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The Academic Rankings: From Popularity to Reliability and Relevance

Development of "Self-directed" College Ranking and its Impact on Taiwan Higher Education



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Popularity of College Ranking in the 21st Century

>Higher education expansion
>Resources allocation
>Accountability
>Benchmarking
>Marketization in higher education

National College Ranking

>U.S. News & World Report

 The most influential college ranking –"American Best Colleges" published by U.S. News & World Report in 1983

>Maclean's, The Times, CHE, etc



Global Ranking

Intense international competitions between universities.
 Global college rankings have drawn international attention worldwide, including Taiwan

- Academic Ranking of World Universities by Shanghai Jiao Tong University in 2003
- QS "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
- Time Higher Education's "World University Ranking" in 2010



Dilemma for Traditional College Rankings

- >Arbitrary selection of indicators and weightings
- >Undefined users
- Simplistic presentation
- >Outdated information
- >Research focus

Unfair for humanities, arts and social science fieldsEnglish domination

Development of Personalized College Ranking in the 21st Century

What 's "*Self-directed*" Personalized College Ranking ?



CHOICE

Features of

Personalized College Ranking

> Users

• Targets students as the major users clearly compared to the league tables currently.

Customization

• It emphasizes the respect for user's needs in selection of indicators and weightings by their own through the web-based platform.

≻IT based

• Updated information

≻Matching

• The goal of the information system function is to lead to a match between the student and the institution or the program that they're most interested

Rationales

>Higher education internationalization

Social demand on data transparency

Customer-oriented service

• The first personalized college ranking called "University Ranking" was published by Centre for Higher Education Development in Germany in 1998

Major Publishers of Personalized College Rankings

Website	Organization	Туре	Country
University Ranking (1998)	The Center for Higher Education Development	Research Center	Germany
GlobeCampus (2008)	Globe Mail.com	Mass Media and Research Center	Canada
Ranking Tool (2006)	Maclean's	Mass Media	Canada
Studychoice. Nl (2007)	Studychoice123.nl partnership	HBO-Raad, VSNU and PAEPON and the students' organizations	Holland
PUSH (2007)	The Push Guides Independent House	Mass Media	UK
College Navigator (2007)	National Center for Education Statistics	Governmental sector	U.S.A.
Do it yourself ranking (2009)	Forbes/ CCAP (Center of College Affordability and Productivity)	Mass Media and Research Center	U.S.A.

Development of College Rankings in Taiwan

Before the 90s, most college rankings or league tables in Taiwan published by mass media didn't draw the public attention due to validity and creditability in methodology.

Driven by global market of higher education, universities and government agencies started to develop rankings as a tool to encourage institutions to strive for excellence.

3 major types of college rankings developed in Taiwan.
Each has its own characteristics and uniqueness.

Three Major College Rankings in Taiwan after the late 90s

Tamkang <u>National</u> College Ranking in 2002
 HEEACT <u>Global</u> Ranking in 2007

HEEACT <u>Personalized</u> Ranking in 2008

- Hou, Yung-chi & Robert Morse (2009). Quality Assurance and Excellence in Taiwan Higher Education-An Analysis of Three Major Taiwan College Rankings., *Evaluation in Higher Education*, 3(2), 45-72.
- Hou, Yung-chi. (2009) . Personalized Rankings: A New Ranking System for Taiwanese Universities, *Asian Journal of University Education*, 4(1) June.1-24
- Hou, Yung-chi. (March 3-5, 2010). *Development of "Self-directed" College Ranking and its Impact on Taiwan Higher Education. APQN 2010 Annual Conference &AGM*, Bangkok, Thailand.

HEEACT Personalized Ranking - College Navigator in Taiwan

Public demand
Transparency
Internationalization



Background of Developmental Framework of "College Navigator in Taiwan"

Rapid Expansion in Taiwan Higher Education

- Number of universities and colleges Increased by **120%** in the past 10 years with more than 160 institutions
- Student enrollment With a total number of 1.3 millions increased 65%
- University Entrance Exam admission rate more than 97% in 2008
- Internationalization in Taiwan Higher Education
 - The total number of international students, including degree-level, exchange, and language study students, reached 17,742

> Transparency

• Planning to establish a very consumer-oriented ranking service system to provide more transparent university information for prospective students locally and internationally

Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT)

Higher Education Evaluation & Accreditation Council of Taiwan

≻Founded in 2005

- ≻Two jobs
 - Program Accreditation
 - Ranking projects

> Very responsive to Taiwan society's need.

STRIVING FOR EXCELLENCE

WITH FAIRNESS AND PROFESSIONALISM

College Navigator in Taiwan 2-year project Four well-established personalized rankings Berlin Principles



Research Team

3 professors/ one international consultant / one full time staff/ one IT designer / 7 graduate TA



College Navigator in Taiwan

> Target group of the ranking

- All school leavers seeking for a suitable university with the fields they are interested in.
- Selection of Institutions
 - 69 4-year colleges and universities evaluated by HEEACT from 2006 to 2010.
- Hold 10 focus groups to collect users' opinions about the indicators



Model of Criteria

Tier	Content	Number
Criteria	academic survey, student quality, faculty resources , library acquisitions, research grant, research output, teaching quality , learning output, international outlook etc.	11
Indicator	enrollment rate, proportion of graduate students, graduation rate, proportion of faculty members above assistant professors, proportion of professors with a highest degree, proportion of full- time faculty, faculty-student ratio, total expenditure per student, number of articles published in SCI/ SSCI/ AHCI and EI per faculty, National Science Foundation grants per faculty, proportion of international students, proportion of international faculty, library expenditure per student, number of patents awarded per faculty, employment rate, etc.	24
Preference	location, size, type, program/ discipline, etc.	5
Basic information	history, enrollment, number of programs, and website, room and board, student service, accreditation status, governmental grants, scholarship, tuition, student clubs, accommodation etc.	16

Data Sources

- >Academic survey
 - Response rate is up to 74.88%
- >Universities
 - General information, including the description of institutional features.
- >Independent third parties
 - Ministry of Education, 2008 Tamkang ranking report, National Science Foundation, ISI



Presentation of results

- >Updated annually on the HEEACT website
- Users can interactively make their own league table by selecting and weighing indictors according to their preference.
 - 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).
 - Unranked Group (data are not submitted in the form requested by HEEACT)



Applicability of the Berlin Principles to the Taiwan Personalized College Ranking

- ≻User and goal
 - Clear about purposes and target groups
- >Criteria and weighting
 - Transparency and relevance
- ≻Data collection
 - With proper procedures for scientific data collection.
- Result presentation
 - Web-based ranking system
 - It will be empowered to rank the institutions according to their preference,
 - Be updated annually through the use of IT system.



Methodology : 4 steps

- Given a certain extent of autonomy over selection of indicators and weightings.
- Users will be able to rank the institutions they are interested in by region, type, size and program.
- More detailed information on universities such as founding year, mission, and total enrollment, number of programs, and website, accreditation status, government funding, application, room and board, tuition will be listed for user's references on the ranking outcomes.
- There are 4 tiers in the model of criteria including 11 criteria, 24 indicators, 5 preferences and 20 items

<u>http://cnt.heeact.edu.tw/index2.asp</u>



College Navigator in Taiwan- Home







Are you interested in studying in Taiwan? Would you like to get more information about the academic performance of Taiwan universities and colleges? The leading independent guide to Taiwan higher education will guide you step by step through a well-developed model of measures with more than 11 criteria, 24 indicators and 20 general information items including, academic reputation, faculty resource, research outputs, internationalization, student support, scholarship, and tuition. Be your own college counselor and select the school that best fits your needs!!!

國立成功大學

THE - QS: 2009 University Rankings

College Navigator in Taiwan- Step 1: Indicators



College Navigator in Taiwan- Step 1: Indicators



College Navigator in Taiwan- Step 2: Weighting



College Navigator in Taiwan-Step 3:Preference



College Navigator in Taiwan- Step 4: Result

Step 2

Weightin

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

Our system will **1** analyze the rank of the universities according to the indicators and weights you decide

	een 31% and 69% of all institutions) xtom 30% of all institutions)	TI	The indicators you choose				
rties)						_	
Rank	Institution	Enrollment rate	Faculty-student	Proportion of professors with Pn.D.	sci	Thor	
1	Chang- iung University	⇒	T	÷	t	The p	
of 1	n an Ze University	T	J.	t	T	eac	
	Tatung Iniversity	1	⇒		T		
anc	nung uan Christian University	1	- U	⇒	T		
le	Tamkai g University	⇒	.	⇒	⇒		
6	Fu Jen atholic University	1	•		⇒		
7	Chung-Hua University	•	.	⇒	>		
8	Huafan University		>	>	>		
9	Soochow University	1	- U	>	>		
10	Ming Chuan University	1	>	>	>		
11	Kainan University	J.	.	Î	-U-		
12	Chinese Culture University	>	-U		>		
13	Shih Hsin University	Î	J.	>	-0-		
14	Fo Guang University						
				-			

Step 3

Preferen

Step 4 Result

The performance of each university

College Navigator in Taiwan- Step 5: General I 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

Chang Gung University

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	Maste	r degree: 79		
Ph.D. degree: 54	Maste	Master Programs for working students: 22		
Accreditation Outcomes				
Accrediting Organization	Outco	mes		
HEEACT	100 (Detail)		
AACSB	0 (Det	ail)		
IEET	46 (De	etail)		
Chemical Society in Taiwan	3 (Det	ail)		
1	• •	(2) 網際網路		
	12	Chung Yuan Christian University	T	
	13	Yuan Ze University	t	
			100	

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National Taiwan Normal University

(Taiwan Literature and Taiwan Studies)

National Chengchi University NO.64,Sec.2,ZhiNan Rd.,Wenshan District,Taipei City 11605,Taiwan (R.O.C) Year founded: 1954 Campus setting: 1,033,851 square meters Total enrollment: 15,588 Number of undergraduates: 9,315 Number of graduates: 6,273 Website: http://www.nccu.edu.tw/english/ Directions: Detail

Introduction

Established in 1927, National Chengchi University (NCCU) is noted for its humanities and social sciences disciplines. In the future, NCCU will pass on the outstanding traditions of humanities and social sciences, balancing both teaching and research, theory and practice, internationalization and domestication in academic disciplines including humanities, social sciences, law, business and communications, reinforce dialogues between humanities, technology and society, and promote multi-variant academic research development. Our vision is to build a first-rate international humanities and social sciences academic temple, and nurture "Humane, Global, Innovative" successors for the new century.

Programs/ Degrees Offered	
Undergraduate degree: 37	Master degree: 53
Ph.D. degree: 37	Master Programs for working students: 16
Accreditation Outcomes	
Accrediting Organization	Outcomes
HEEACT	78 (Detail)
AACSB	30 (Detail)
IEET	0 (Detail)
Chemical Society in Taiwan	0

3 (Detail)

Impact of College Navigator on Taiwan Universities and Students >Users' attitude toward the ranking

- >The most popular indicators
- >Responses from universities

Mean Scores for Users' Attitude toward the Ranking

Questionnaires	Mean score*
Q1. Definitions of indicators are clearly stated.	3.73
Q2. Selection of indicator number is reasonable. (between 3-10)	3.63
Q3. Presentation of ranking outcome is clear and understandable.	3.66
Q4. Presentation of basic information for each institution is clear and understandable	3.69
Q5. Information provided is useful for me to select a school to study	3.76
Q6. It is convenient for me to operate this ranking tool.	4.06
Q7. Speed of this system is moderate and does not take me too much time.	4.23
Q8. Functions in the system are highly stable.	3.91
Q9. Web pages are presented clearly.	4.16
Q10. Contrast of color is nice and comfortable	3.81
Q11. Information on the web-pages is easily read.	3.93 32

College Navigator in Taiwan - Survey

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q1. Definitions of indicators are clearly stated.	•	•	•	•	•
Q2. Selection of indicator number is reasonable. (between 2-11)	0	0	0	0	0
Q3. Presentation of ranking outcome is clear and understandable.	•	•	•	•	•
Q4. Presentation of basic information for each institution is clear and understandable	0	0	0	0	0
Q5. Information provided is useful for me to select a school to study.	•	•	•	•	•
Q6. It is pretty convenient for me to operate this ranking tool.	0	0	0	0	0
Q7. Speed of this system is moderate and doesn't take me too much time.	•	•	•	•	•
Q8. Functions in the system are highly stable.	0	0	0	0	0
Q9. Web pages are presented clearly.	•	•	•	•	•
Q10. Contrast of color is nice and comfortable.	0	0	0	0	0
Q11. Information on the web-pages is easily read.	•	•	•	•	•
Other comments:		1			
				Reset	Submit

Top 10 Indicators by the Number of Usage Times

Indicators	Usage times
Academic survey	16694
Expenditure per student	14372
Enrollment rate	11149
Faculty-student ratio	10561
Average proportion of graduated students	10191
Number of national academic awards by students	7898
Total holdings per student	7728
Total NSC grants per faculty	7466
Proportion of full-time faculty	6921
Proportion of professors with Ph.D.	6431 34

Impact of College Navigator on Taiwan Universities and Students

- Taiwan colleges and universities are pressured highly to pay more attention to what students do care about most
- But some of them misunderstood and misused the innovative system
 - It is a searching engine, not a fixed ordinal college league
- > High schools encouraged students to take advantage of it
 - Bureau of Education presented the system in the handbook of college selection for students



Survey on All the Selection of Universities

- A survey of 69 university presidents of the selected subjects in the system was conducted
- >Overall response rate is 68.12%.
- ≻6 items 24 questions
- Including institutional policy making, staff and faculty recruitment, research output, resource allocation, student services and learning environment, and system operation



Major Findings

- Respondent's attitude toward all questions is fairly positive and they generally agrees that the system has a great impact on the development of universities and colleges in Taiwan.
- The respondents agrees most on the category of "increasing research performance ", with a mean score of 4. 06, but a big confidence interval exists among all respondents compared with the other items.
- > several single items have a higher point.
 - Helping enhancement of overall academic performance, promotion of faculty quality, engaging in governmental research funding, focus on faculty research outputs and diversification of financial sources, increasing the number of school website pages and content, and improvement of transparency of institutional data, etc.
- > few items has a comparably lower point
 - re-identifying institutional mission and goal, hiring more top notch scholars, actively engaging in fund raising, and improving the graduation rate, etc.

Mean and STD by items

Categories		STD	95% Confidence Interval		
			Upper	Lower	
Institutional policy making	3.95	0.61	4.14	3.76	
Staff and faculty recruitment	3.93	0.67	4.14	3.73	
Research output	4.06	0.76	4.30	3.83	
Resource allocation	3.82	0.69	4.04	3.61	
Student services and learning environment	3.86	0.72	4.09	3.62	
System operation	3.93	0.75	4.16	3.69	

Summary

Most university presidents admitted that the system, to some extent, engaged the institutions actively to improve faculty quality, as well as to provide local and international students with more transparent information in school selection

Few respondents from teaching-oriented type and private institutions still believe the system had brought a negative effect on their reputation, or even hurt their reputation

➤The goal of the system has been achieved at the certain level since it was published

Future Perspective

- HEEACT, as an accrediting agency, attempts to carry out its obligation to act as a transparent information proxy instead of a ranker.
 - Has updated the data of the 69 institutions of 2010.
 - Currently, the project is moving into the second phase of national-based expansion.
 - The remaining 79 Taiwanese universities of technology and technical colleges will be added into the system by the end of 2010.
 - Having considering the missions of universities of technology and technical colleges, the system will adopt a duel-track selection approach to facilitate the different cohorts of the perspective students.
 - 5 focus groups session have been held up to present.
- To improve student mobility in Chinese society, the mid-term objective of the project is to expand its Taiwanese participation based system into an Chinese based type
 - Taiwan government just passed the law of Mainland China Students studying in Taiwan

In the long term, more and more Asian universities which intended to attract more international students will be invited to join the system soon

Challenges for College Navigator in Taiwan

- ≻Gain stable governmental funding
- Educate institutions and students
- >Enhance its international visibility
- Invite more foreign institutions to join, like what CHE does
- Develop more good quality of indicators
- Improve data quality
- >Establish a more diversified college searching engine

Higher Education Evaluation & Accreditation Council of Taiwan Attitude Toward Rankings

Realize the functions and limits of college rankings
 Develop a variety of ranking projects by field and program

>Improve data quality of "College Navigator in Taiwan"

Thank you for your listening

Questions and Comments

Higher Education Evaluation & Accreditation Council of Taiwan (HEEACT)

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