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PEKING UNIVERSITY



eLearning Forum Asia 2012

24-27 April 2012 @ Peking University, China

Next Generation Learning

Visions • Innovations • Possibilities

Cloud Learning Environment Created as a Result of OpenCourseWare Initiatives

開放式課程運動形成的學習雲

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Content 內容



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○ The emerging need for higher educational OpenCourseWare (OCW) in Chinese

對華文高教開放式課程的殷切需求

○ OCW movement in Taiwan

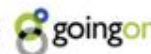
台灣的開放式課程運動

○ To form a Chinese open education cloud

如何形成華文開放式教育雲

○ And some other non-trivial things

其他一些不算小的議題



Where Does “OCW” Come From

誰開始了「開放式課程」



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- Fall 1999, Faculty Committee appointed
- Fall 2000, “OpenCourseWare” concept recommended to MIT President
- April 2001, MIT OCW announced in The New York Times
- September 2002, MIT OCW pilot site open to the public

"OpenCourseWare looks counterintuitive in a market-driven world. But it really is consistent with what I believe is the best about MIT. It is innovative. It expresses our belief in the way education can be advanced — by constantly widening access to information and by inspiring others to participate."

— Charles M. Vest,
President of MIT



What is Open CourseWare (OCW)

甚麼是開放式課程



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Doing OCW

Affiliated w/ OCW

OCW Member

**Open CourseWare –
A free and open digital
publication of high-quality
educational materials, organized
as courses.**

Source : OCWC John P. Dehlin

假如有一門課程的內容以數位形式公布在網路上免費提供大眾使用，這就是一門開放式課程

“A rose by any other name would smell as sweet.” -- William Shakespeare





Countries with Most Hits (*outside of the United States*) September 2004

Country		Web Hits
1	India	2,272,575
2	Taiwan	1,718,642
3	Canada	1,458,066
4	China	1,409,646
5	South Korea	902,657
6	United Kingdom	779,557
7	Germany	670,591
8	Brazil	569,091
9	Italy	540,328
10	Spain	506,308

Country		Web Hits
11	Japan	473,615
12	Mexico	440,603
13	France	380,520
14	Singapore	353,435
15	Australia	336,635
16	Netherlands	297,786
17	Turkey	273,482
18	Malaysia	262,412
19	Philippines	242,277
20	Greece	227,973

Source : Anne H. Margulies, MIT OpenCourseWare

Top Country/Languages in Internet Usage

使用網路的主要國家及語言



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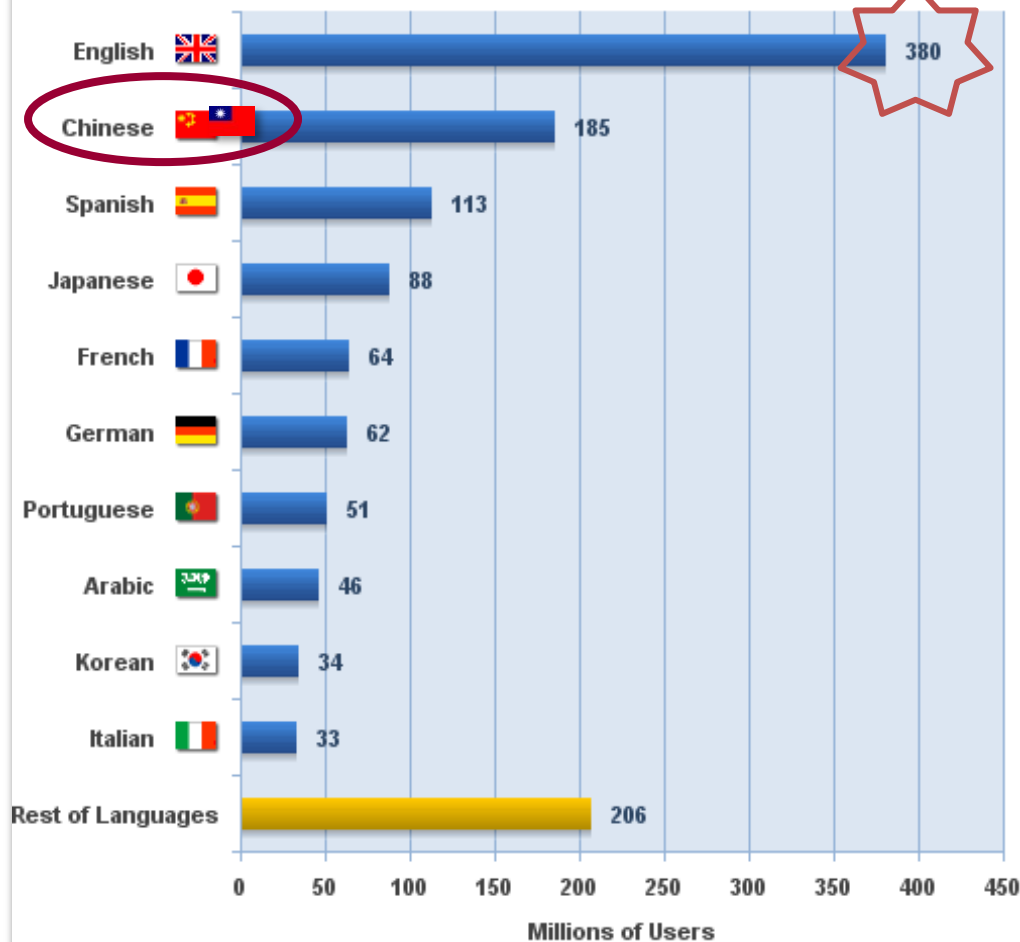
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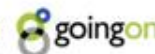
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Top 10 Internet Languages - November 2007



Source: www.internetworldstats.com

Copyright © 2008, Miniwatts Marketing Group



Growth of Internet Users in Mainland China

快速成長的中國大陸網路人口



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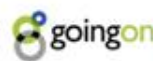
(10,000 people)

(penetration rate)



Source : CNNIC

(Taiwan 2011 : Netizen 16.95 M , penetration rate ~ 76.7% , from TWNIC)



Netizen Penetration in Different Age Groups

中國大陸不同年齡層的網路人口比例



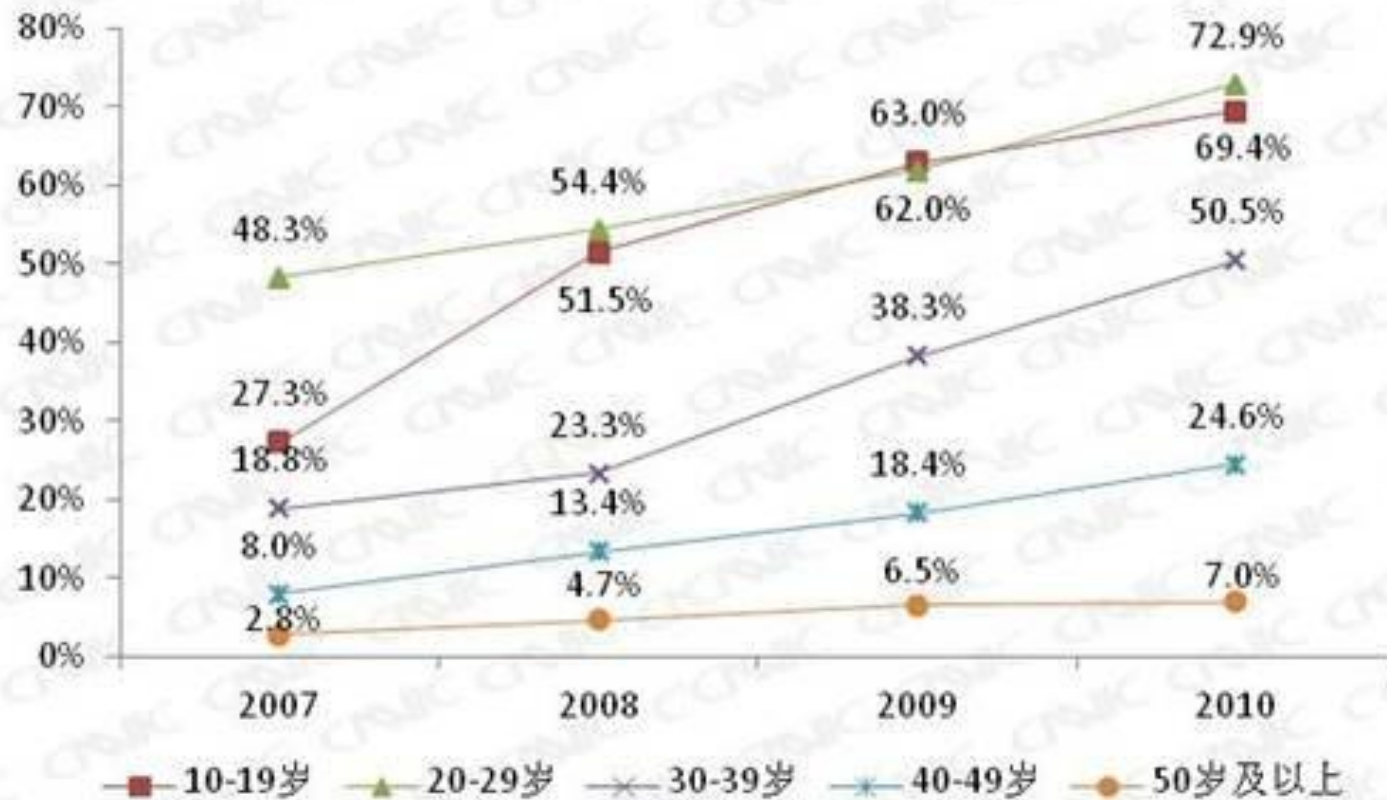
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Source : CNNIC



Netizen Penetration in Different Education Levels

中國大陸不同教育層級的網路人口比例



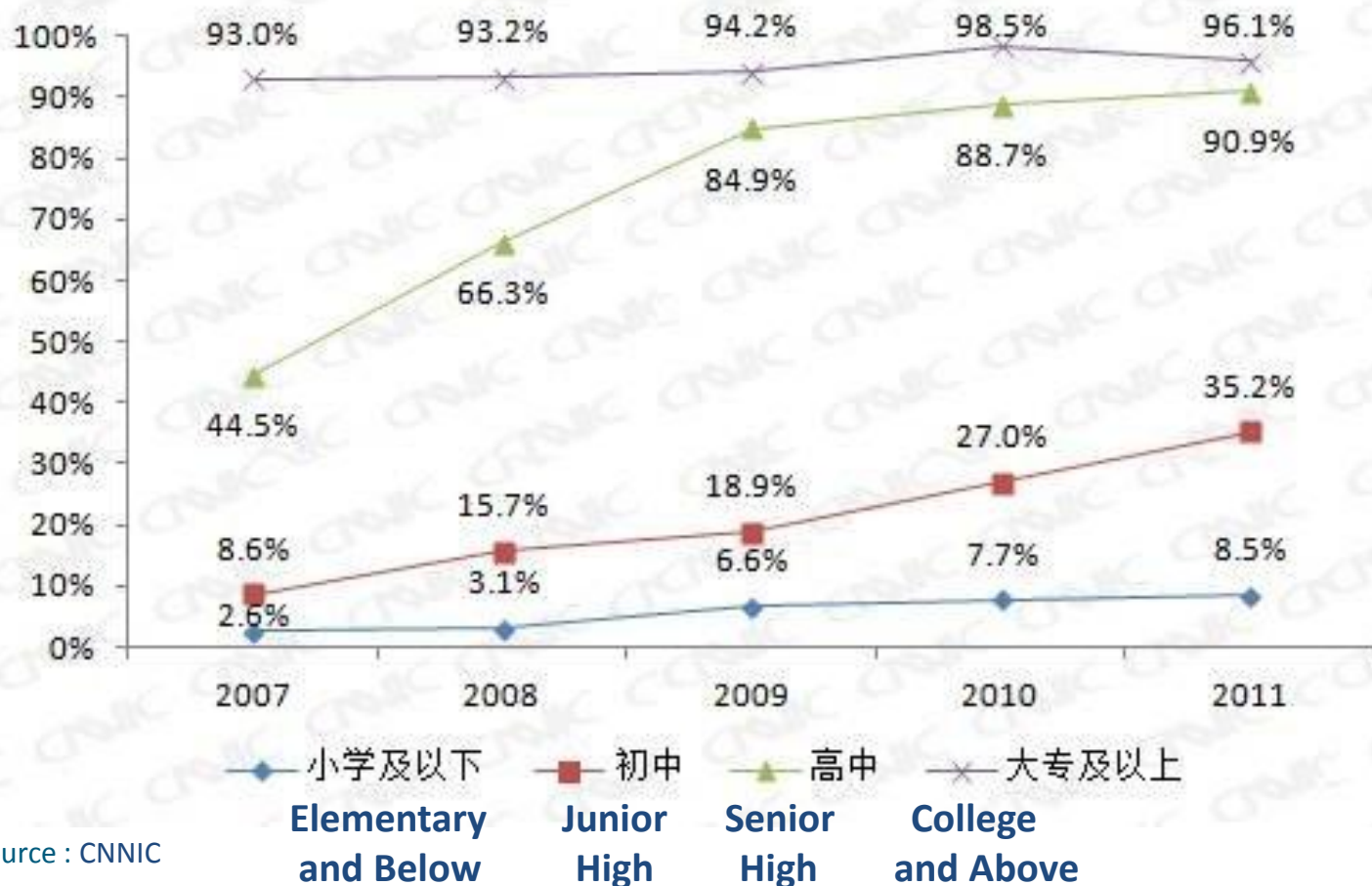
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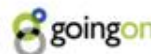
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Source : CNNIC





Year 学 年	Total 学生总数	Growth 增长率%	Grad. 研究生	Growth 增长率%	Undergrad. 本专科学	Growth 增长率%	Adult 成人高教	Growth 增长率%
1998	6.42	\	0.19	\	3.40	\	2.82	\
1999	7.42	15.44	0.23	17.45	4.13	21.2	3.05	8.25
2000	9.39	26.62	0.30	28.94	5.56	34.5	3.53	15.76
2001	12.14	29.22	0.39	30.94	7.19	29.3	4.55	28.93
2002	15.12	24.54	0.50	27.42	9.03	25.6	5.59	22.63
2003	18.47	22.13	0.65	30.00	11.08	22.7	\	\
2004	21.33	15.50	0.81	25.89	13.33	20.2	4.19	\
2005	24.06	12.77	0.97	19.36	15.61	17.1	4.35	3.70
2006	26.96	12.07	1.10	12.89	17.38	11.3	5.24	20.57
2010	31.05		1.54		22.32		5.36	

In millions
百萬人

2008 College Entrance Exam exceeds 10M people(高考人數超過1000萬人)



Mainland China, 中國大陸

- 2003 : An NPO, China Open Resources for Education (CORE), start translating MIT OCW into Chinese
- 2003 : Minister of Education initiated a National Course of Excellence Project (or China Quality OpenCourseWare)
北京教育部開始推動國家精品課程

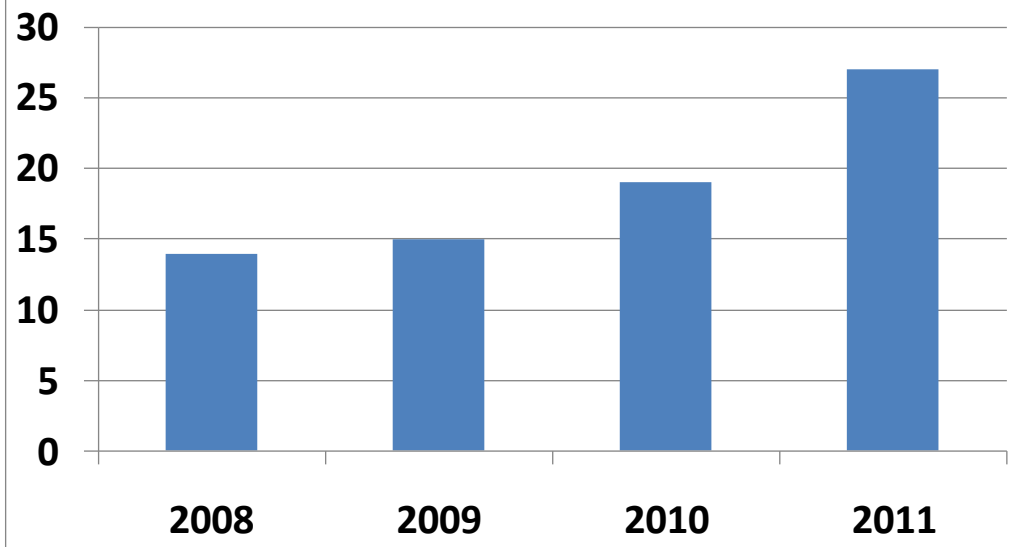
Taiwan, 台灣

- 2004 : An NPO launched Opensource Opencourseware Prototype System (OOPS) website to translate MIT OCW into Chinese
- 2007 : National Chiao Tung U. launched 1st OCW site in Chinese
新竹交通大學成立華文世界第一個大學OCW網站



Initiated in Dec. 24th, 2008.

No. of University Members in TOCWC



<http://tocwc.nctu.edu.tw/>





tool by ammap.com



28 members from Taiwan
(the highest density of OCWC members)
台灣的OCWC會員密度居全球各國之冠

OCWC has
more than 300
members in
more than 46
countries



桃竹苗區：

國立中央大學、國立交通大學、國立清華大學、國立新竹教育大學、中華大學

中區：

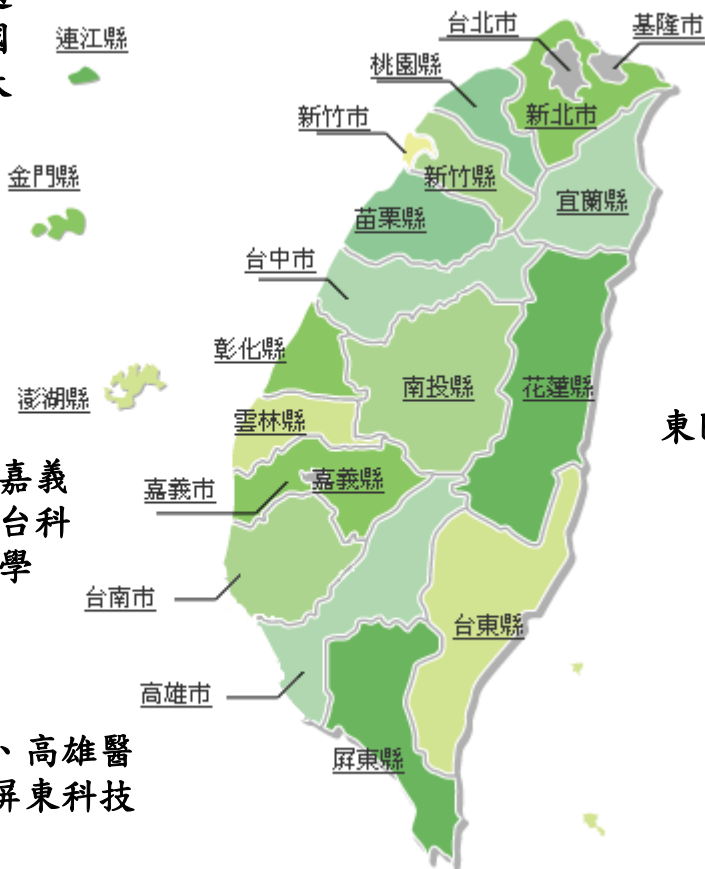
國立中興大學、靜宜大學、弘光科技大學

雲嘉南區：

國立成功大學、國立嘉義大學、長榮大學、南台科技大學、崑山科技大學

高高屏區：

國立中山大學、高雄醫學大學、國立屏東科技大學



大台北區：

東吳大學、輔仁大學、國立政治大學、臺北醫學大學、國立臺灣大學、國立臺灣海洋大學、國立臺灣師範大學、國立臺灣科技大學、國立臺灣藝術大學、國立空中大學

東區：國立東華大學



Three unique characters :

○ 80% of the top universities joined TOCWC

絕大多數的頂尖大學都參與了（12所頂尖大學中只有陽明大學及長庚大學尚未加入）

○ One of the highest percentage (~15%) of universities which joined a National OCW consortium

最高大學參與率(~15%)的國家之一

○ Very high percentage (70%) of full video OCW courses

相當高比例(~75%)的影音課程

Number of OCWs by Taiwan OCWC

台灣開放式課程聯盟提供之課程數



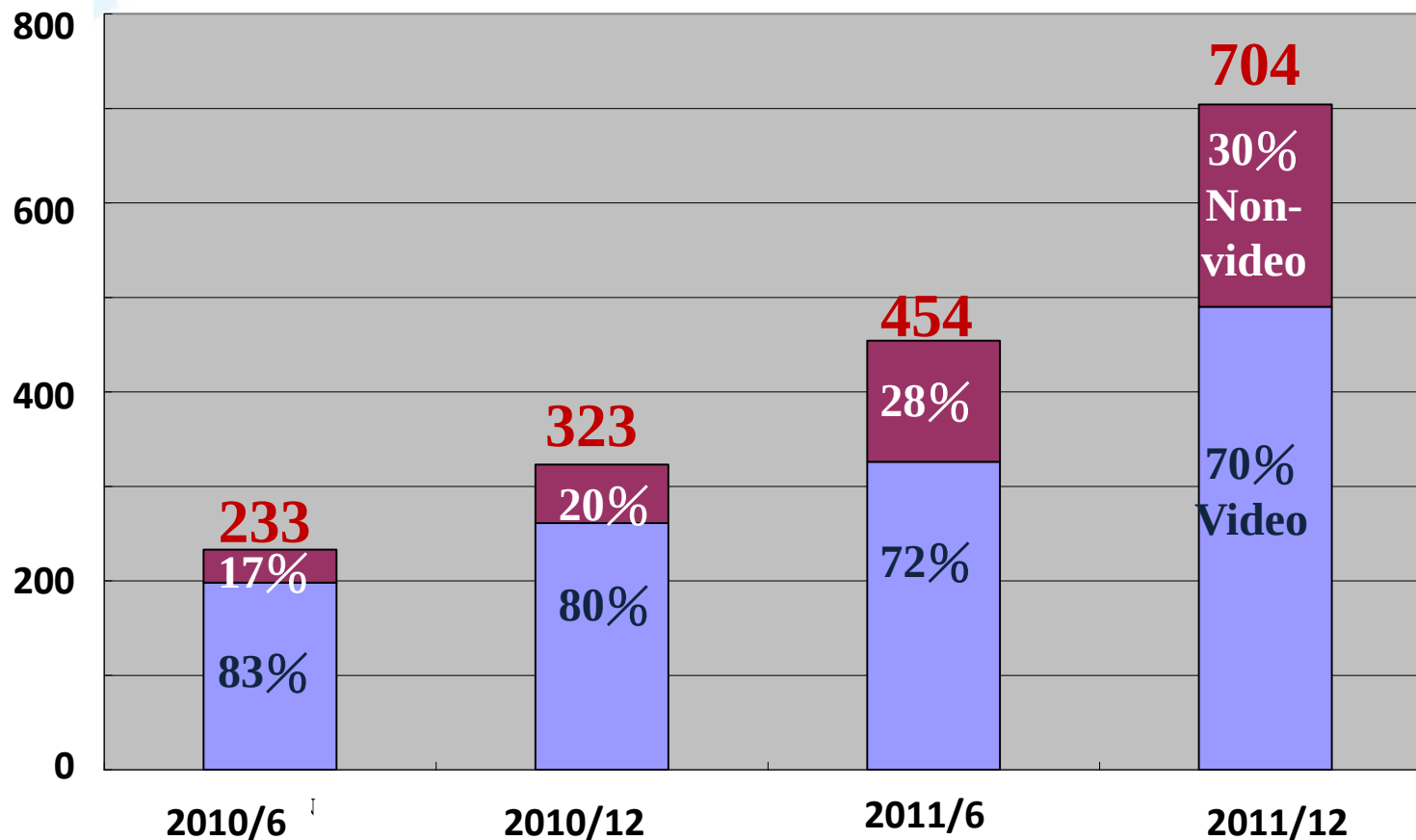
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(To compare, less than 5% of MIT OCWs offer full video content.)

(作為比較，MIT 的2000門公開課中僅有不到100門是全影音課程)



Disciplines of OCWs by Taiwan OCWC

台灣開放式課程聯盟提供之課程領域



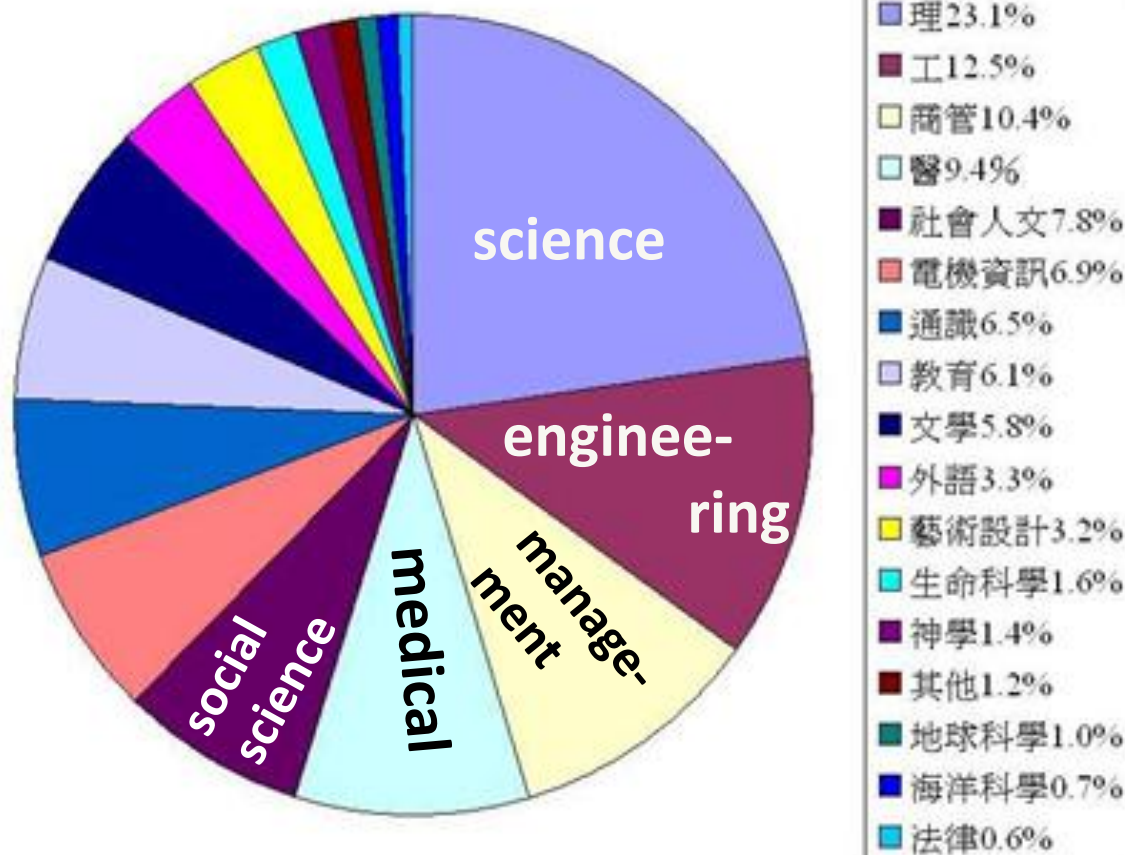
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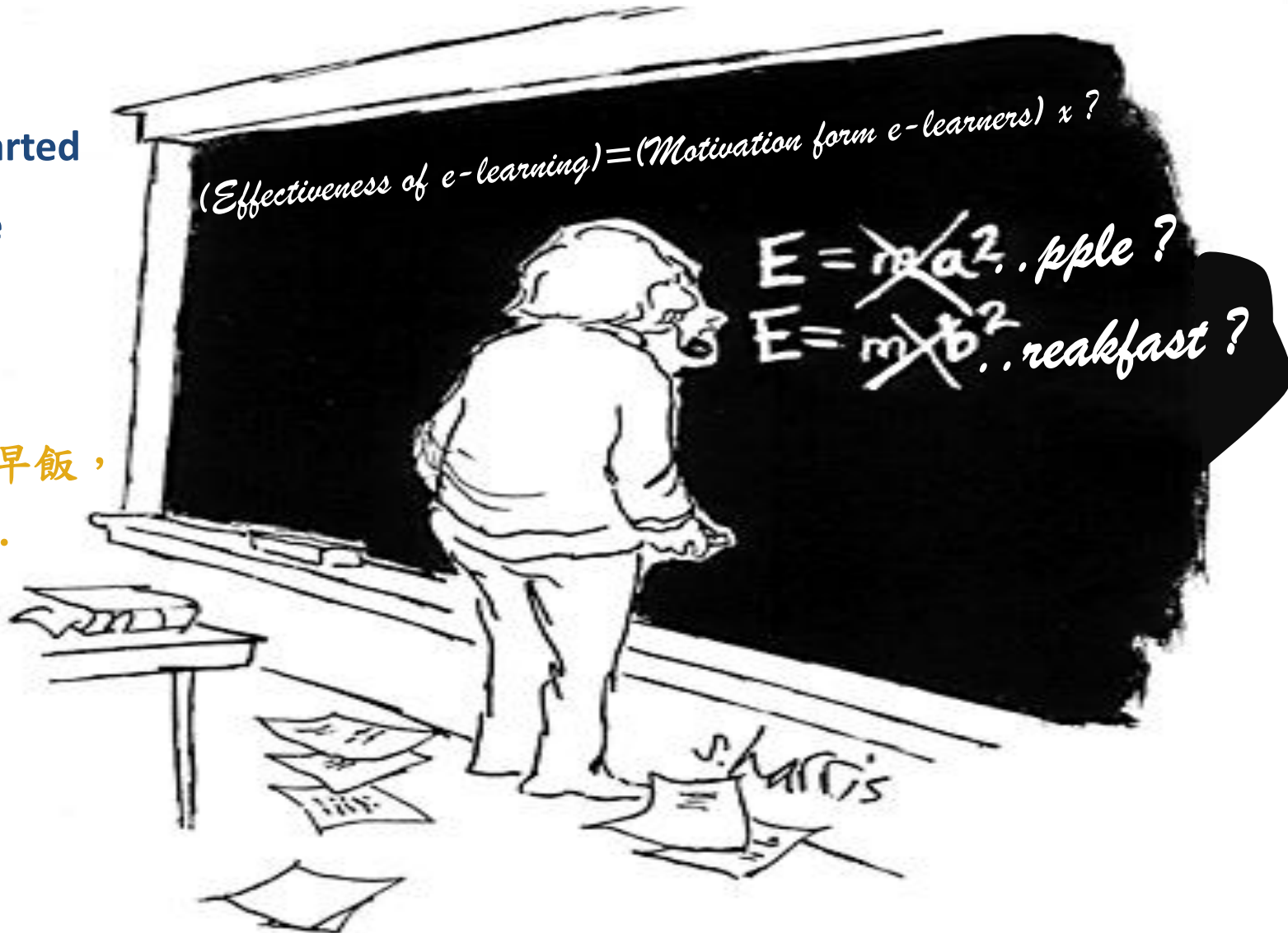


That morning,
Mr. Einstein started
working before
breakfast

那天早上 ...

愛先生還沒吃早飯，

就開始工作 ...





Effectiveness



$$e = m$$

Motivation



2

?





Effectiveness



$$e = mc^2$$

Motivation



Content





NCTU OCW Monthly Visits

To compare,

2004 MIT OCW :

> 500 courses

~ 40,000 visits/M
from China

visits

400,000

350,000

300,000

250,000

200,000

150,000

100,000

50,000

visitors

visits

unique
visitors

80,000

60,000

40,000

20,000

Apr-2008

Oct-2008

Apr-2009

Oct-2009

Apr-2010

Oct-2010

Apr-2011

Oct-2011

Based on Google Analytics , in 2011 :

~ 300,000 visits/M and 50,000 unique visitors/M



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100,000

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0

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visits

unique
visitors

80,000

60,000

40,000

20,000

Apr-2008

Oct-2008

Apr-2009

Oct-2009

Apr-2010

Oct-2010

Apr-2011

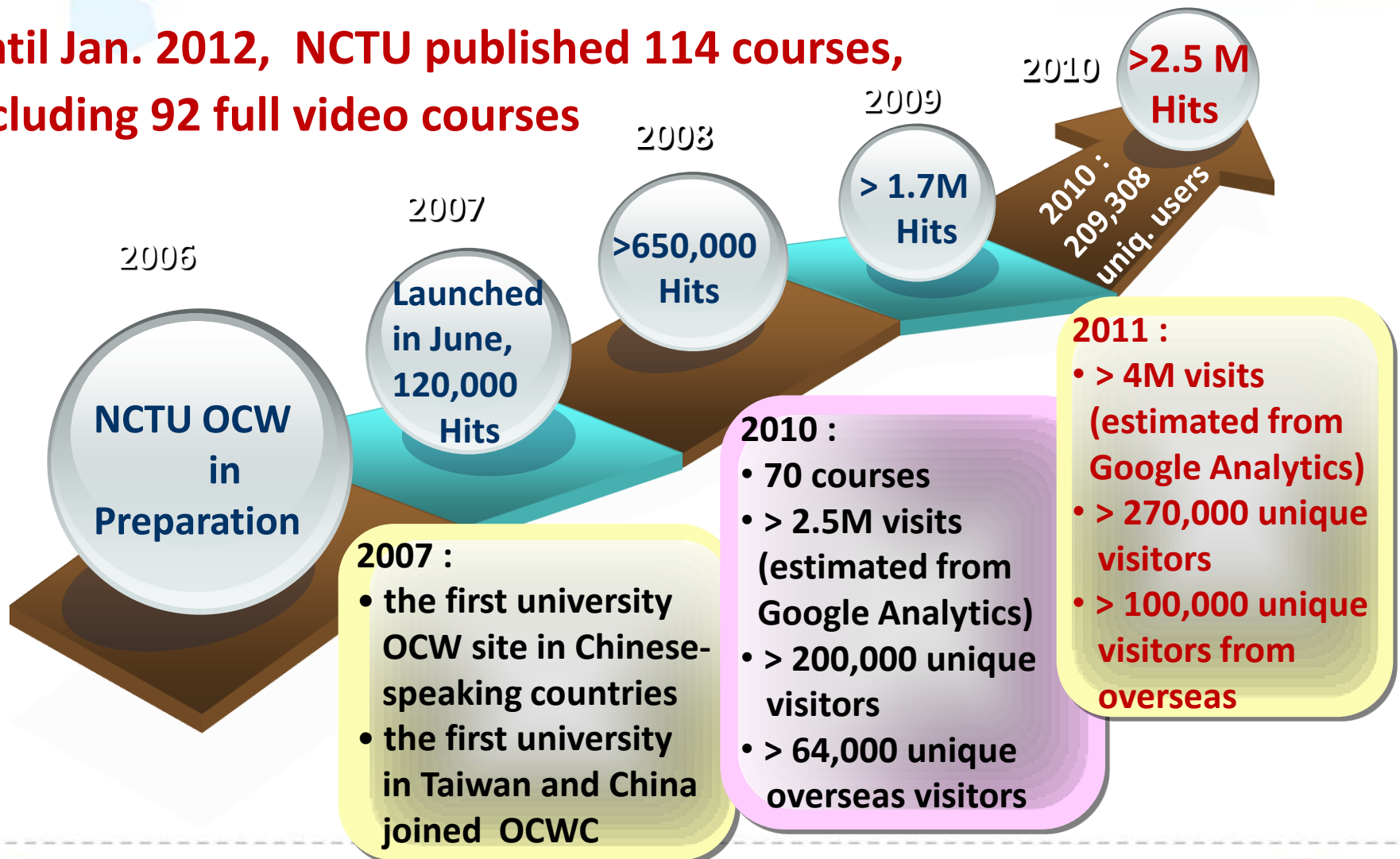
Oct-2011

Based on Google Analytics , in 2011 :

~ 300,000 visits/M and 50,000 unique visitors/M

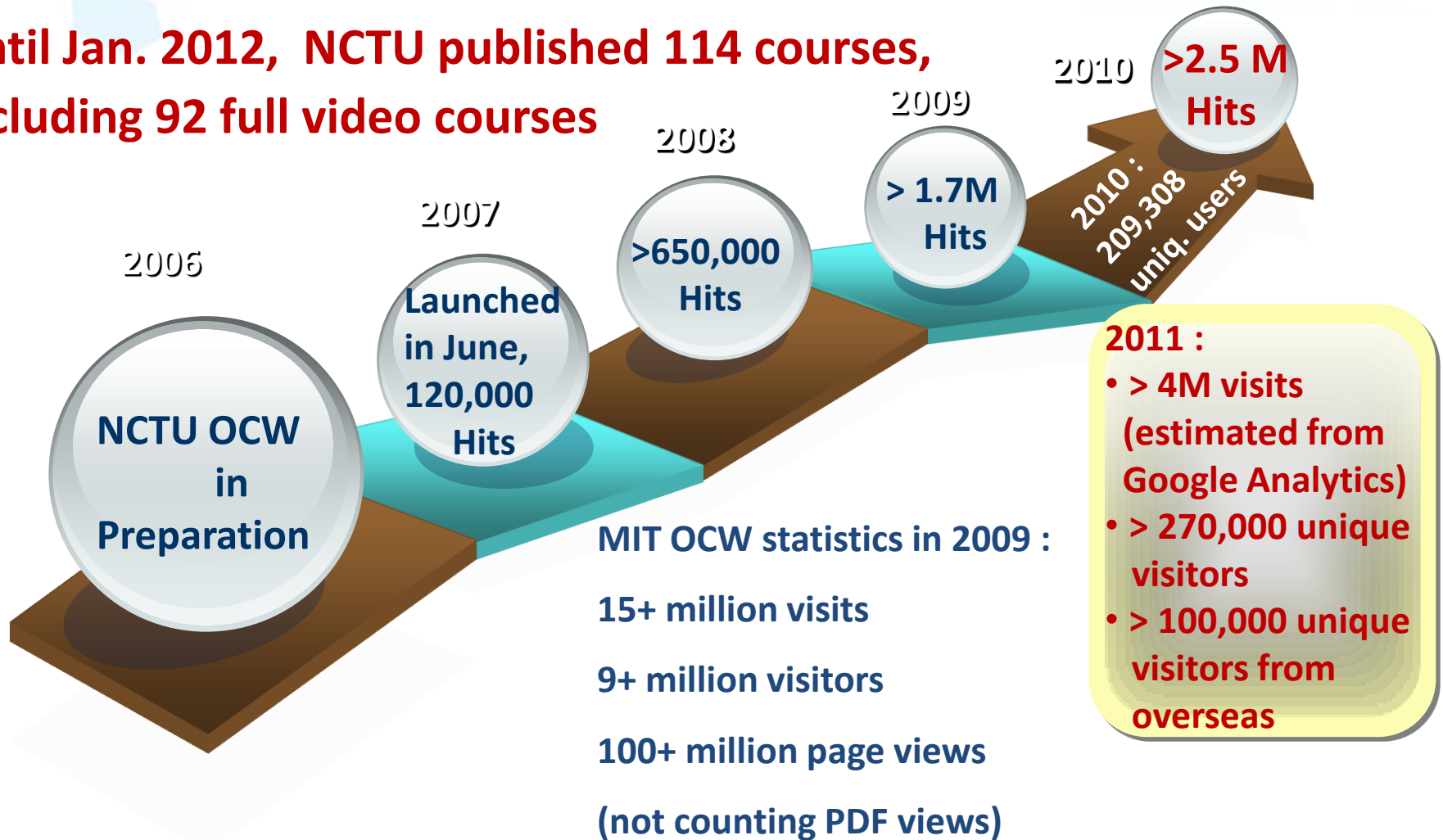


**Until Jan. 2012, NCTU published 114 courses,
including 92 full video courses**



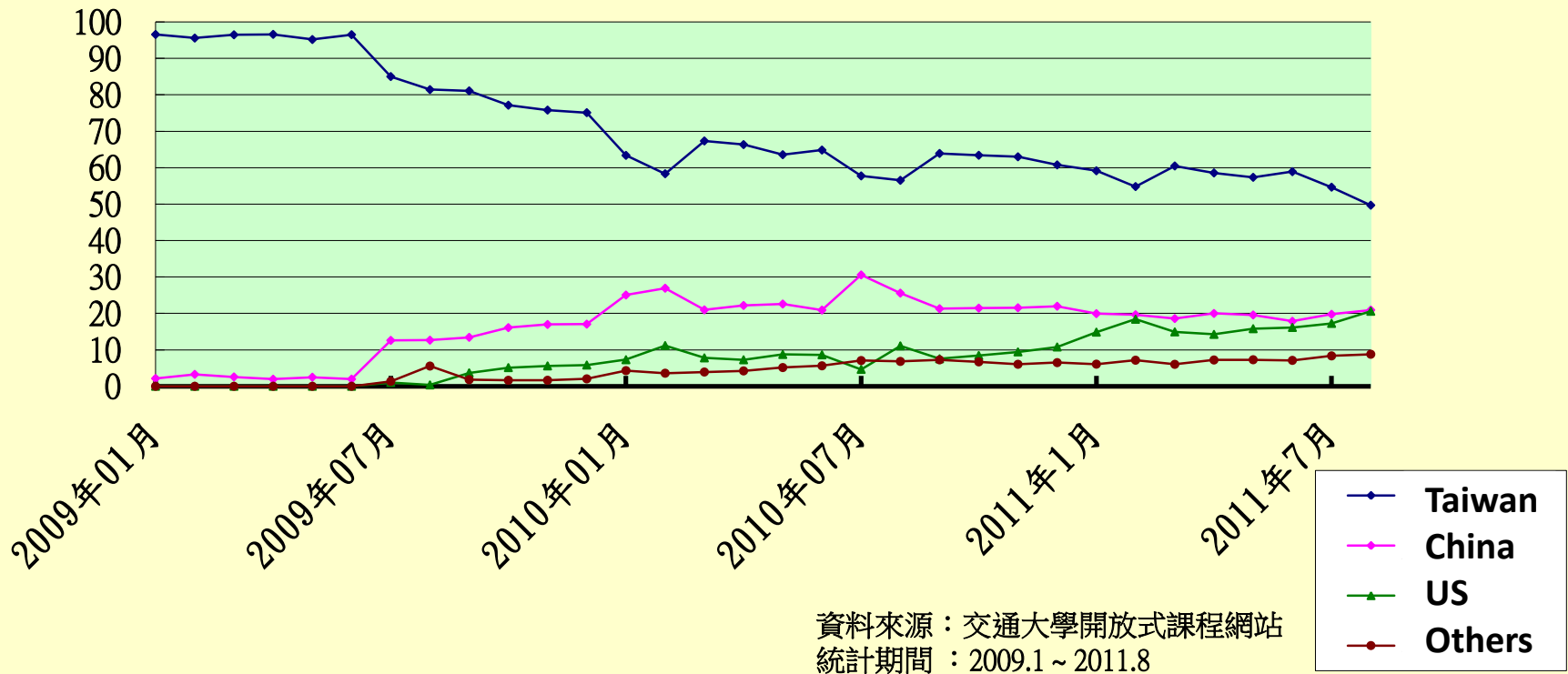


**Until Jan. 2012, NCTU published 114 courses,
including 92 full video courses**





Percents of Visits to NCTU OCW



The percentage of overseas visitors to NCTU OCWs approaches that of MIT's.

Who Are Using NCTU OCW

誰在使用交大開放式課程



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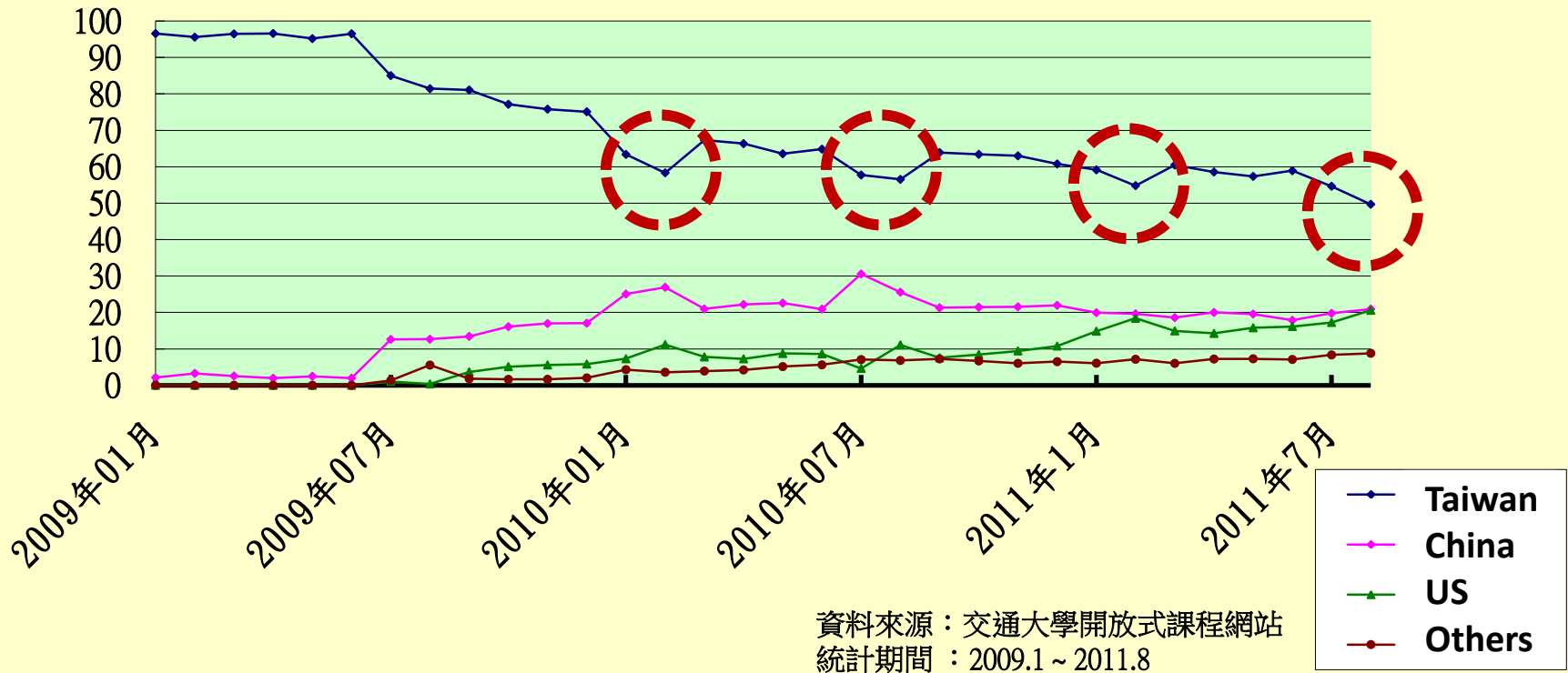
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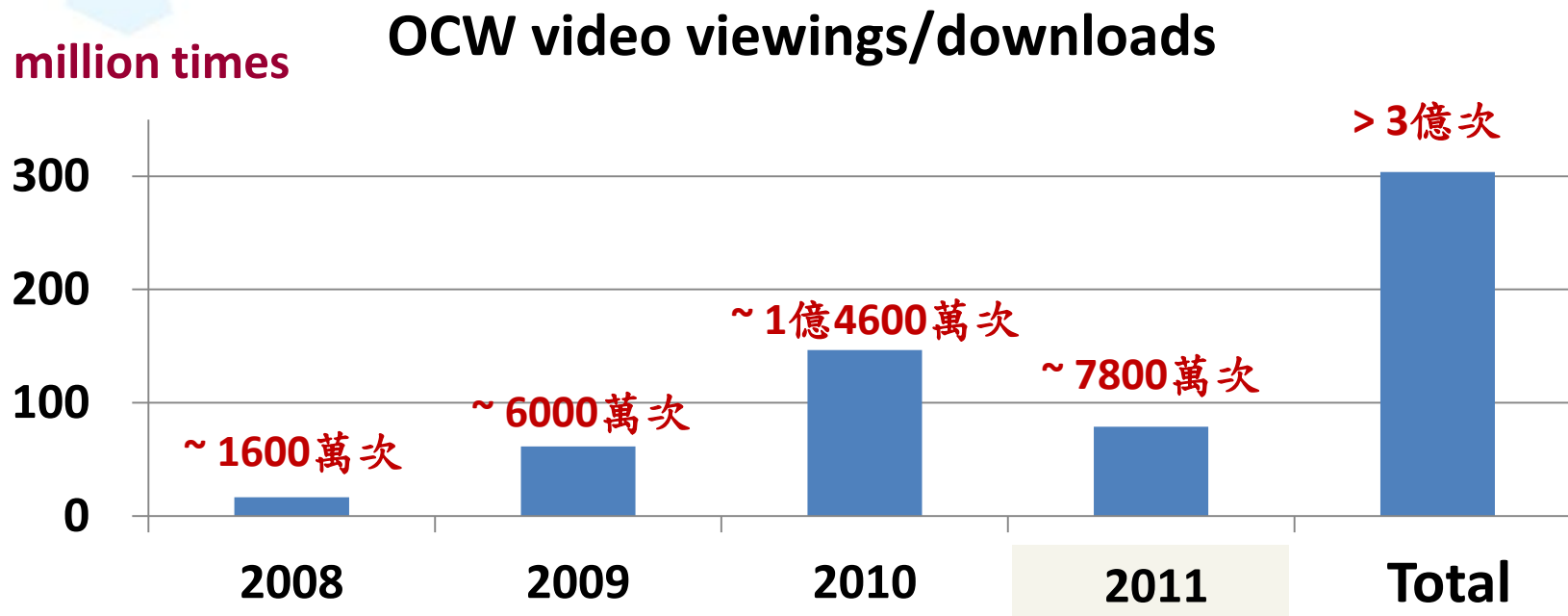
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Percents of Visits to NCTU OCW



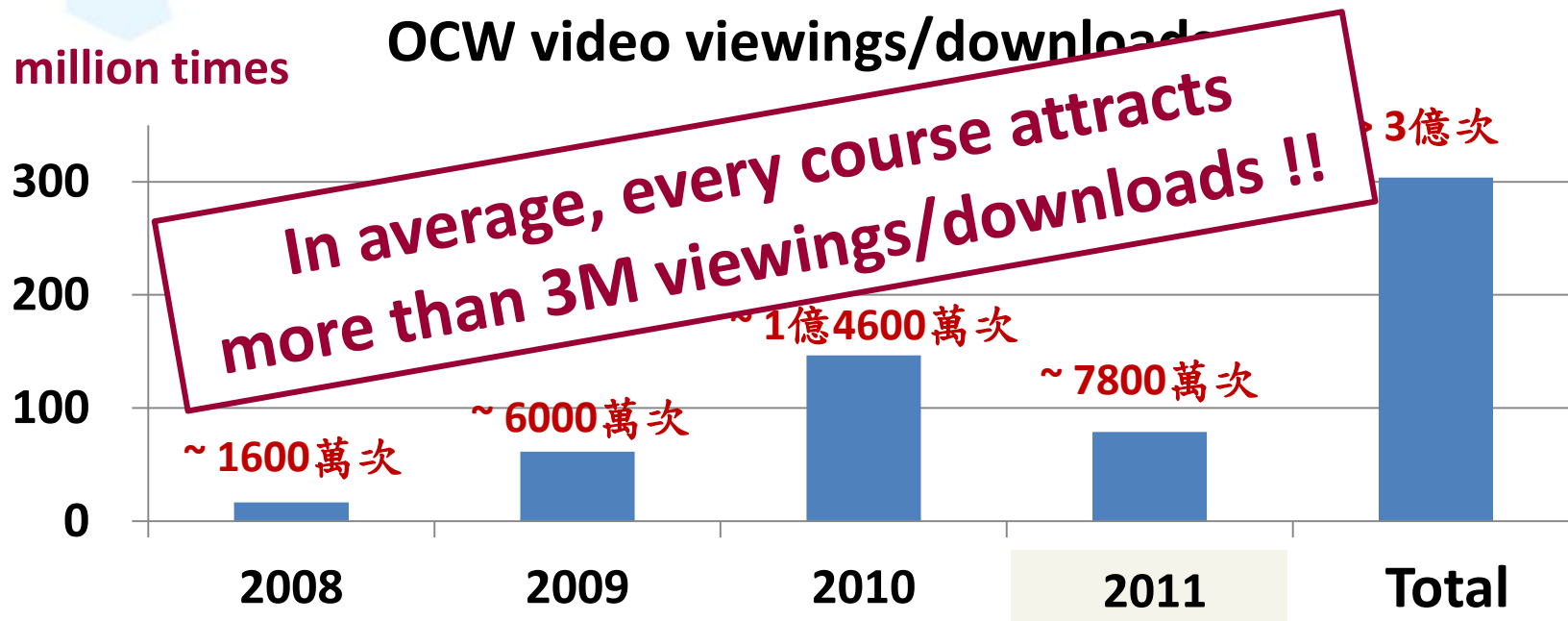
The percentage of overseas visitors to NCTU OCWs approaches that of MIT's.



2010 : 209,300 unique visitors, 146M times video viewings/downloads

➔ ~ 700 viewings or downloads / unique visitor

(Ex. Calculus I includes 172 files for viewing or download
Calculus II includes 144 files for viewing or download)



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➔ ~ 700 viewings or downloads / unique visitor

(Ex. Calculus I includes 172 files for viewing or download
Calculus II includes 144 files for viewing or download)



You Tube

Lady Gaga - Poker Face (HQ)

KiRsTeNjAyNelsCoOl

+ 訂閱

48 部影片 ▼



喜歡

新增至

分享

3,411,126

Return of Investment of NCTU OCWs

交大開放式課程的投資效益



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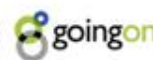
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	MIT	NCTU
Unique visitors / month	1,000,000	50,000
No. of published courses	2,000	100
Visitor / (course . month)	500	500
Domestic visitors / (course . month)	250	300
Domestic population	300,000,000	23,000,000
% of population / (course . month)	~1/1,200,000	~1/76,000
Higher education population	17,000,000	1,200,000
% of H.E. Population / (course . month) (assume all users are in higher education)	~1/68,000	~1/4,000
Annual investment	4M USD	4M NTD

(Based on the statistics of a certain month in 2011)





○ Rapid growth of the published high-quality courses by TOCWC

➤ good chance forming a unique Chinese open education cloud

由於聯盟所提供課程的精緻、多樣及快速成長，極有機會形成一獨特且重要的華文開放式學習雲

○ A few important tasks before forming a cloud :

➤ Establishment of a metadata standard for all courses

統一及推動各校的典藏後設資料標準







- Rapid growth of the published high-quality courses by TOCWC
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統一及推動各校的典藏後設資料標準
- Standardization of backstage statistics analysis

將各校後台統計的方法標準化

- Promotion of clustering effects

形成開放式課程“夜市”，加強行銷



- **25% of the Taiwanese universities join the higher education OER movement and TOCWC**

25%的大專校院加入推動開放式數位資源運動及台灣開放式課程聯盟

- **Generate at least 1500 OCWs, including 1000 full video courses**

產生至少1500門開放式課程，其中至少1000門高品質的全影音課程

- **Establish metadata standard for all OCWs and form an effective open education cloud**

建立高教開放式數位資源的典藏後設資料標準，推行到參與台灣開放式課程聯盟之各大學，並設立共同檢索平台，形成高教開放式學習雲。

- **Combine cloud learning platform with social networking functions to facilitate collaborative learning**

結合開放式學習雲及社群功能，增進學習雲使用者的學習興趣及成效



- Develop proper models of OCWs for mobile learning and produce at least 100 mobile OCWs

推動開發適於行動學習之課程學習模式及技術，並產生至少100門行動學習開放式課程

- Develop methodologies on the learning cloud platform to effectively study the learning behaviors on learning clouds

在學習雲平台上開發出研究雲端學習行為的有效方法

- Cooperate with at least 30 companies to demonstrate incorporation of OCWs into cooperate trainings

與至少30家企業形成合作關係，具體示範將高教開放式學習雲融入企業內部訓練

- Annual users reaches 500,000, including 200,000 from overseas

各校高教開放式數位資源年度使用者總人數達50萬人，年度國外使用者總人數達15萬人



- Produce OCWs introducing Taiwanese or Chinese culture and languages to non-Chinese-speaking countries.

e.g. Learn to Speak Chinese OCWs taught in English, Spanish, French, German, Japanese, Korean, Vietnamese and etc.

Learn Taiwanese/Chinese Cooking OCWs taught in English, Spanish, French, German, Japanese, Korean, Vietnamese and etc.

共同開發以他國語言介紹台灣或中華文化及語言的開放式課程

- Perform comparative studies of cloud learning behaviors between different countries or regions.

進行雲端學習行為的比較研究

- Any other creative suggestions, such as how to utilize our platform.

任何其他具有創意的合作建議

Our Goal 我們的目標



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Make Taiwan the most open and innovative Higher Educational Chinese Digital Resources Center

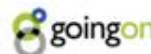
讓台灣成為全球最開放、最具創意的華文高教數位資源中心。



NBC LEARN



eUreka



iThenticate

turnitin

before internet

pen makes progress !

筆促使進步

after nternet



open makes progress!

開放促使進步

Thank You ...

謝謝您...

如果您需要我的報告檔案
我將非常樂意提供

For Being Open

保持開放的心

I will be more than glad to
provide you my presentation file.