智慧教育的成功之道

全球案例與觀點

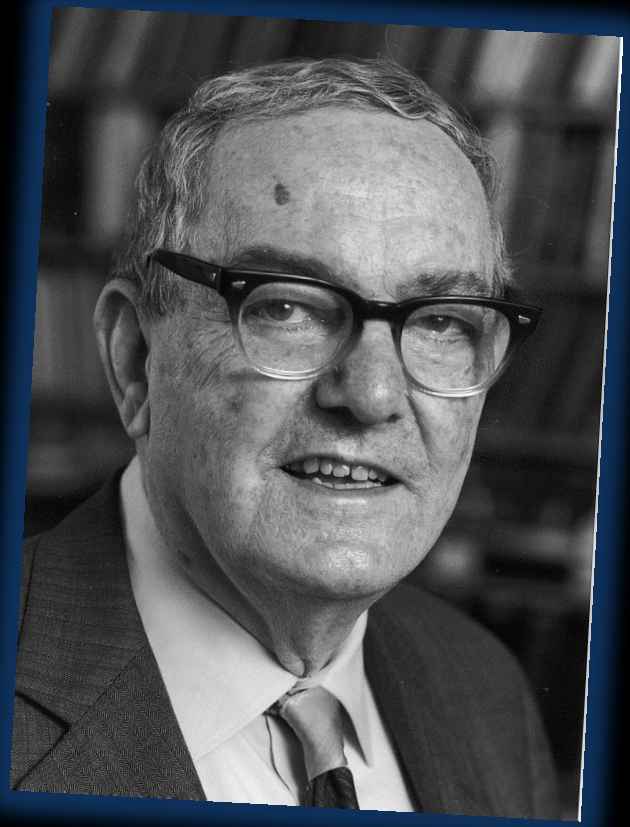
台灣科技領導與教學科技發展協會顧問

網奕資訊科技全球銷售營運暨商務開發資深副總

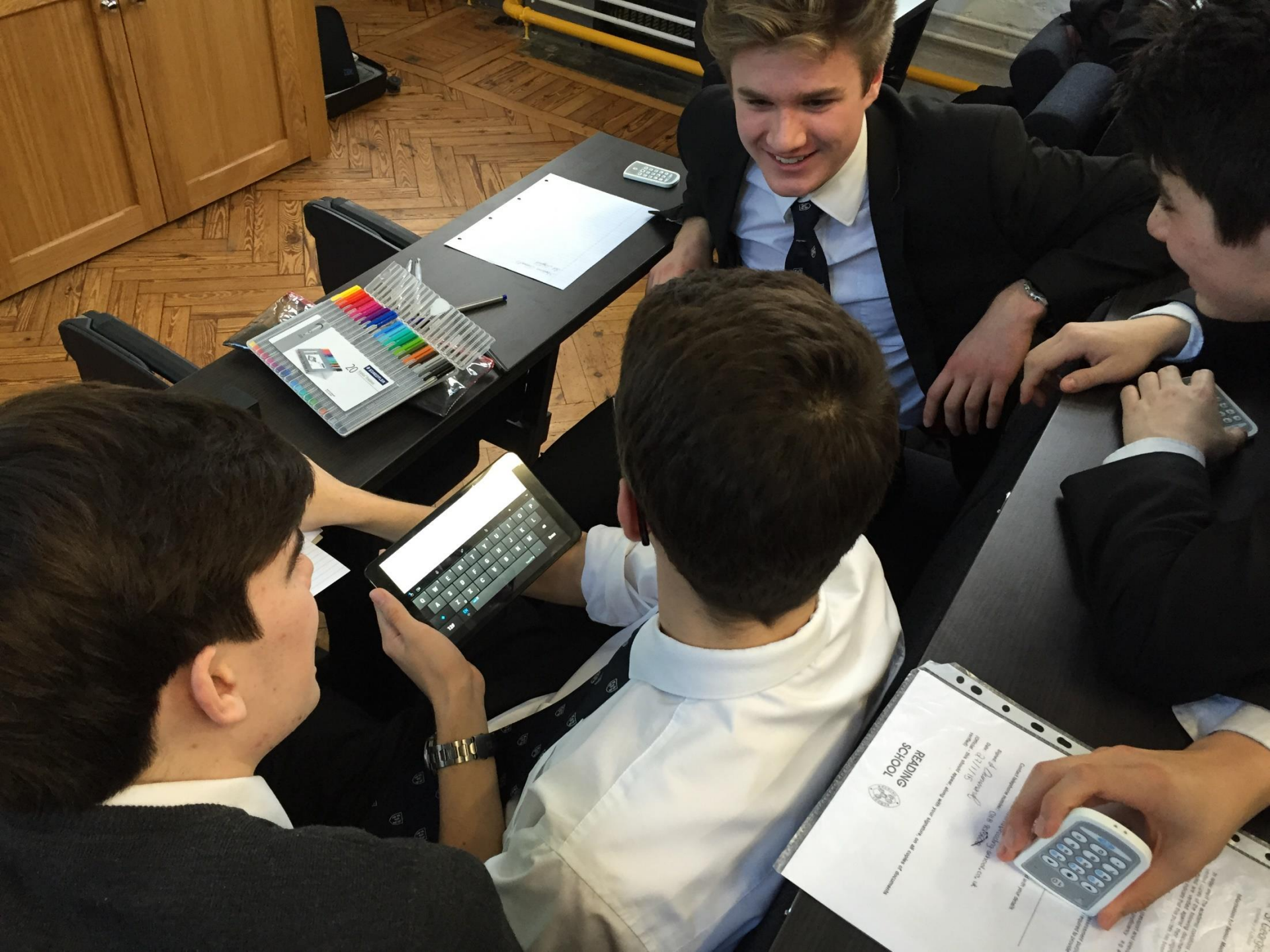
王緒溢 博士

AClass Learning Technology Inc.

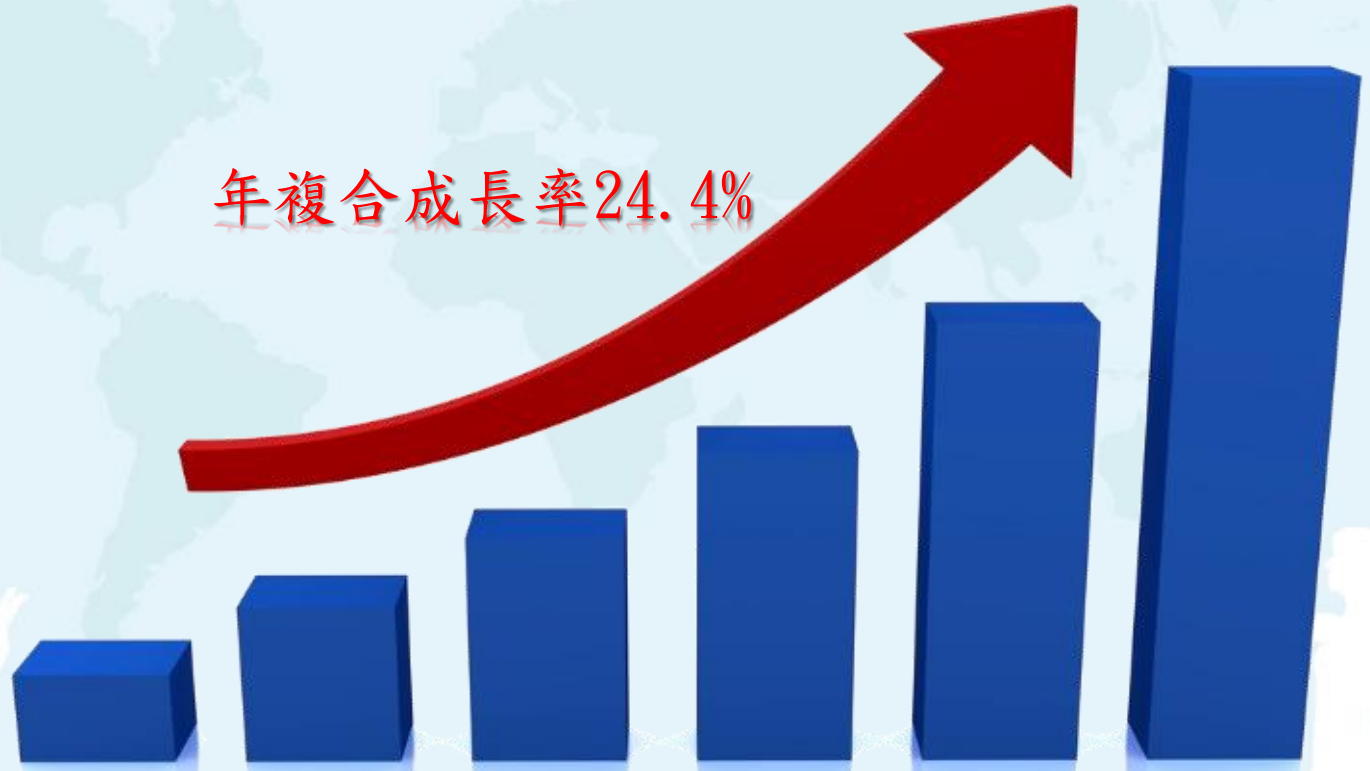
學生的學習成果來自於他們的動手做和思考，而且只來自於他們的動手做和思考。教師只能藉由影響學生的做中學來提高他們的學習。



Dr. Herbert Simon


READING
SCHOOL

智慧教育市場規模



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來源：RESEARCH AND MARKET

從案例中學習經驗

AClass Learning Technology Inc.

“電子書包”首發

一生一筆電(OLPC)

Goodbye One Laptop per Child

11
MAR
2014

Here is a question for you: 8 years on, would you recommend anyone start a new deployment with XO-1 laptops?

With the hardware now long past its life expectancy, spare parts hard to find, and zero support from the One Laptop Per Child organization, its time to face reality. The XO-1 laptop is history. Sadly, so is Sugar. Once the flagship of OLPC's creativity in redrawing the human-computer interaction, few are coding for it and new XO variants are mostly Android/Gnome+Fedora dual boots.

Finally, OLPC Boston is completely gone. No staff, no consultants, not even a physical office. Nicholas Negroponte long ago moved onto the global literacy X-Prize project.

That's not to say the OLPC idea is dead. OLPC Miami is still servicing the major deployments in Uruguay, Peru, and Rwanda, and has licensed commercial rights to the brand to Sakar/Vivitar, which introduced an XO Tablet for American children.

Yet let us be honest with ourselves. The great excitement, energy, and enthusiasm that brought us together is gone. OLPC is dead. In its place, is the reality that technology is a force in education, and we all need to be vigilant about when, where, and how it's used.

So take a moment to mourn the loss of OLPC, and then join us for the larger Educational Technology Debate on where *all* ICT4Edu efforts are going.

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土耳其FATiH

TODAY'S ZAMAN

HOME NEWS BUSINESS INTERVIEWS FEATURES ARTS & CULTURE TRAVEL COLUMNISTS OP-ED EXPAT ZONE

FATİH project is a failure despite promise to revolutionize public education

Then prime minister Recep Tayyip Erdoğan is seen distributing tablet PCs to the students at a high school in the capital city of Ankara.(Photo: Sunday's Zaman)

May 23, 2015, Saturday/ 17:00:00 / ISTANBUL

Share Tweet Share Print A A

Ali Osman Öztürk, an eighth-grader, has like many others, still not received the tablet PC that was to be given to all students as part of the Movement to Increase Opportunities and Technology (FATİH) project launched by the Justice and Development Party (AK Party) government in 2012.

When he first heard about the project, he was a sixth-grader and he was very excited. An interactive smart board was installed at his school, but despite three years having elapsed, promises have still not been kept. As time went on, Ali Osman's hopes turned into total disappointment.

"Now, I am about to finish middle school. My friends and I have not received our tablets yet. I hope we will have them in high school, but students at most of the high schools in my area have not received them, either," he told Sunday's Zaman.

Millions of students have still not still received the tablet PCs that were to be provided by the government to all students as a part of a bid to integrate state-of-the-art computer technology

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泰國一生一平板(OTPC)

深圳電子書包

救救孩子！请立即停止推广任何名目的电子书包！

收藏人：叶老师YP　+关注　与TA对话

2015-09-29 | 阅：5 转：0 | 来源 A | 分享　分享到微信　转藏到我的图书馆

（孩子正在用ipad上课，作为家长，我们很担忧！）

记得在2013年，福田区开始试点推行电子书包，遭到很多人的反对。最后市教育局出来收场，说那只是试点，并不是全面推广。

然而电子书包并未消失，似乎改头换面了：龙岗区给换了个名目，叫智慧校园，又在大力推广。前段时间，前海的港湾小学，也要开始推广了……

作为深圳的一群关心教育事业的中小学生家长，我们看在眼里，疼在心里！我们有话说！

一、大张旗鼓推动电子书包，获益的是商家而不是学生！

网友@保护儿童　发帖称：在电子书包打着"教育信息化"、"教育改革"的旗号大张旗鼓推行的时候，我们不难看到背后是诸多商业机构在做推手。

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美國洛杉磯

Visual Browse

LA Times

SEARCH

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CALIFORNIA

SPORTS

ENTERTAINMENT

BUSINESS

OPINION

NATION

WORLD

L.A. school district demands iPad refund from Apple

Roosevelt High School students check out t
back and slowed down. (Irfan Khan / Los An

By HOWARD BLUME
contact the reporter

Education

LAUSD ditching Pearson iPad program software, demanding multimillion dollar refund

by Annie Gilbertson April 16 2015

AUDIO FROM THIS STORY

4:32 Listen

SHARE

270 1461

Los Angeles Unified told Apple Inc. this week that it will not spend another dollar on the Pearson software installed on its iPads and is seeking a multimillion-dollar refund from the technology giant.

Los Angeles Unified may be headed toward a show down with Apple Inc. over the software installed for a controversial iPads program.
FLICKINGERBRAD VIA FLICKR

If an agreement cannot be reached, the nation's second-largest school district could take Apple to court.

"While Apple and Pearson promised a state-of-the-art technological solution for ITI implementation, they have yet to deliver it," David Holmquist, the school district's attorney, wrote in a letter to Apple's general counsel. The ITI, or Instructional Technology Initiative,

MORE FROM THIS CATEGORY
Education SEE ALL

June 09 2015
Gov't plans to erase student debt for Corinthian students

「為什麼人們會覺得單單只把電腦放到孩子的面前，就可以帶來教育的改變？」

Lan Neugent
Executive Director of SETDA

對教育科技的期待

Published Online: June 10, 2015
Published in Print: June 11, 2015, as Why Ed Tech Is Not Transforming Teaching

Why Ed Tech Is Not Transforming How Teachers Teach

Students in a classroom at Mount Pleasant High School in Wilmington, Del., listen to a social studies lecture from their teacher.
—Charles Mostoller for Education Week

Student-centered, technology-driven instruction remains elusive for most

By Benjamin Herold

Wilmington, Del.

Public schools now provide at least one computer for every five students. They spend more than $3 billion per year on digital content. And nearly three-fourths of high school students now say they regularly use a smartphone or tablet in the classroom.

But a mountain of evidence indicates that teachers have been painfully slow to transform the ways they teach, despite that massive influx of new technology into their classrooms. The student-centered, hands-on, personalized instruction envisioned by ed-tech proponents remains the exception to the rule.

"The introduction of computers into schools was supposed to improve academic achievement and alter how teachers taught," said Stanford University education professor Larry Cuban. "Neither has occurred."

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聯合國經濟合作發展組織報告

New approach needed to deliver on technology's potential in schools

15/09/2015 - Schools have yet to take advantage of the potential of technology in the classroom to tackle the digital divide and give every student the skills they need in today's connected world, according to the first OECD PISA assessment of digital skills.

"Students, Computers and Learning: Making The Connection" says that even countries which have invested heavily in information and communication technologies (ICT) for education have seen no noticeable improvement in their performances in PISA results for reading, mathematics or science.

Ensuring that every child reaches a baseline level of proficiency in reading and mathematics will do more to create equal opportunities in a digital world than solely expanding or subsidising access to high-tech devices and services, says the OECD.

In 2012, 96% of 15-year-old students in OECD countries reported having a computer at home, but only 72% reported using one at school. Overall, students who use computers moderately at school tend to have somewhat better learning outcomes than students who use computers rarely. But students who use computers very frequently at school do much worse, even after accounting for social background and student demographics.

"School systems need to find more effective ways to integrate | technology into teaching and learning to provide educators with learning environments that support 21st century pedagogies and provide children with the 21st century skills they need to succeed in tomorrow's world," said Andreas Schleicher, OECD Director for Education and Skills. "Technology is the only way to dramatically expand access to knowledge. To deliver on the promises technology holds, countries need to invest more effectively and ensure that teachers are at the forefront of designing and implementing this change."

The report found that the gap between advantaged and disadvantaged students in digital reading was very similar to the differences in performance in the traditional PISA reading test, despite the vast majority of students using computers whatever their background. This suggests that to reduce inequalities in digital skills, countries need to improve equity in education first.

To assess their digital skills, the test required students in 31 countries and economies* to use a keyboard and mouse to navigate texts by using tools like hyperlinks, browser button or scrolling, in order to access information, as well as make a chart from data or use on-screen calculators.

Top performers were Singapore, Korea, Hong Kong-China, Japan, Canada and Shanghai-China. This reflects closely their performances in the 2012 print-reading test, suggesting that many of the skills essential for online navigation can also be taught and learned using standard, analogue reading techniques.

But the report reveals striking differences. Students in Korea and Singapore perform significantly better online than students in other countries with similar performance in print reading, as do students in Australia, Canada, Hong Kong-China, Japan and the United States. In contrast, students in Poland and Shanghai-China – both strong performers in print reading – do less well transferring their print-reading skills to an online environment.

「學校系統需要找出更多有效的方法，來將科技整合到教學與學習中，以提供教學者一個支持21世紀教學法，以及讓學生習得21世紀所需技能的學習環境，使他們能在未來的世界中成功。」

Andreas Schleicher
OECD Director for Education and Skills

21世紀的教育

AClass Learning Technology Inc.

學生角色的轉變

Shift from Students as Consumers to Creators

Mid-Term Impact Trend: Driving Ed Tech adoption in K-12 education for three to five years

A shift is taking place in schools all over the world as learners are exploring subject matter through the act of creation rather than the consumption of content. A vast array of digital tools are available to support this transformation in K-12 education; indeed, the growing accessibility of mobile technologies is giving rise to a whole new level of comfort with producing media and prototypes. This may be due in part to the rising popularity of social media apps, such as SnapChat, Instagram, and Vine, in which people tell and tag their informal stories through photos and video snippets. Many educators believe that honing these skills in learners can lead to deeply engaging learning experiences in which students become the authorities on subjects through investigation, storytelling, and production. Other components of this trend include game development and making, and access to programming instruction that nurtures learners as inventors and entrepreneurs. As students become more active producers and publishers of educational resources, intellectual property issues will become a key component of K-12 curricula.

Overview

student-generated tutorials designed to teach other middle school students. Students use Camtasia Studio to create their mathcasts, which can then be rated and commented on by other users.[72] All videos are shared freely under a Creative Commons license. Additionally, teachers are sharing their instructional videos via TeacherTube, a free online community that provides a safe and dedicated place for educational content. With over 1.5 million users, TeacherTube community members curate content based on appropriateness, subject, and learning standards.[73]

In recent years, games and game development have proven to be a viable means of engaging learners in creation and play at the same time. The popularity of Minecraft, often described as a digital sandbox, is rooted in the simplicity of its premise — players mine resources in order to erect structures in a virtual world. Many schools have already integrated MinecraftEdu into their classrooms, using the interactivity of the game to facilitate experiential learning.[74] Game development in classrooms is also becoming more commonplace as resources such as Scratch, Gamemaker, and Gamestar Mechanic are helping teachers engage learners in design thinking, systems thinking, and project-based learning.[75] A recent survey of 107 game developers

你在課堂上教多少位學生？

1. 全部
2. 一半
3. 三分之一
4. 我無所謂

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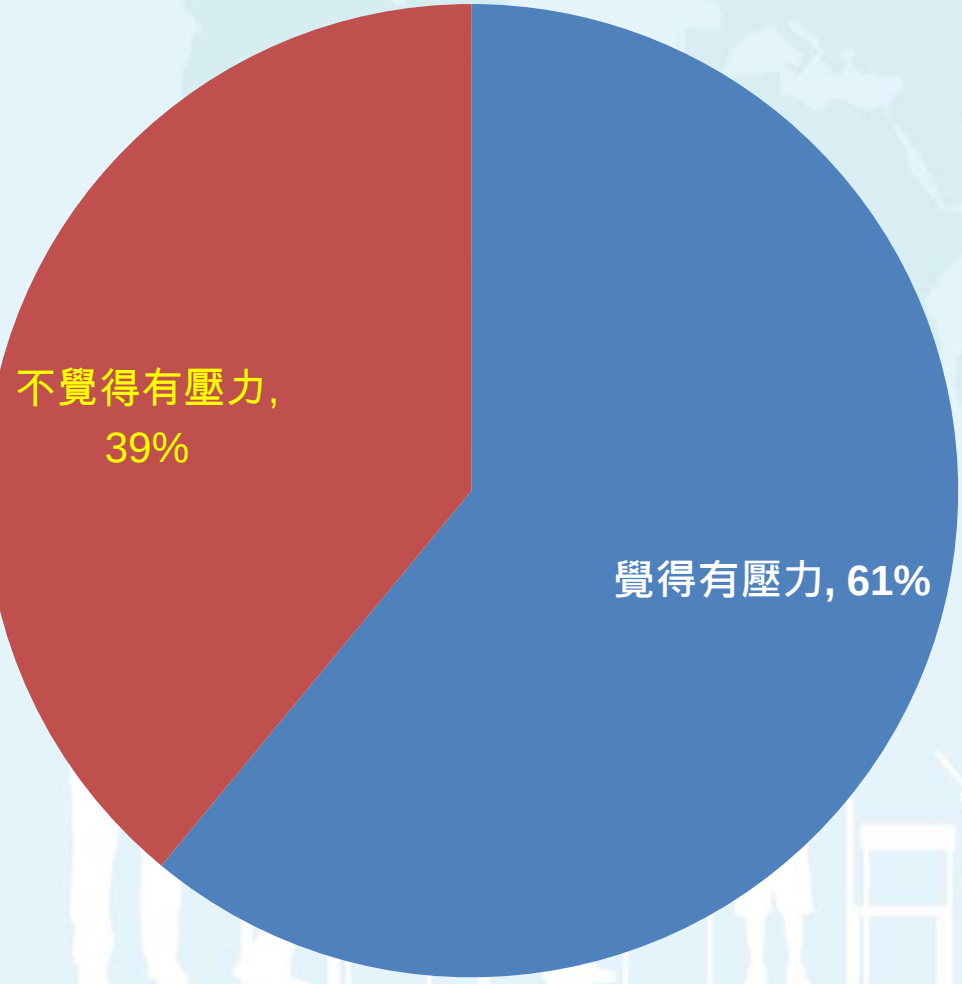
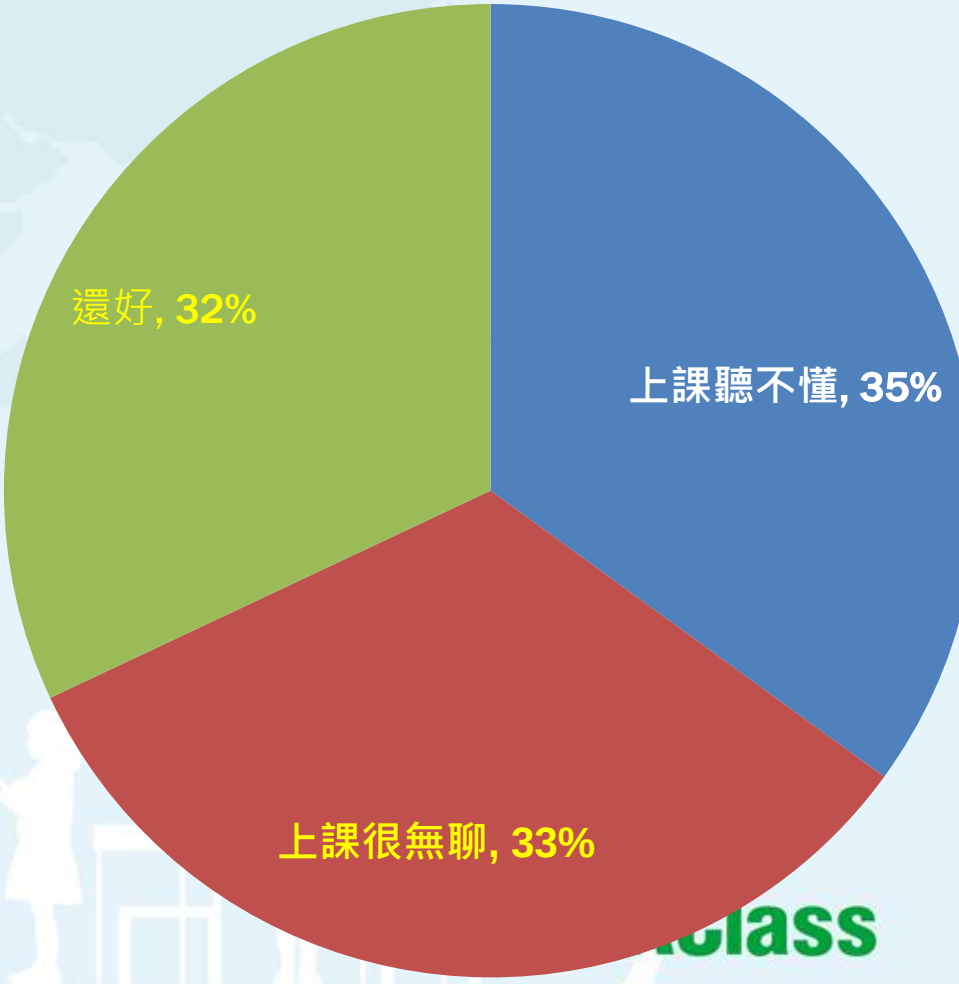
事實跟你想的一樣嗎？

— 親子天下雜誌





智慧課堂的成功要素

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一模多用

團隊合作學習(TBL)

一對一(1:1)

大數據

遠距教學

AClass Learning Technology Inc.

一模多用

現代系統學校(MSS), 安曼

團隊合作學習

AClass

學生反饋器 + 小組平板

MSS博士校長的觀察

總經理兼校長
Dr. Mustafa Afouri

「學生在參與IRS活動時的反應真是令人感到驚奇，他們在很短的時間內就非常熟悉IRS的操作，老師們則對於IRS能夠幫助他們備課、即時施測，以及團體競賽感到印象深刻。」

一模多用

佛科院附屬學校, 廣東

一對一(1:1)

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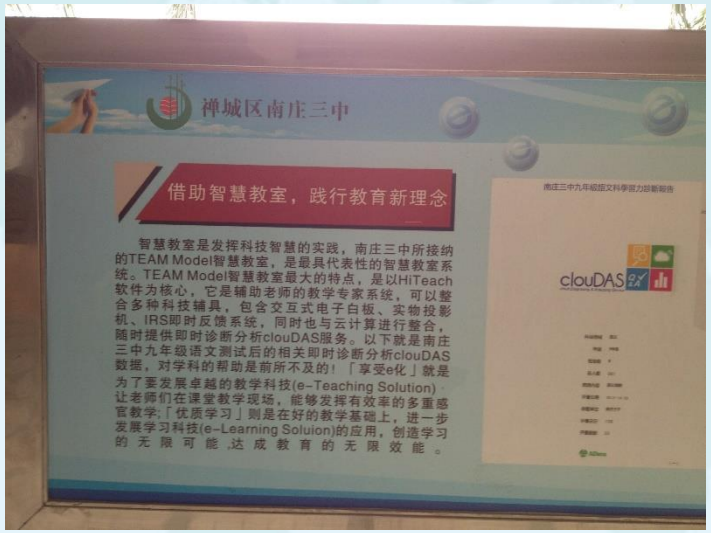
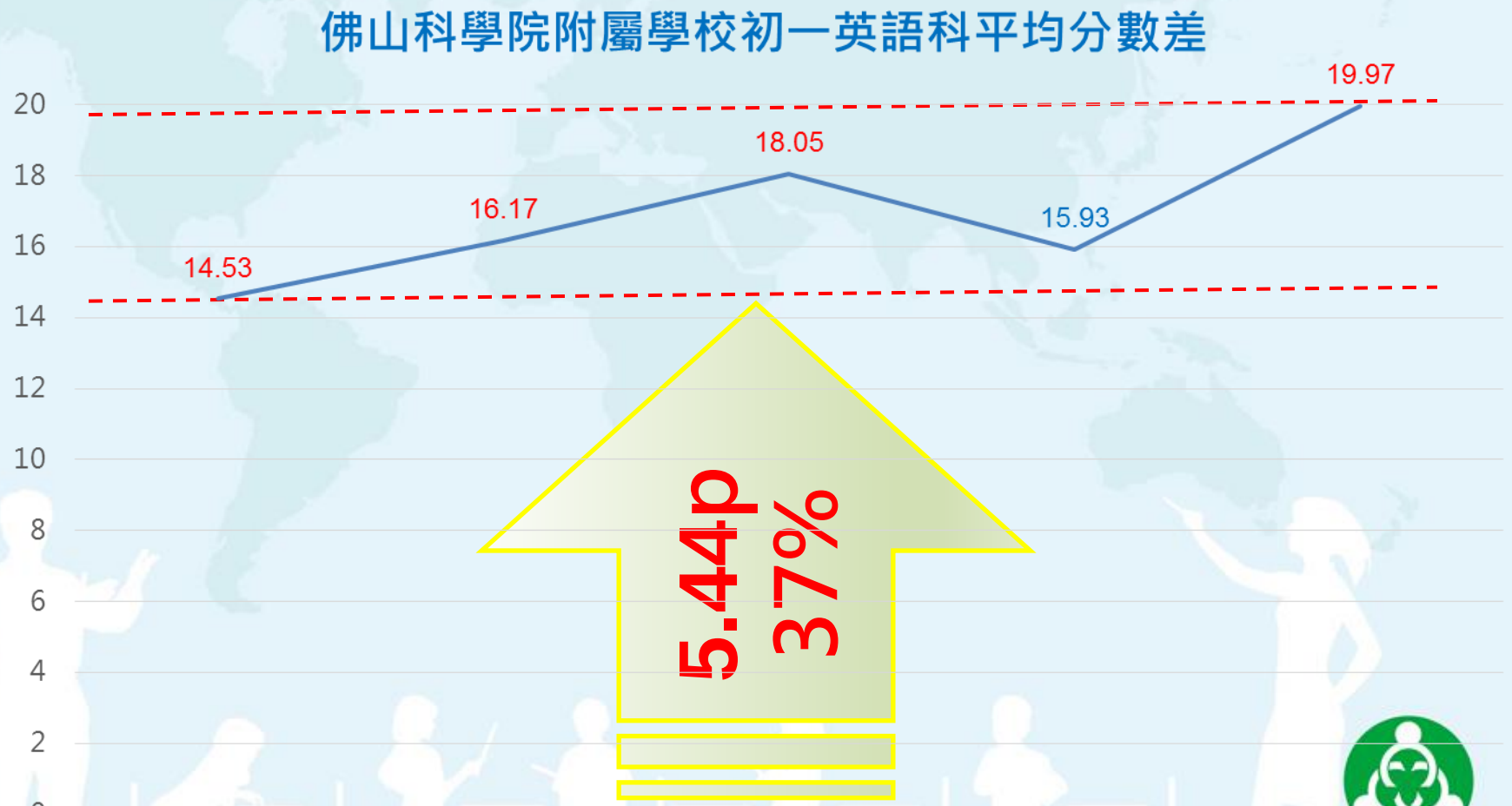
學生平板 + 學校私有教育雲



學校成就

- 全校30班都是TEAM Model智慧教室，其中10間為電子書包智慧教室，學校配置IES教育雲
- 2015全國教育信息化創新應用先鋒學校
  - 2013, 2014: 全國新技術支持下的個性化學習教學大賽一等獎
  - 2014: 6個全國電子白板教學大賽一等獎

學習成就提升



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佛科院附屬學校電子書包心法

三看點十招式

AClass

一模多用

歷下區, 山東

大數據

AClass

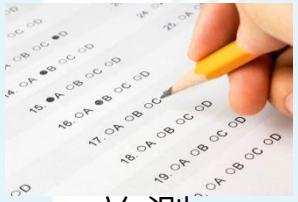
閱卷流程

IES
補救學習雲平台

ADAS

上傳

試卷掃描與批改



施測

School

下載clouDAS診斷報告

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關於數據

	7年級			8年級			9年級	
校數	19			18			18	
班級數	143			138			135	
學生數	7102			7005			6791	
科目	地理	生物	英語	生物	地理	英語	化學	英語
試題數	36	57	90	32	39	90	21	90
數據量	255,672	404,814	639,180	224,160	273,195	630,450	142,611	611,190
圖片量	120,734	163,346	42,612	56,040	105,075	42,030	74,701	40,746

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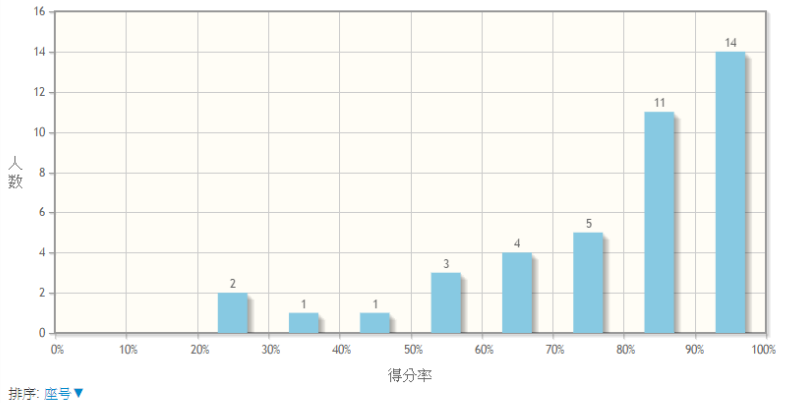
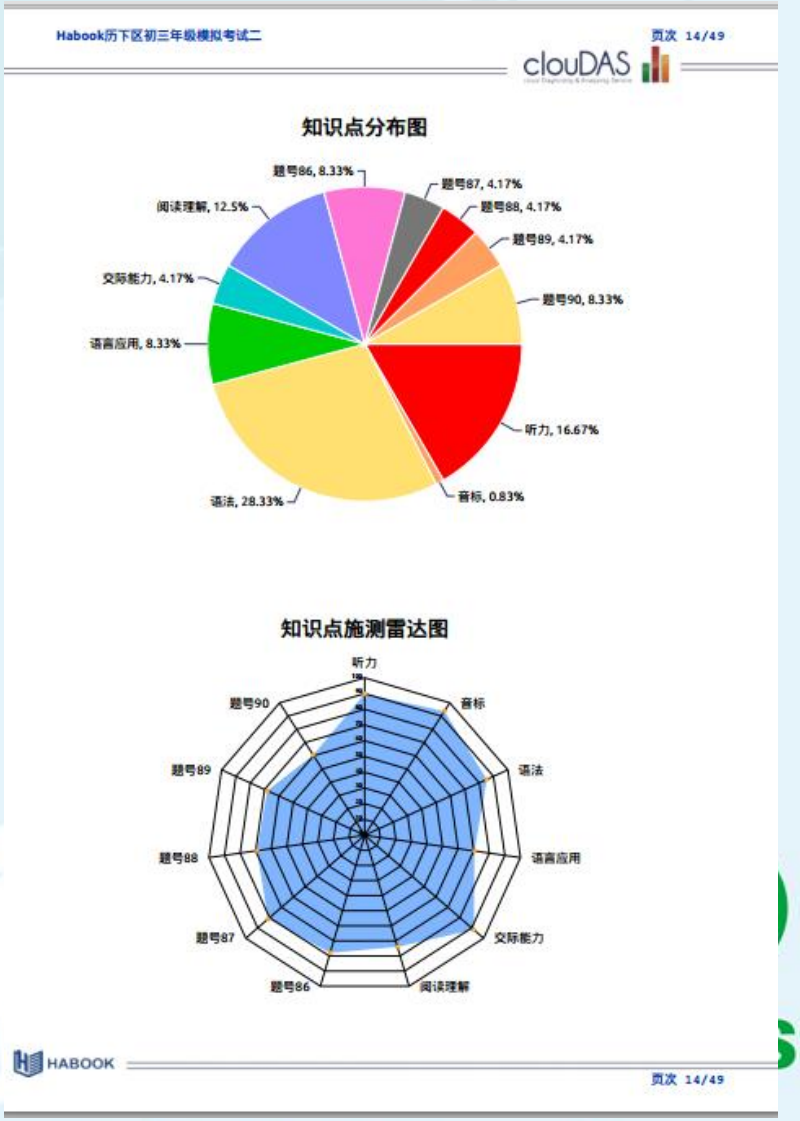
產生的診斷與分析報告

NO	学校	结束时间	平均	标准偏差	答题正确率
1	济南五中	2015-05-29	95.4	22.5	79.9%
2	济南八中	2015-05-29	73.8	23.0	64.8%
3	泉城中学	2015-05-29	77.9	27.4	68.2%
4	甸柳一中	2015-05-29	94.4	22.0	80.6%
5	燕山中学	2015-05-29	92.8	24.0	78.8%
6	东方双语	2015-05-29	98.1	19.2	82.9%
7	山师二附中	2015-05-29	94.2	22.5	80.1%
8	山大一附中	2015-05-29	104.8	16.0	87.5%
9	山大二附中	2015-05-29	104.2	15.3	87.5%
10	历元学校	2015-05-29	97.0	16.4	82.4%
11	砚泉学校	2015-05-29	85.4	22.5	73.8%
12	燕新中学	2015-05-29	71.2	28.1	62.4%
13	锦屏学校	2015-05-29	77.0	28.8	66.5%



排序: 座号▼

座号	姓名	分数	名次	答对题数	答错题数	未作答数	施测时间	诊断报表
1	杨鲁城	111	8	81	9	0	2015-05-25 00:00	view
2	王添沂	101	17	74	16	0	2015-05-25 00:00	view



學生透過APP連結診斷報告

AClass ONE 智慧學伴

AClass

O2O教育模式

IES
雲端補救學習平台

AClass ONE
智慧學伴

2

TEAM Model智慧教室

AClass

一模多用

泰國

遠距智慧教室

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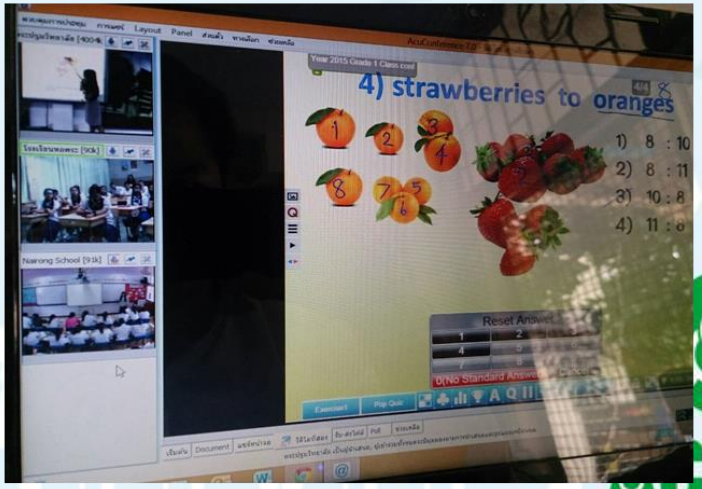
泰國的三地同上數學課

Main Classroom in Phrapathom Wittayalai

Distance Classroom in MOE

Distance Classroom in Horpra, Chiangmai



Distance Smarter Classroom solution

遠距學生一同答題競賽

Students from Bangkok, Nakhon Pathom, and Chiang Mai joined the same interactive distance lesson together!

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智慧教育的成功之道

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一步一步穩步向前

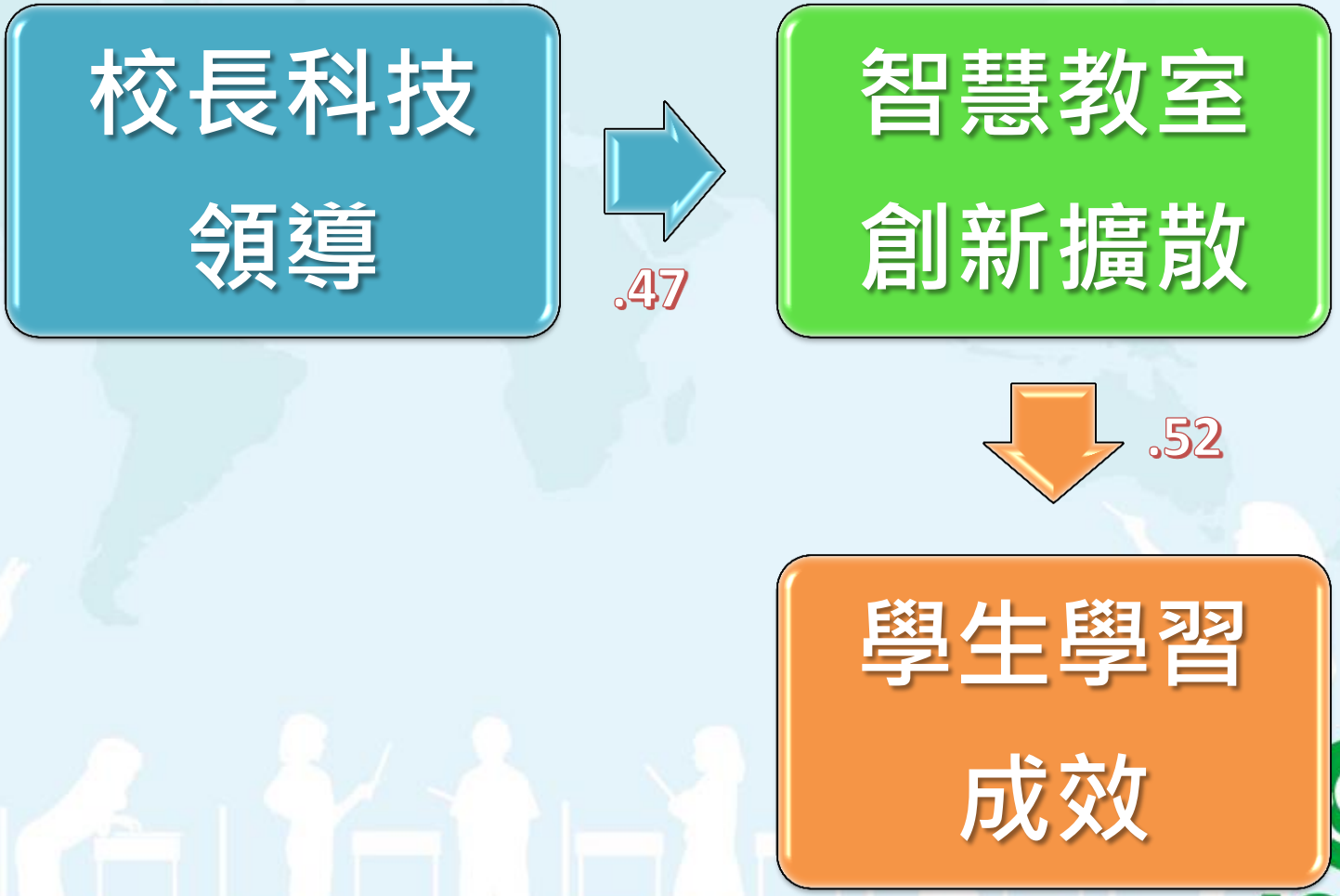
從簡單的開始 ⇦ 講述式教學法 (一生一IRS)

教學法轉變 ⇦ 團隊合作學習TBL (小組平板)

擴散 ⇦ 建置學校私有教育雲平台

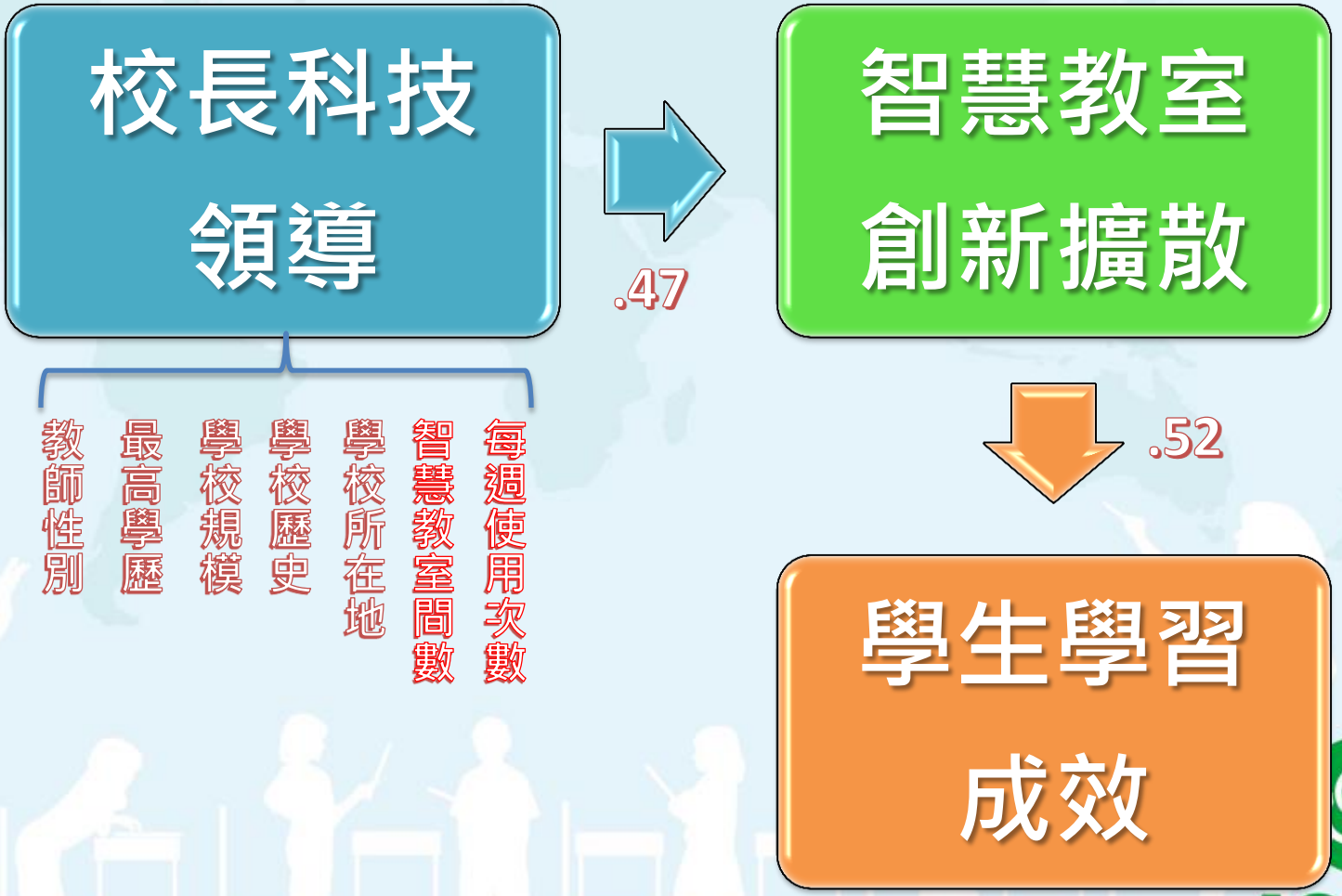
典範轉移 ⇦ 學生中心學習 (1:1)

校長科技領導、智慧教室創新擴散與學生學習成效關係



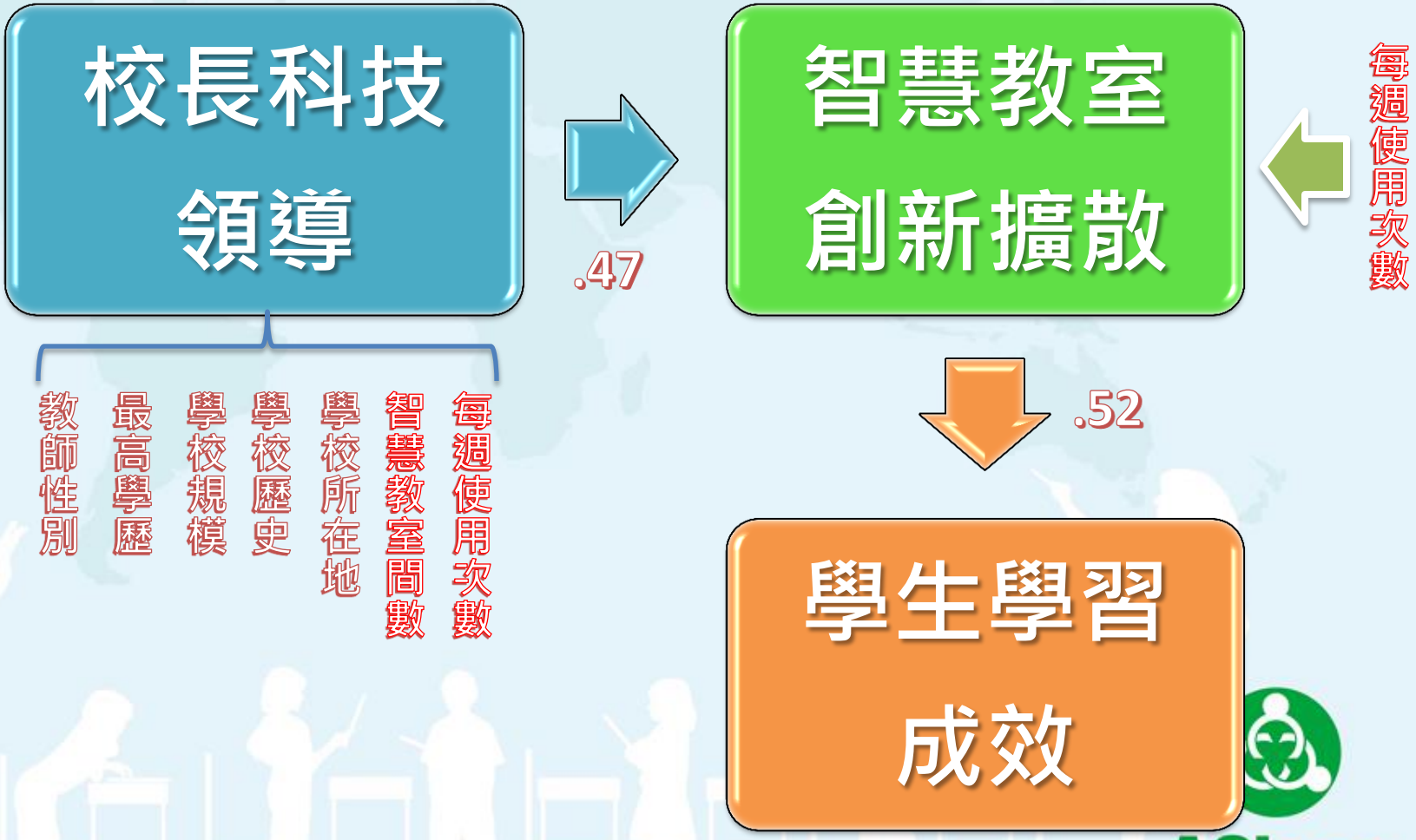
來源: 政治大學教育研究所

校長科技領導、智慧教室創新擴散與學生學習成效關係



來源: 政治大學教育研究所

校長科技領導、智慧教室創新擴散與學生學習成效關係



來源: 政治大學教育研究所

科技若跟老師的教學才能加以結合，有機會帶來教育界的革命。我希望各位都能參與其中，因為這不只對我們意義重大，對未來的孩子來說更是重要。

Sir. Ken Robinson

感謝聆聽！

AClass