



2011 INQAAHE conference and AGM



**Global Rankings and its Impact on Higher Education Policy
and Institutional Behaviors, and Students' Choice**

: Effective Use of College Rankings

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Outline of Presentation



- Excellence in global higher education: building world class universities
- Quality Challenges and Academic Rankings
- Rationales and dilemma of university rankings
- HEEACT Rankings
- From ranking to benchmarking: A wise choice for institutions, governments and students



Excellence in global higher education: building world class universities



- No matter whether countries are developed or developing ones, they are immensely eager to build at least one world class university, but they don't know exactly what they look like
- World class University by Philip Altbach
 - excellence in research, top professors, academic freedom and an atmosphere of intellectual excitement, governance, adequate facilities and funding



Academic Excellence and global benchmarking

- Many nations tend to use global rankings as a basis of building world class universities despite their well documented methodological flaws.
 - Launching several Excellence Programs
 - Brain21 (Korea)
 - Global 30 (Japan)
 - 5 year-50 Billion Program (Taiwan)
 - 985 project (China)
- All aim at building at least one world class university within a period of time through the policy of funding concentration.
- accelerated public investment “world-class’ universities” has forged a unique culture called the “Confucian Model” in the region. (Margison, 2010)



Universities' goal



- Many top administrators at leading universities are learning to use global rankings in order to achieve the institutional short term and long term strategic plans, not just to boycott them.
 - Minnesota's initiative to become one of the top three research institutions in the world
 - Taiwan National University announced the initiative of "Moving into the top 100" at its 80th anniversary
 - Baylor University put the vision on making the institution one of the *U.S. News* Top 50 by 2012
 - Griffith University has set its ambition to reach the ARWU and HEEACT Top 500 by 2012.



Quality Challenges and Academic Rankings



- quality of higher education is a complex concept due to the fact that practically all the methods and mechanisms of its assessment such as peer review, accreditation, audit, benchmarking, and rankings are a mixture of objective and subjective aspects”. (by Jan Sadlak)
- The definition of quality can differ in terms of stakeholders, context and type of institutions. No matter how differently quality might be defined, there is something in common in the most popular global rankings.



Relevance between global rankings and World Class University



- Examining current global ranking outcomes, it can be found that universities that figure in the top ranks have owned these features.



Global Ranking



- intense international competitions between universities in the 21st Century
- global college rankings have drawn international attention worldwide



Five Major Rankings



- Academic Ranking of World Universities by Shanghai Jiao Tong University in 2003
- QS's "World University Ranking" in 2004
- "Webometrics Rankings of World Universities" by the Spanish National Research Council published in 2004
- **Performance ranking of scientific papers of world class universities by the HEEACT in 2007**
- The Times Higher Education's "World University Ranking" in 2010

Top 20 Universities in the Four Rankings (1/2)

University Name	HEEACT	ARWU	THE	QS
Harvard University	1	1	1	2
Stanford University	2	3	4	13
Johns Hopkins University	3	18	13	17
University Washington- Seattle	4	16	-	-
UC- Los Angeles	5	13	11	-
UC - Berkeley	6	2	8	28
MIT	7	4	3	5
University Michigan- Ann Arbor	8	-	15	15
University Toronto	9	-	17	-
University Oxford	10	10	6	6
University Pennsylvania	11	15	19	12
UC - San Diego	12	14	-	-
Columbia University	13	8	18	11
Tokyo University	14	20	-	-



Top 20 Universities in the Four Rankings (2/2)



University Name	HEEACT	ARWU	THE	QS
UC - San Francisco	15	19	-	-
University Cambridge	16	5	6	1
University College London	17	-	-	4
Yale University	18	11	10	3
Duke University	19	-	-	14
University Wisconsin- Madison	20	17	-	-
CIT	-	6	2	9
Princeton University	-	7	5	10
University Chicago	-	9	12	8
Cornell University	-	12	14	16
Imperial College London	-	-	9	7
ETH Zurich	-	-	15	18
McGill University	-	-	-	19
Australian National University	-	-	-	20



(Higher Education Evaluation & Accreditation Council of Taiwan (HEEACT))



- Leading QA agency in Taiwan
- Operating program and institutional accreditation
- Publish a variety of rankings
- Endowed in 2005 with mutual funds of the government and 153 institutions in Taiwan
- IREG member (International Ranking Expert Group)



HEEACT Rankings



- Two major rankings published by HEEACT
 - Performance Ranking of Scientific Papers of World Class Universities in 2007
 - College Navigator in Taiwan in 2009



HEEACT's Performance Ranking of Scientific Papers of World Class Universities

(by institution and by field)

- Biblio-metric ranking published first by HEEACT in 2007
- 2010 edition has been published
- Goal: analyze and rank the scientific paper performances of the top 500 universities in the world.



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English(US)

2010 Performance Ranking of Scientific Papers for World Universities

2010

- [Background](#)
- [Methodology](#)
- [Top 500 Universities](#)
- [Top Universities by Continents](#)
- [Top Universities by Countries](#)
- [Link](#)
- [FAQ](#)

2010 by Field

- [Background](#)
- [Methodology](#)
- [Agriculture](#)
- [Clinical Medicine](#)
- [Engineering](#)
- [Life Sciences](#)
- [Natural Sciences](#)
- [Social Sciences](#)

2010 by Subject

- [Background](#)
- [Methodology](#)
- [Physics](#)
- [Chemistry](#)
- [Mathematics](#)
- [Geosciences](#)
- [Electrical Engineering](#)
- [Computer Science](#)
- [Mechanical Engineering](#)
- [Chemical Engineering](#)



Criteria and Indicators



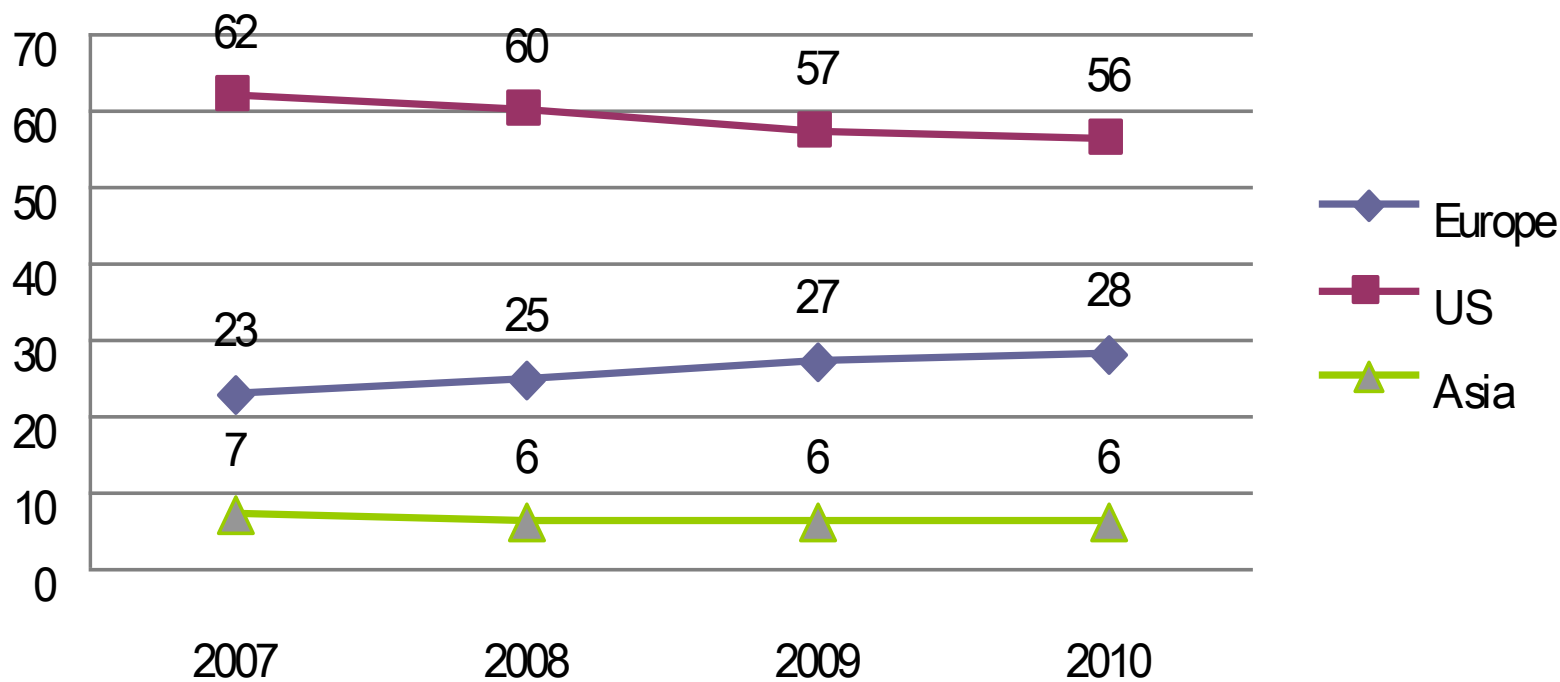
Criteria	2010 Overall Performance Indicators	Weight	
Research Productivity	Number of articles in the last 11 years (1999-2009)	10	20
	Number of articles in the current years(2009)	10	
Research Impact	Number of citations in the last 11 years (1999-2009)	10	30
	Number of citations in the last 2 years (2008-2009)	10	
	Average Number of citations in the last 11 years (1999-2009)	10	
Research Excellence	H-index of the last 2 years (2008-2009)	20	50
	Number of highly cited papers(1999-2009)	15	
	Number of articles in high-impact journals in the current year (2009)	15	



HEEACT Institutional Ranking from 2007 to 2010

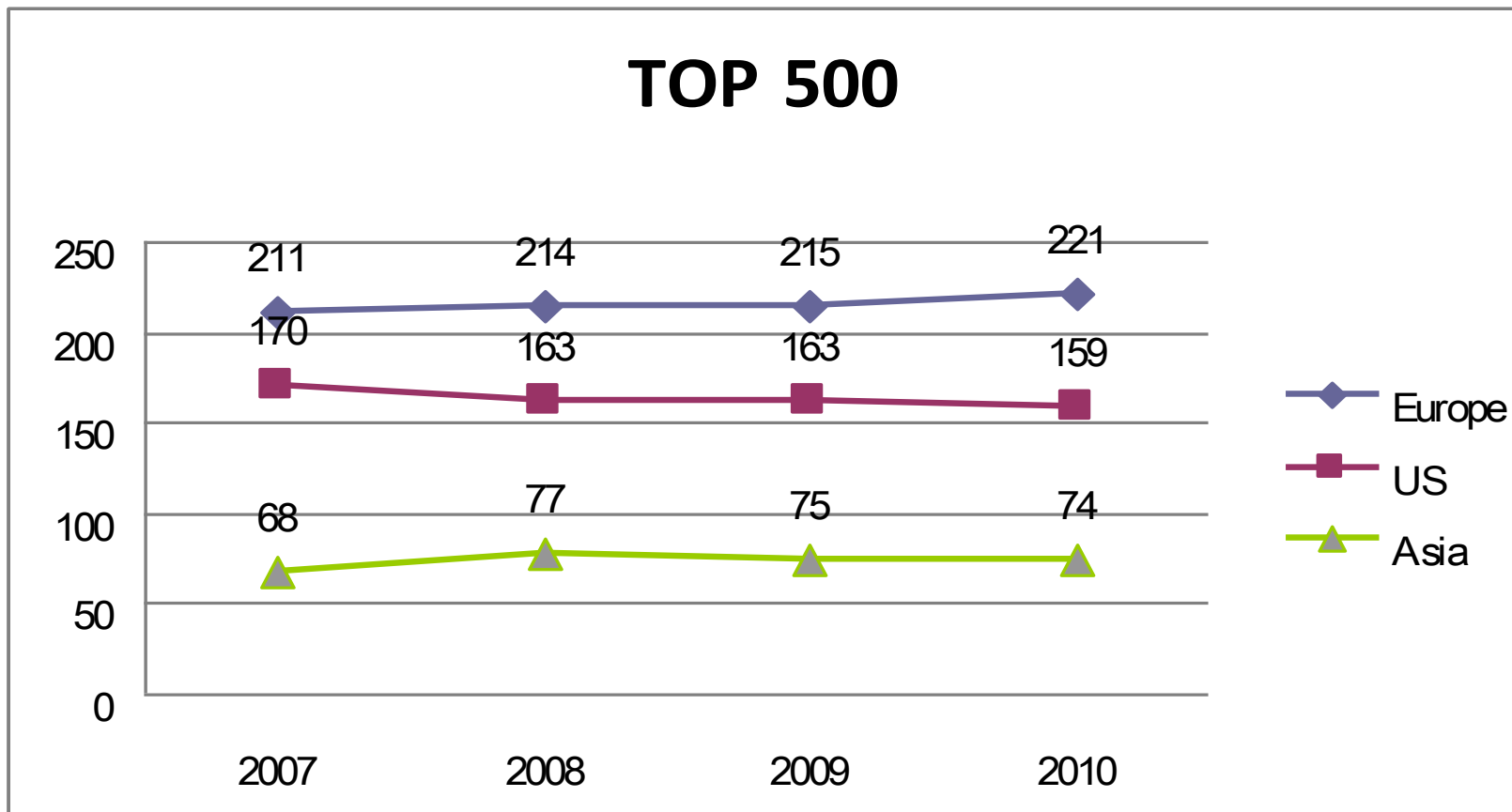


TOP 100





HEEACT Institutional Ranking from 2007 to 2010





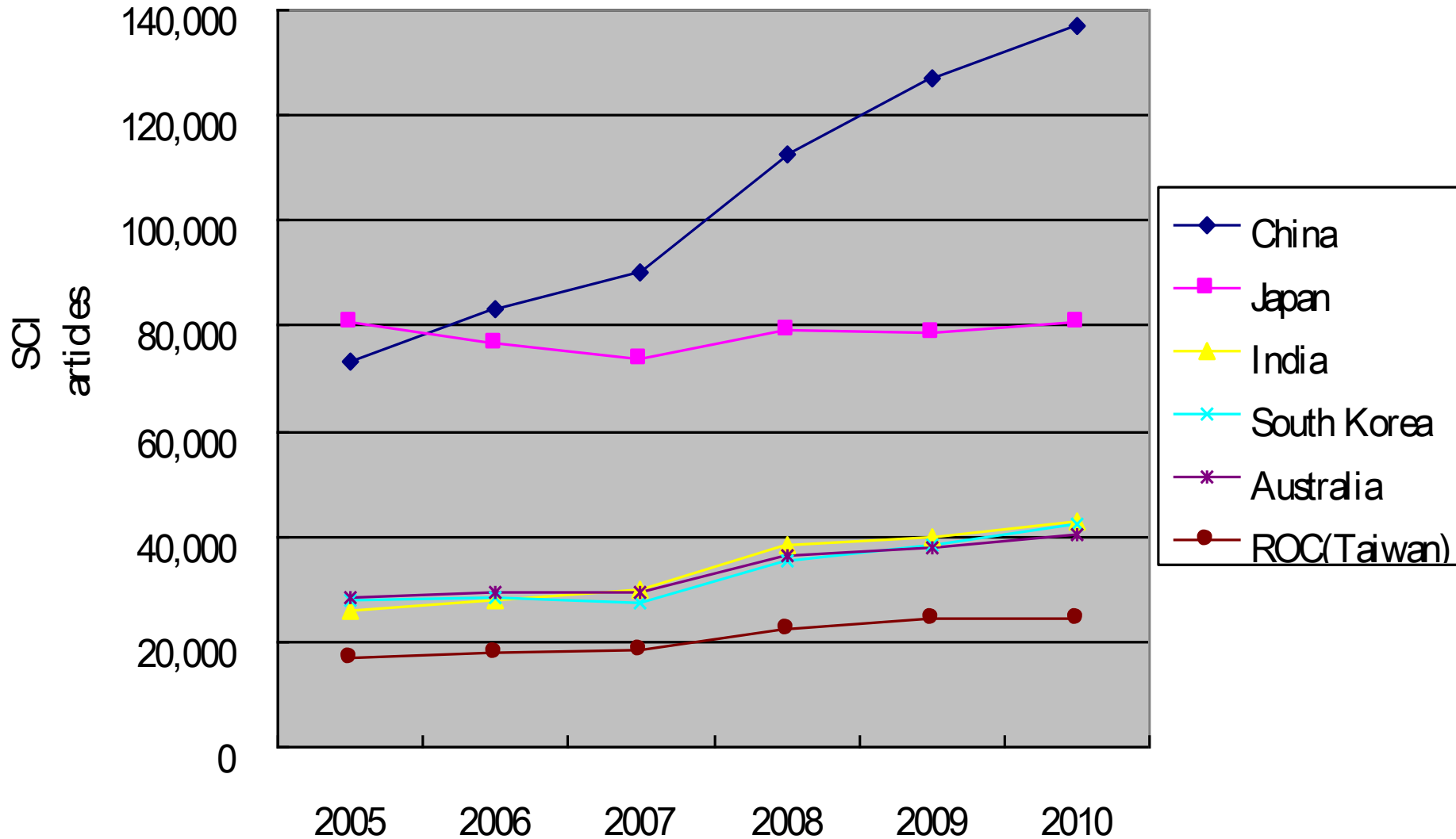
Number of Top 500 Universities of HEEACT 2010 Ranking in each Asia Countries



Countries	Number of Top 500 Universities of HEEACT Ranking
JAPAN	28
CHINA	16
AUSTRALIA	10
SOUTH KOREA	10
TAIWAN	5
HONG KONG	5
INDIA	2
SINGAPORE	2
THAILAND	1



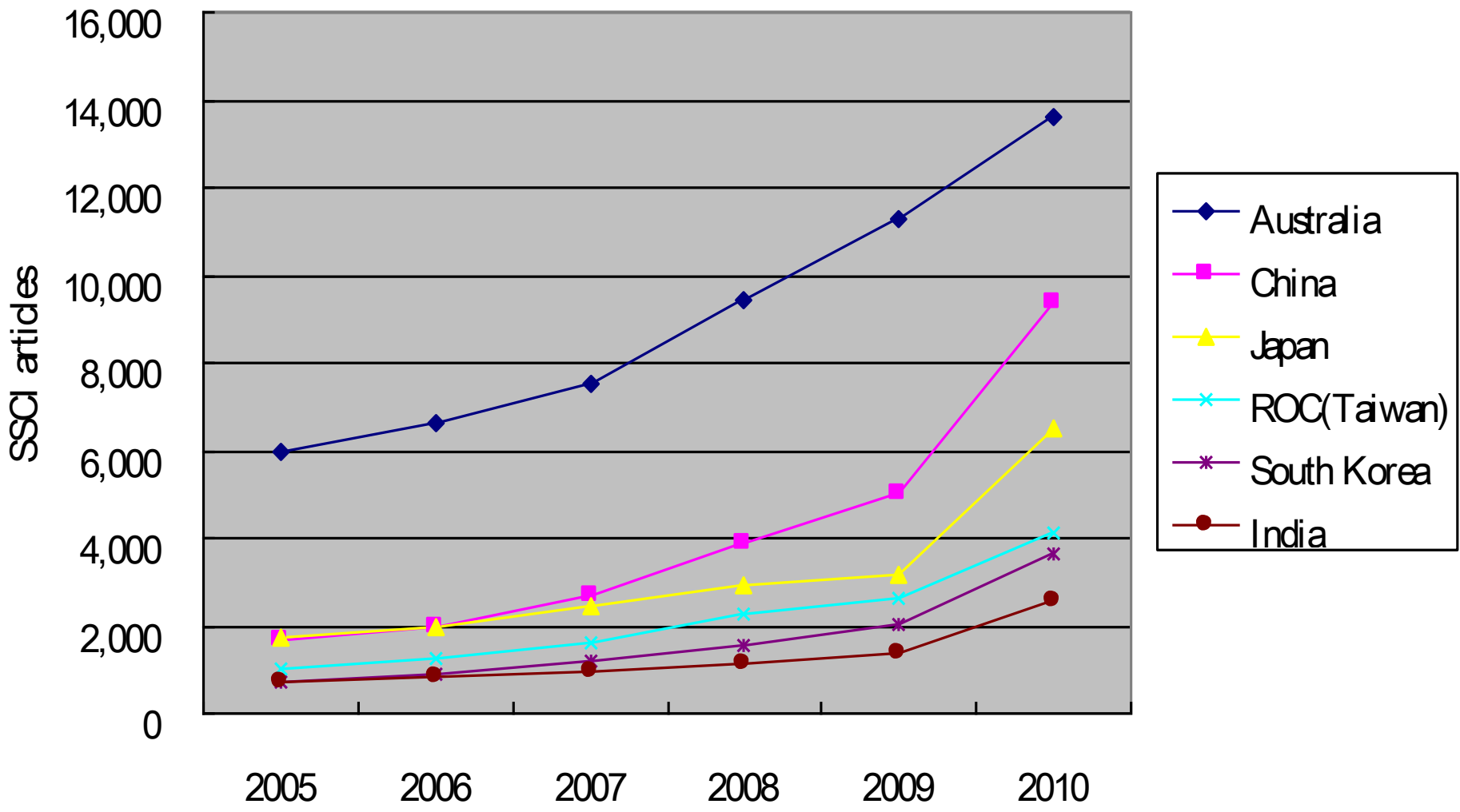
Changing Pattern of Increases of SCI Articles in Asia-Pacific Countries



Source: Indicators of Science and Technology (NSC) 2010
Higher Education Evaluation & Accreditation Council of Taiwan



Changing Pattern of Increases of SSCI Articles in Asia-Pacific Countries



Source: Indicators of Science and Technology (NSC) 2010
Higher Education Evaluation & Accreditation Council of Taiwan



College Navigator in Taiwan Published in 2009



- Goal
 - lead to a match between the student and the institution or the program that they're most interested
- Selection of Institutions
 - 69 4-year colleges and universities evaluated by HEEACT from 2006 to 2010.
 - 77 University of Technology and Technical College





Step 1: Indicators

Chinese



College Navigator in Taiwan

- Introduction
- Criteria & Indicators
- Statistics
- Users' Manual
- FAQ
- About Us
- Links

Higher Education Evaluation &

Applied Statistics
Fu Jen Catholic University

Online Users
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PERSONALIZE
YOUR RANKING

Latest News

2009.10.21
HEEACT releases "College Navigator in Taiwan"

2009.10.15
US News and World Report: 2009 World's Best Colleges and Universities

2009.09.18
THE - QS: 2009 University Rankings

College Navigator



Choosing Indicators (at least 3 and up to 10 at a time)

detail information

SURVEY
Peer assessment Academic survey

DATABASE	
Student selectivity	<input checked="" type="checkbox"/> Enrollment rate
	<input type="checkbox"/> Number of national academic awards by students
Student demographics	<input type="checkbox"/> Proportion of graduate students
Teaching quality	<input checked="" type="checkbox"/> Faculty-student ratio
	<input type="checkbox"/> Proportion of full-time faculty
Faculty resources	<input checked="" type="checkbox"/> Proportion of professors with Ph.D.
	<input type="checkbox"/> Proportion of faculty above assistant professor
	<input type="checkbox"/> National Academy membership
Research output	<input checked="" type="checkbox"/> Number of articles published in SCI per faculty
	<input type="checkbox"/> Number of articles published in SSCI per faculty
	<input type="checkbox"/> Number of articles published in AHCI per faculty
	<input type="checkbox"/> Number of citation per faculty
	<input type="checkbox"/> Total NSC grants per faculty
	<input type="checkbox"/> Total NSC grants in Sciences per faculty
Research grants	<input type="checkbox"/> Total NSC grants in Social Sciences
	<input type="checkbox"/> NSC projects per faculty
	<input type="checkbox"/> NSC projects in Sciences per faculty
	<input type="checkbox"/> NSC projects in Social Sciences per faculty
Library	<input type="checkbox"/> Total holdings per student

Step 1:
Choose the
indicators



Step 1: Indicators

http://cnt.heeact.edu.tw - Content and implication - Microsoft Internet Explorer

Faculty-student ratio -
 The indicator represents the ratio of the number of full time equivalent faculty and the total enrollment in the 2007 academic year. The higher the ratio is, the more faculty resources an institution provides. Data source is from the MOE database.

[Close window](#)

Step 1: Choose the indicators



Choosing Indicators (at least 3 and up to 10 at a time)

SURVEY

Peer assessment [i](#) Academic survey

DATABASE

Student selectivity [i](#) Enrollment rate
 [i](#) Number of national academic awards by students

Student demographics [i](#) Proportion of graduate students

Teaching quality [i](#) Faculty-student ratio
 [i](#) Proportion of full-time faculty

Faculty resources [i](#) Proportion of professors with Ph.D.
 [i](#) Proportion of faculty above assistant professor
 [i](#) National Academy membership

Research output [i](#) Number of articles published in SCI per faculty
 [i](#) Number of articles published in SSCI per faculty
 [i](#) Number of articles published in AHCI per faculty
 [i](#) Number of citation per faculty

Research grants [i](#) Total NSC grants per faculty
 [i](#) Total NSC grants in Sciences per faculty
 [i](#) Total NSC grants in Social Sciences

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PERSONALIZE YOUR RANKING

Latest News


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- 2009.09.18
THE - QS: 2009 University Rankings





Step 2: Weighting





College Navigator in Taiwan

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- Introduction
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Research Team
 Graduate Institute of Applied Statistics
 Fu Jen Catholic University

College Navigator

Step 1

Indicators

Step 2

Weighting

Step 3

Preference

Step 4

Result

Assign a weight to each indicator(at least 10%), so that the total will add up to 100 percent.

Enrollment rate	20
Faculty-student ratio	20
Proportion of professors with Ph.D.	20 %
SCI	40 %
Total	100 %

Online Users

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↓

PERSONALIZE
YOUR RANKING

Latest News

Step 2: Give each indicator a weight



College Navigator

Step 3: Preference

College Navigator in Taiwan

Chinese

Online Users: 7

PERSONALIZE YOUR RANKING

College Navigator

Step 1 Indicators → Step 2 Weighting → **Step 3 Preference** → Step 4 Result

Way 1: Narrow down your choices

Step 3: Decide the Universities you want to compare

Mode 1: Narrow the Choices according to your preference

Region: Detail

All

Region (North Central South East)

Type: Detail

All

Public Private

Field: Detail

All

Engineering &IT Humanity & Social Sciences

Biomedicine Sciences)

Size: Detail

All

Size (Below 4999 5000~9999

10000~14999 15000~19999

Mode 2: Select the universities you want to compare

National Chengchi University

National Tsing Hua University

National Taiwan University

National Taiwan Normal University

National Cheng Kung University

Back Next

2009.10.15
US News and World Report:
2009 World's Best Colleges
and Universities

2009.09.18
THE - QS: 2009 University
Rankings

Way 1: Narrow down your choices

Step 3: Decide the Universities you want to compare

Way 2: Choose Universities



Step 4: Result



The indicators you choose

The performance of each university

Our system will analyze the rank of the universities according to the indicators and weights you decide

- ↑ Top Group (green upward arrow, the indicator is in the top 30% of all institutions)
- Middle Group (yellow sideward arrow, the indicator is between 31% and 69% of all institutions)
- ↓ Final Group (pink downward arrow, the indicator is in the bottom 30% of all institutions)
- N/A Unranked Group (data are not found in the third parties)

Rank	Institution	Enrollment rate	Faculty-student ratio	Proportion of professors with Ph.D.	SCI
1	Chang Jung University	→	↑	↓	↑
2	Nan Ze University	↑	↓	↑	↑
3	Tatung University	↑	→	↓	↑
4	Chung Yuan Christian University	↑	↓	→	↑
5	Tamkang University	→	↓	→	→
6	Fu Jen Catholic University	↑	↓	↓	→
7	Chung-Hua University	↓	↓	→	→
8	Huaan University	↓	→	→	→
9	Soochow University	↑	↓	→	→
10	Ming Chuan University	↑	→	→	→
11	Kainan University	↓	↓	↑	↓
12	Chinese Culture University	→	↓	↓	→
13	Shih Hsin University	↑	↓	→	↓
14	Fo Guang University	↓	→	↑	↓



College National Ranking in Taiwan - Step 5: General Information



Total enrollment: 21,972
Number of undergraduates: 11,056
Number of graduates: 10,916
Website:
<http://english.web.ncku.edu.tw/bin/home.php>
Directions: [Detail](#)

Introduction

NCKU, located in the historical and ancient cultural capital city Tainan, is one of the primary universities in the southern Taiwan. With its outstanding faculty, abundant educational resource, and excellent research achievement, NCKU has grown to be a world-class university characterized by its strength in electronic engineering and computer science. For decades, our graduates have been ranked as industry's best choice in the local polls. Its excellent learning environment and beautiful campuses have attracted numerous distinguished students, scholars, and visitors around the world to explore the world of knowledge and its historical heritage.

Programs/ Degrees Offered

Undergraduate degree: 48	Master degree: 79
Ph.D. degree: 54	Master Programs for working students: 22

Accreditation Outcomes

Accrediting Organization	Outcomes
HEEACT	100 (Detail)
AACSB	0 (Detail)
IEET	46 (Detail)
Chemical Society in Taiwan	3 (Detail)

武林英雄 常用網站

	↑	↑
	→	↑
the: 那個	↑	→
	↑	↑
	→	↑
	↑	↑
	↑	↑
	↓	↑
	↑	↑
	→	↑
	→	↑
	→	↑

網際網路

12	Chung Yuan Christian University	↑	↑	↑
13	Yuan Ze University	↑	↑	↑
14	Chang Gung University	↑	→	↑



Popular use of global rankings by stakeholders



- Students are using ranking tables in their decision-making about where to study.
 - choice of institution (domestic) or for studies abroad
- Governments are taking advantage of rankings to know where to invest
- Scientists use them to know where to work
- Institutions use rankings to know where they stand and whom they can partner with.
 - collecting and publishing more reliable data
 - analyzing key factors explaining ranking
 - seeking to improve teaching, learning and research □



Major Benefit



- Culture of transparency



What We can't see in the rankings ?



- overall performance of tertiary education systems
 - access vs. equity
 - quality and relevance
- institutional differentiation
- contribution to local economic and social development (human capital vs. patents)



From ranking to benchmarking: A wise choice for institutions, governments and students



- thirst for information
 - culture of transparency and accountability
- rankings
 - one among many QA and accountability
- international comparisons help to stimulate a healthy debate on main challenges



2011 HEEACT International Conference & Workshop and IREG-6



*Internationalization of Standards in Higher Education :
Accountability, Student Learning Outcomes and
Collaborations in Quality Assurance Agencies
Workshop: Graduate Tracking Mechanism*

June 2-4, 2011



*Academic Rankings and Advancement of Higher Education:
Lessons from Asia and other Regions*

April 18 ~ 20, 2012



Thank you for your attention

Welcome to Taipei in June !!!

Higher Education Evaluation & Accreditation
Council of Taiwan

<http://www.heeact.edu.tw/>