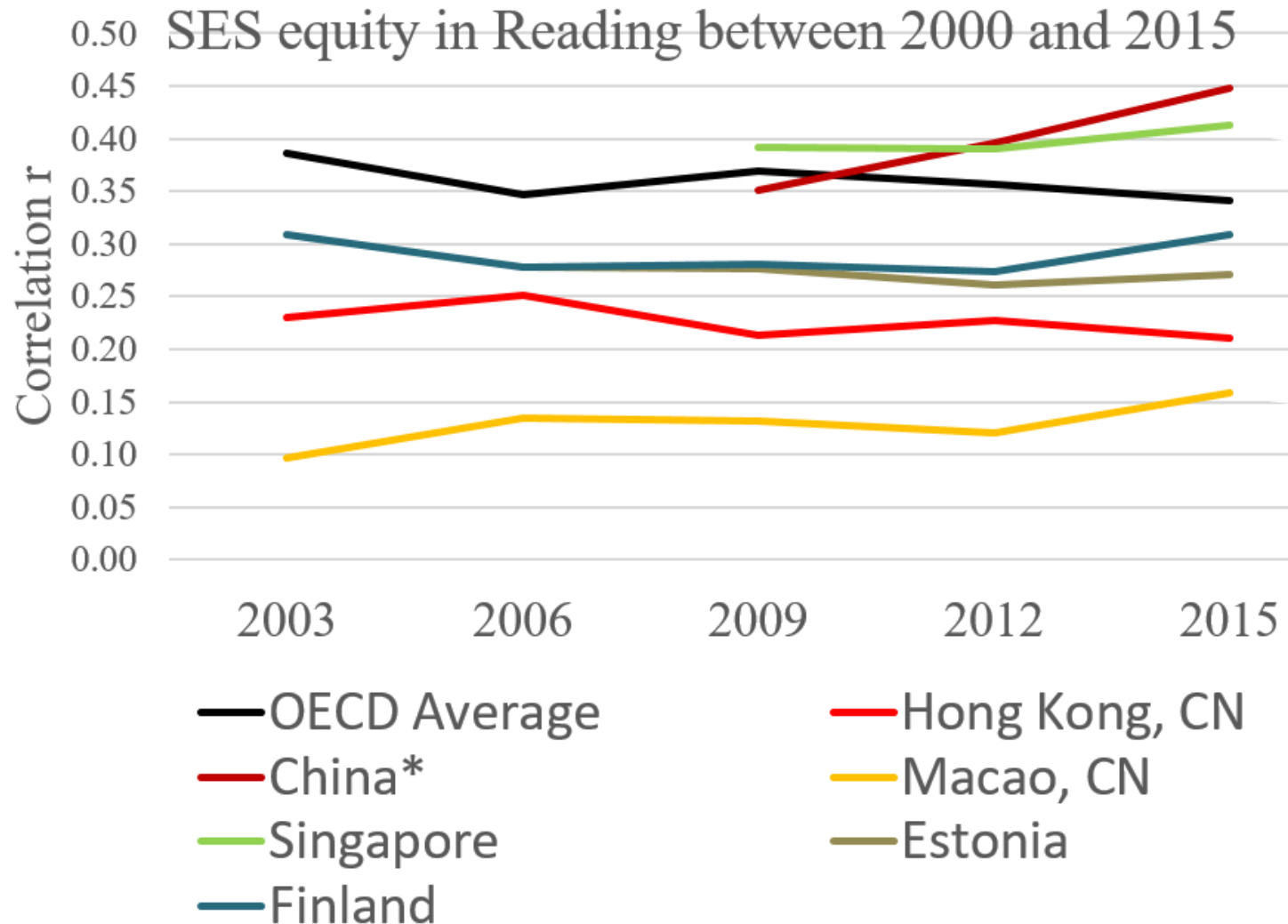
- HK: F > M by 30
- Similar to Macao/Singapore
- Finland F>M by 50-60

#### Maths/Science

- HK: M=F (or F>M) in recent years
- despite Macao/Singapore M > F
- HK boys NOT focused/hard working



### III. Data Shows: HK good in SES Equity across years



- very stable across years,
- Macao best (.10-.16), HK second (.21-.25)
- Estonia (.25-.28)
- Finland (.27-.31)
- Singapore (.36-.41)
- BSJG (.35-.41)

## IV. Future: Project Doubtful

**Long project, own assessment,  
written feedback on top of mark:**

**NOT HAPPENING**

**a) public belief/impression  
wrong**

**b) these new strategies not  
effective? need  
improvement/enhancement?**

- Not work on long project (EST FIN, JPN, KOR)(except SHA, SGP)
- NOT administer own assessment (JPN, KOR, SHA, EST)
- NOT provide written feedback on top of mark (FIN, JPN, EST, KOR)(SHA, SGP provided fdbk)

SGP

ly all

Student

— I develop/administer own assessment :Freq/nearly all

— I provide written feedback on S work add'n to <mark> :Freq/nearly all



# IV. Future: Project Learning -- Perhaps we should be familiar with Literature on....



EDUCATIONAL PSYCHOLOGIST, 41(2), 75–86  
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## Why Minimal Guidance During Instruction Does Not Work: An Analysis of the Failure of Constructivist, Discovery, Problem-Based, Experiential, and Inquiry-Based Teaching

Paul A. Kirschner

*Educational Technology Expertise Center  
Open University of the Netherlands  
Research Centre Learning in Interaction  
Utrecht University, The Netherlands*

John Sweller



Journal of Educational Psychology  
2011, Vol. 103, No. 1, 1–18



Journal of Educational Psychology  
2011, Vol. 103, No. 1, 1–18

© 2010 American Psychological Association  
0022-0663/10/\$12.00 DOI: 10.1037/a0021017

## Does Discovery-Based Instruction Enhance Learning?

Louis Alfieri, Patricia J. Brooks, and  
Naomi J. Aldrich  
City University of New York

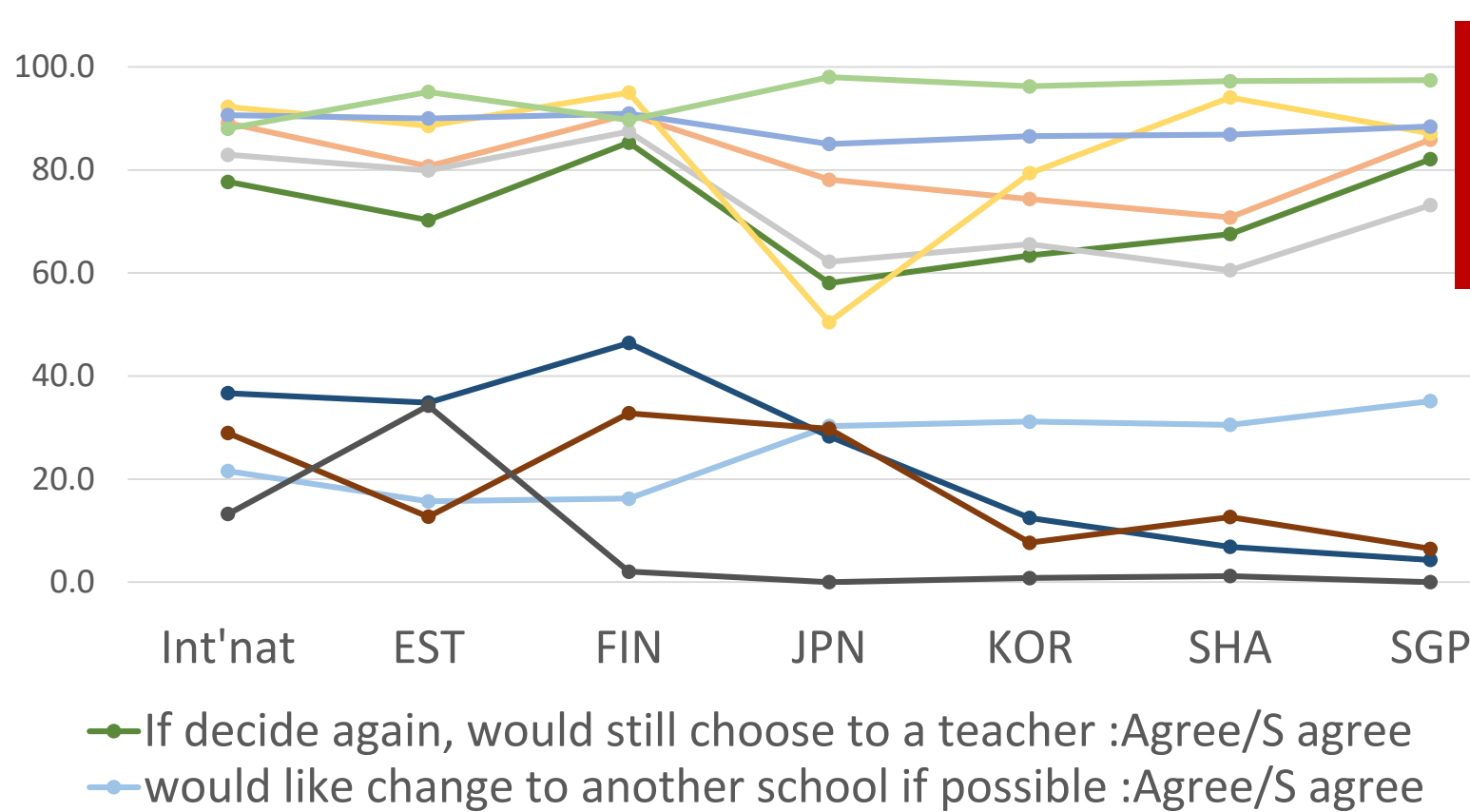
Harriet R. Tenenbaum  
Kingston University

The findings suggest that unassisted discovery does not benefit learners, whereas feedback, worked examples, scaffolding, and elicited explanations do.

discovery under most conditions ( $d = -0.38$ , 95% CI  $[-.44, -.31]$ ). In contrast, analyses of 360 comparisons revealed that outcomes were favorable for enhanced discovery when compared with other forms of instruction ( $d = 0.30$ , 95% CI  $[.23, .36]$ ). The findings suggest that unassisted discovery does not benefit learners, whereas feedback, worked examples, scaffolding, and elicited explanations do.

*Keywords:* discovery learning, explicit instruction, scaffolding

*Supplemental materials:* <http://dx.doi.org/10.1037/a0021017.supp>



## IV. Future: Teachers very unhappy in high ach economies

- Don't want to be teacher, want to change sch, don't enjoy work this sch, don't recommend my sch gd place to work, don't satisfied with performance, not satisfied with work, (EST, JPN, KOR, SHA, SGP)(FIN int'n mean)
- But P: T common beliefs about schooling (FIN int'n mean); no shortage of IT, internet; no cheating (other than EST)

**Students high performance;**

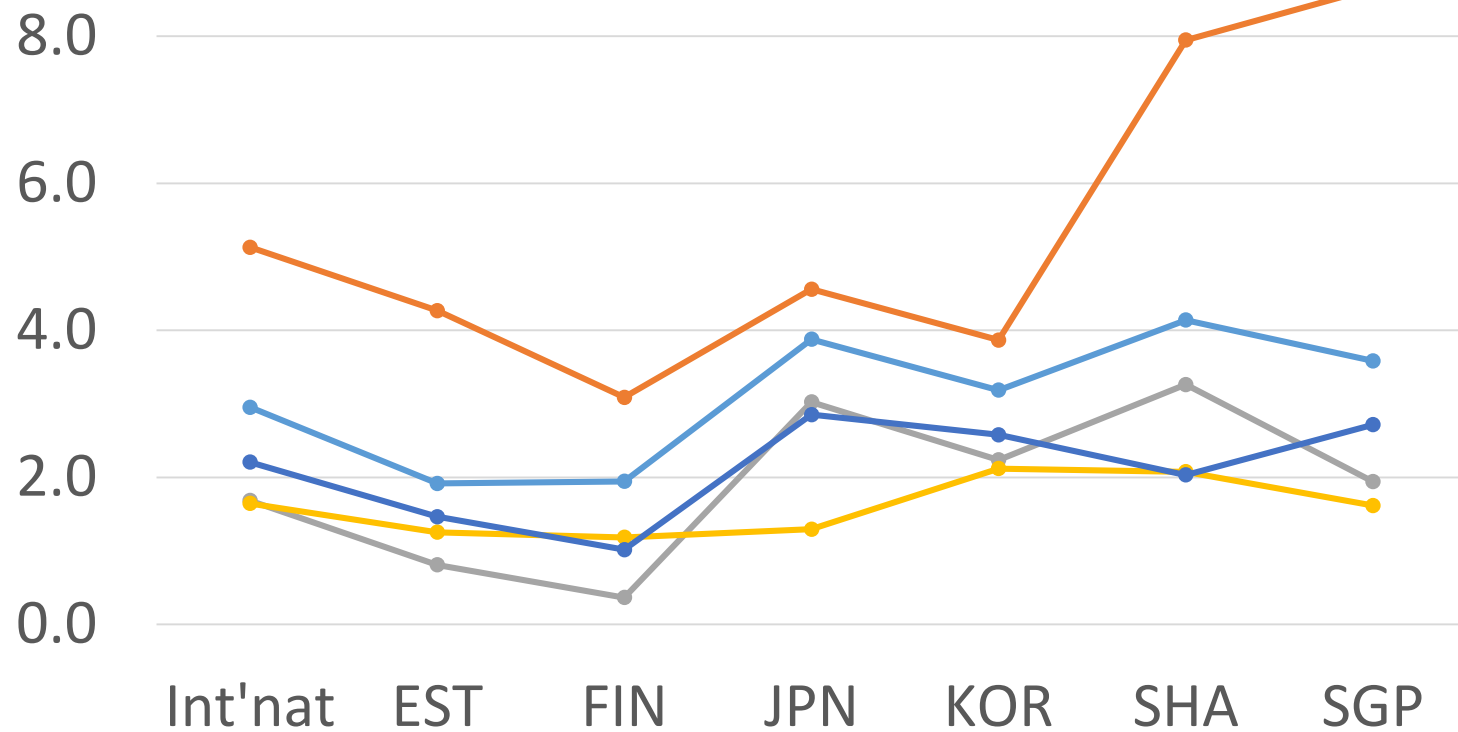
**Teachers hate/not satisfied.**

**Implication: Who should take course?**

- insufficient internet :some extent/A lot
- students Cheating Weekly/ Daily



## IV. Future: marking -- low return



- Team work and dialogue with colleagues
- Marking/correcting of student work
- Participation in school management
- Commut'n co-op'n parents
- others

- JPN, SHA, SGP spent time on team work (but EST, FIN low)
- SHA, SGP spent time mark/correct student work, but FIN, KOR low
- JPN, KOR, SHA spent time on sch management, but EST, FIN seldom
- KOR, SHA work with parents, but EST, FIN, JPN v low
- EST, FIN little other tasks, JPN, KOR, SGP a lot



# IV. Future: Marking, perhaps we should be familiar with literature on other strategies to replace marking



## 如何 (不) 個別評改專題報告

侯傑泰教授 香港中文大學教育心理學系主任

1999年7月

TOC 通訊  
newsletter (volume 5)  
香港、香港教育署

利用專題報告等作為學習或評核學生能力的方法，在香港或世界各地漸受重視及流行，但對頗多教師來說，如何評改這些報告以協助學生學習，確是一個難題。

本文主要是介紹這考核改革的潮流，並引用Goodrich(1998)所建議的方法，描述如何以最少的批改，或甚至不作極為費時的個別評閱，但更能促進學習，也真正發揮以專題報告等學習的優點。我們希望指出很多時候學生主動個別學習的機會及時間，比被動聽教師講授更能促進學習；個別評改可能，本文提出一套更省儉，且能真正發揮專題報告教學果效的方

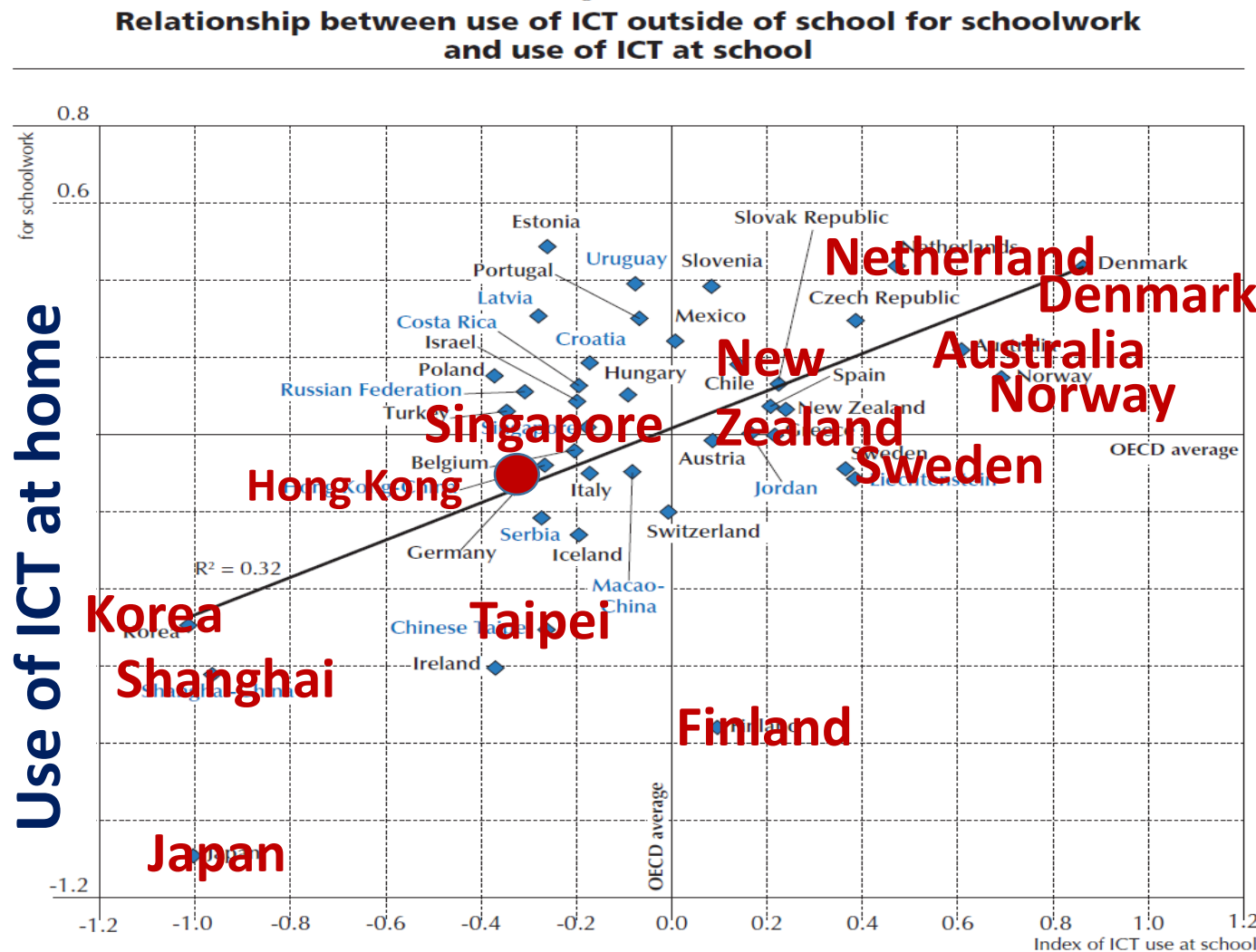
## 20 years ago I wrote:

表現性、真確／另類 (performance, authentic/alternative) 評估

長久以來，評估方法極為影響及控制教學，



# IV. Future: Cautious use of IT in Education



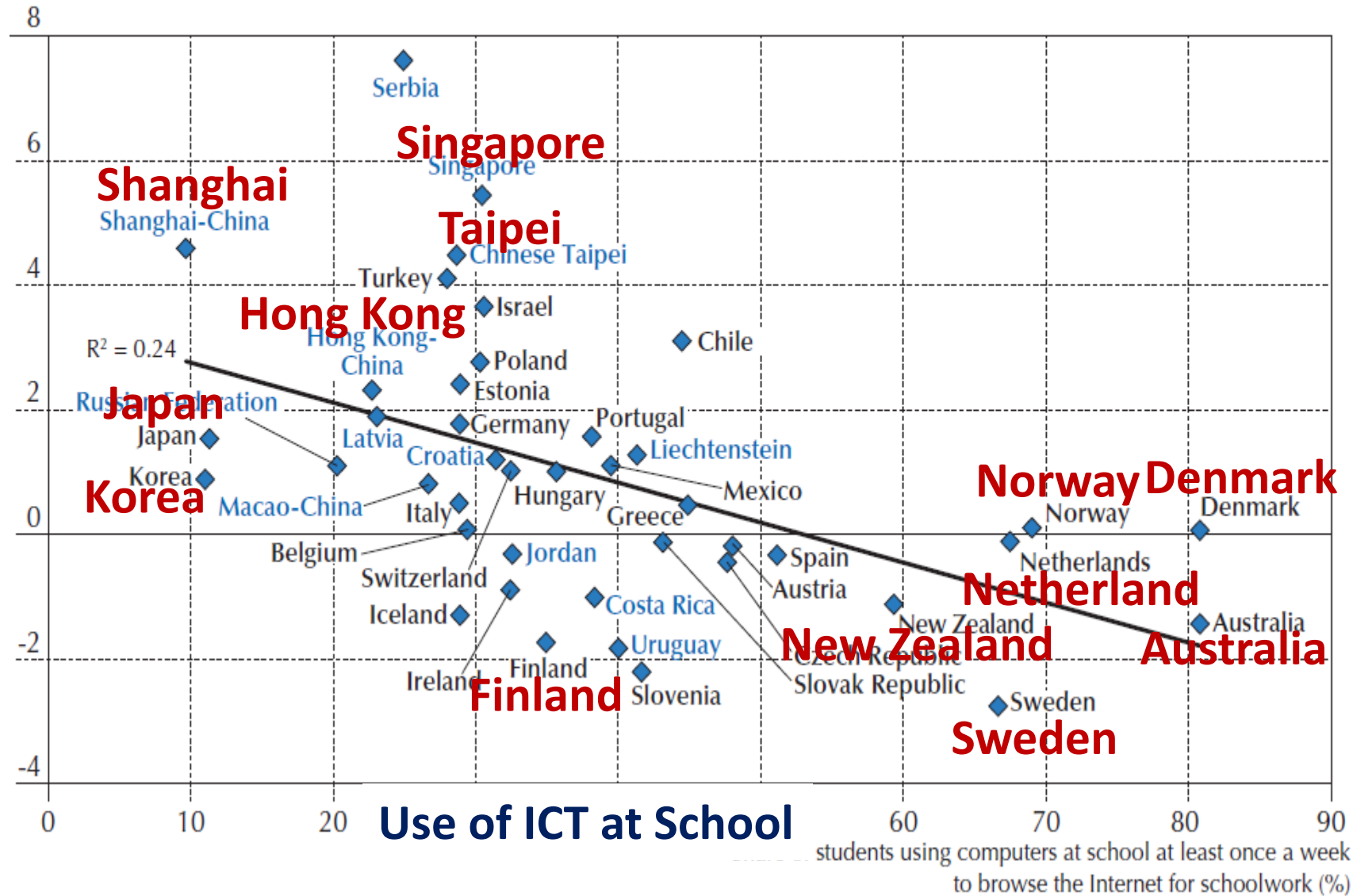
- More use in School --
- More use at Home

5.com>



## Trends in reading performance and proportion of students who frequently browse the Internet for schoolwork at school

Change in Score 2012 - 2000



- More Use of Computer → Academic Results Dropped more from 2000-2012



## IV. Future: Reexamine West/Asian Motivation Theories

Western:

- individualistic / collectivist (19)
  - motivation
  - Task design
  - determine
  - but
  - aim
  - Encourage
  - teachers make learning meaningful/relevance, choices, interest, expectancies
  - minimize competition (mastery goal) to minimize negative ability implication
- Consequences:**
  - Students centre of the world
  - Egoistic
  - “Over”-confidence (praised too much)
  - Learn Jargons/ but less deep learning
- ...cacy, self-  
...ooling imposed



## IV. Future: Reexamine West/Asian Motivation Theories

### Chinese Scenario

- Interdependent
- Undermine learning
- acceptable
- Schools no individual
- difference
- Li (2002): “Eager to learn”
- Failure: effort continuous
- striving, per
- Self-determination less important, prefer to be told by authority (seen as care/ nurture) rather than control

### Consequences:

- **Collectivistic Students**
- **Work hard despite failure**
- **Humble**
- **Eager to learn**
- **Competition not a problem**



## IV. Future: Reexamine West/Asian Motivation Theories



决胜网·学前教育



芬兰“国际失利”的真相：给家长的教育启示

蓝橡树 • 2018-12-

芬兰人的“失利”  
来越迷恋成功学  
极试错，从而收  
中国有句古话，  
教育的国度。

千金難買少年窮

**We have too many “rich” students  
We rely too much on Facebook to  
tell us what to do**

## V. Professionalism: W. Edwards Deming said:

Without Data, You're Just  
another Person with an  
opinion – W. Edwards  
Deming

