



**Council for Higher Education Accreditation
2010 Annual Conference/ International Seminar**

**Quality Assurance and Ranking of Higher Education in
Asian Pacific and Taiwan**

Presented by

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Outline

- ❑ Development of higher education in the global times
- ❑ The role of QA agencies in Taiwan higher education
- ❑ Programmatic and institutional accreditations
By HEEACT
- ❑ Self-directed Rankings by HEEACT

Three Major Concerns for Development of Higher Education in Global Times

Accessibility

- higher education enrollment rate has been increasing in the past decade

Affordability

- Finance need is not an impediment eligible students to attend a college

Accountability

- Enormous resources and talent are available in higher education institutions
 - Help students be ready for college, and be equipped to graduate from college
-

Meeting Challenges to Higher Education in Asian Pacific Region

- Over expansion of higher education
 - 726 universities and 488 junior colleges in Japan
 - 201 universities in Korea
 - 160 universities in Taiwan
 - Private universities outnumber public universities
- Low birth rate
 - three are below 1.5
- Declining financial governmental support

Recipe for higher education in Asian Pacific Region

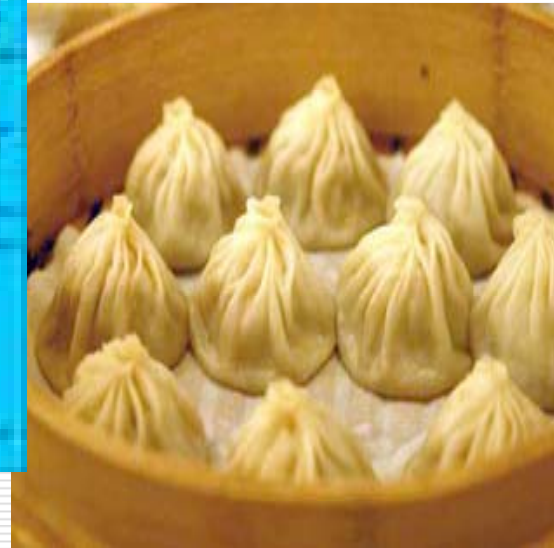
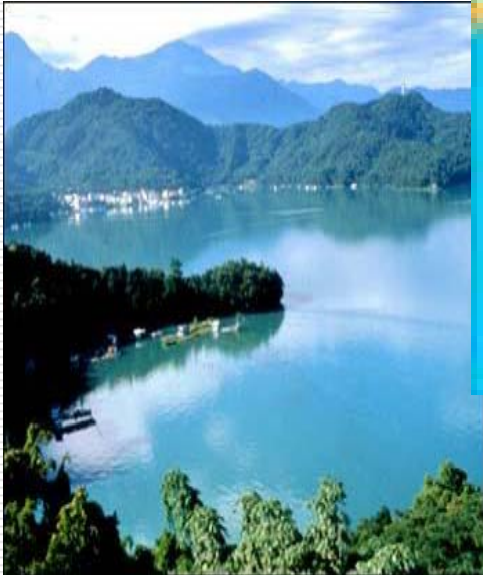
- Enhance international academic competitiveness
 - Launching several Excellence Programs Brain21 (Korea) / COE (Japan)/ 5 year-50 Billion Program (Taiwan)
- Set up Internal and External Quality Assurance System
 - Establishment of National Accrediting agency
- Establish Quality Culture on Campus
 - Compulsory audit

Quality assurance in Japan, Korea and Taiwan

- Adopt U.S. models
 - Japan: the National Institution for Academic Degrees and University Evaluation (NIAD-EU) established in 2000
 - accrediting 99 national universities
 - Korea: Korean Council for Universities Education (KCUE) granted its legal status in 1984
 - involving institutional and program accreditation (second cycle)
 - Taiwan : Higher education Evaluation & Accreditation Council of Taiwan (HEEACT) set up in 2005, going to complete the first cycle of program accreditation over 4000 programs in 75 4- year comprehensive universities.

Taiwan, Republic of China

- ❑ Area : 35,980 sq km
- ❑ Population : 26 million
- ❑ Capital : Taipei
- ❑ Taiwan President Ma, the alumni of Harvard University , most top officials got Ph.D. degrees from American /ivy league universities
- ❑ The best Chinese Treasures Museum
National Palace Museum
- ❑ Talented but friendly people, powerful IT industry, food and Chinese culture



Fact Sheet in Taiwan higher Education

1. Number of universities and colleges

Increased by **120%** in the past 10 years with more than 163 institutions

2. Student enrollment

With a total number of 1.3 millions increased **65%** with a number of **32,000 Ph.D students, 180,000 graduate students , 1 million undergraduates**

3. University Entrance Exam admission rate

More than 98% in 2009

4. Net enrollment in higher education/ /Gross enrollment

55.3% (total number of 18-22 year-old students studying at a university and a college / school-aged population between 18-21 years old)

5. Gross enrollment rate increased

78.6% (total number of students studying at a university and a college / school-aged population between 18-21 years old)

6. Tuition

1800 USD for National universities / 3300 for private universities

7. GDP average **15,800 USD**

Characteristics of Taiwan Higher Education

- Universal type
- Equity
- Accountable / competitive for governmental support
- Academic freedom
- Limited autonomy

Key issue for Taiwan society

- How to maintain our competitiveness in global higher education

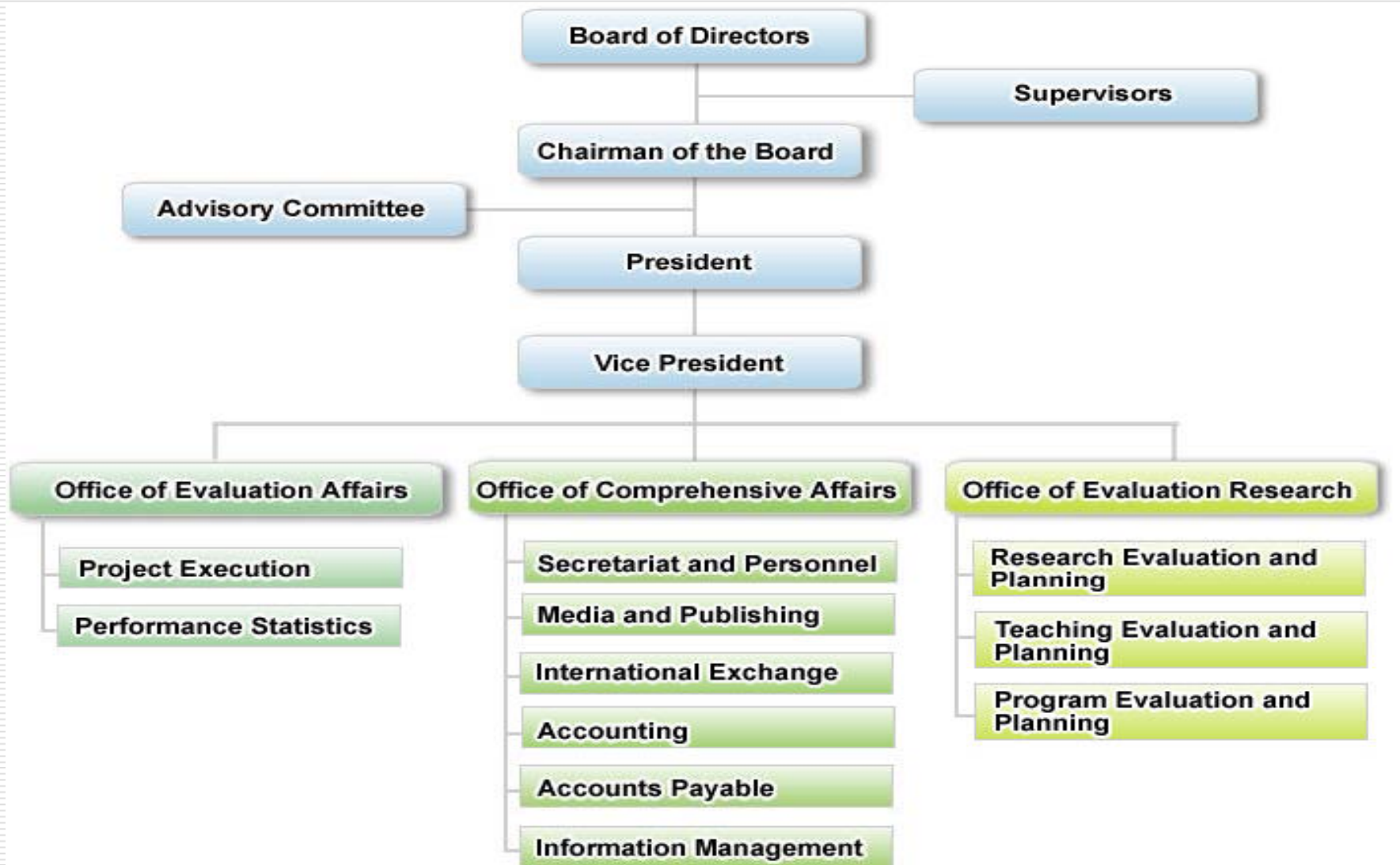
Development of External Quality Assurance - Government role

- *University Law* of 2005
 - Taiwan government is entitled to commission external evaluation agencies to assess the academic performance of an institution

HEEACT

- Endowed in 2005 with mutual funds of the government and 153 institutions in Taiwan
- 42 full-time staffs and more than 1193 part-time reviewers participated

Organizational Chart



HEEACT Accreditation Model

- HEEACT adopted American model of accreditation featuring peer review and on-site visit in the process and procedures of evaluation in order to ensure that the program provides students with a good learning environment
- From centralization to decentralization
 - A decentralized system in higher education evaluation is being formed completely
 - Other local accreditors, including IEET, Taiwan Assessment Association, Chemistry Society in Taiwan, etc.
 - International accreditor, such as AACSB



Two Major Tasks of HEEACT

- **Program Evaluation:** to help institutions and programs to enhance their quality continuously
 - Self-evaluation
 - Peer review
 - 2 –day on-site visit
 - 4~6 reviewers

- **Various Rankings :** to encourage colleges and universities in pursuit of academic excellence based on their strengths
 - Benchmarking
 - International competitiveness



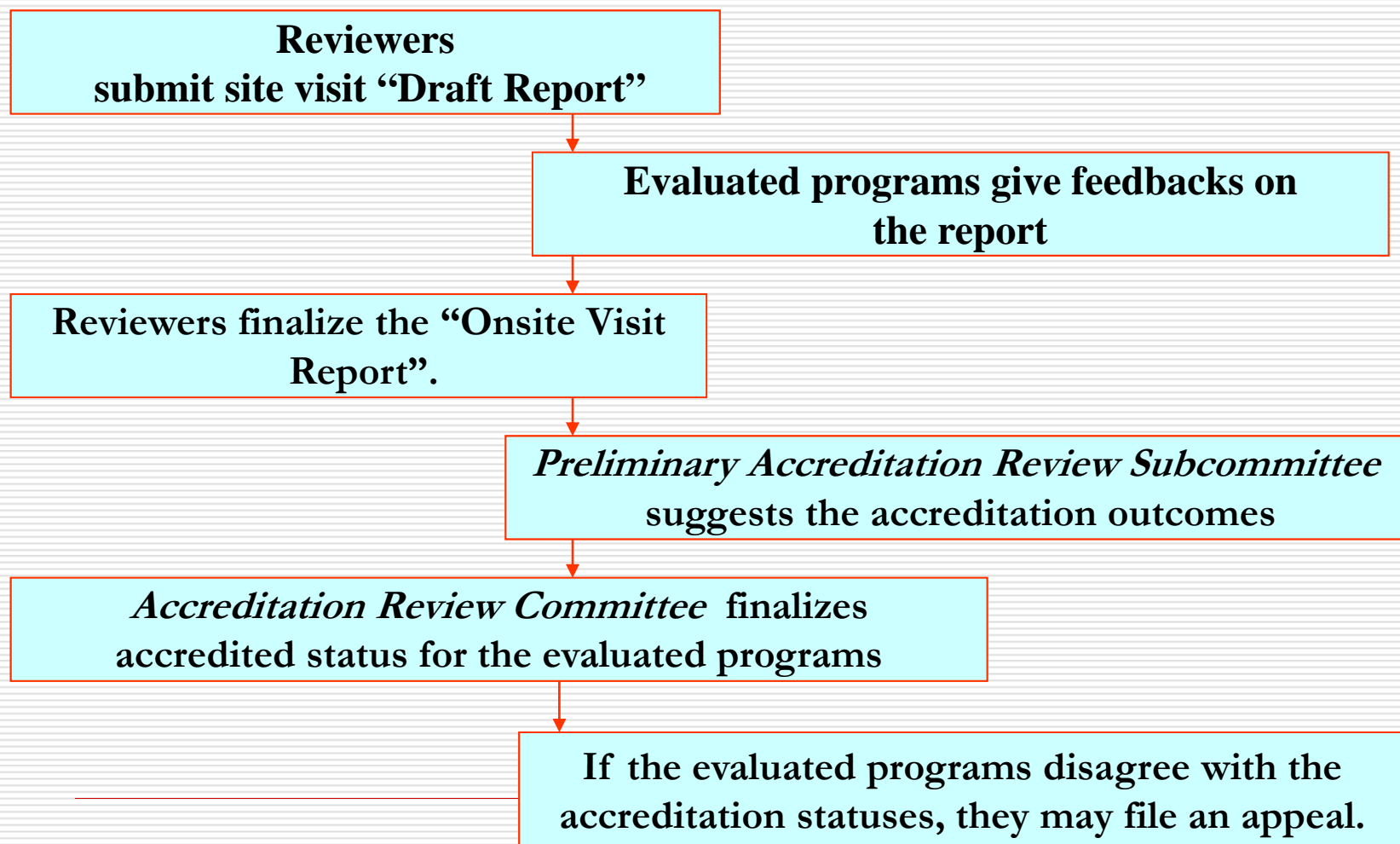
Accreditation Standards

- **Program accreditation focuses mainly on teaching quality**
 - **Providing a good learning environment**
 - **Self-enhancement instead of cross-campus comparison**
 - **Stressing input and process indicators rather than outcome ones**

- **There are five accreditation standards:**
 - **Goals, features and self-improvement mechanism**
 - **Curriculum and instruction**
 - **Student learning and student affairs**
 - **Research output and professional development Performance of graduates**



Procedure and Process



Accreditation outcomes

- **There are 3 accreditation statuses**
 - **Accredited: have been accredited by the HEEACT**
 - **Accredited conditionally: have been accredited partially and should be reviewed by the HEEACT one year later**
 - **Failure: not eligible to achieve the HEECACT standards.**



Implication

- **Accreditation final reports**
 - sent to the Ministry of Education as a reference point in policy-making
 - Outcomes are announced in a press conference
 - Be published on the HEEDACT website
- **Validity for accreditation is only 5 years**
- **Evaluation Exemption**
 - applicable to the programs which have been accredited by international accreditation agencies, such as AACSB
 - Others, like IEET, Chemical Society in Taiwan . National Taiwan Normal University
- **Accreditation of accreditors:**

HEEDACT will be transformed into Council of Higher Education Accreditation in Taiwan to accredit accreditors

Statistics for Accreditation Outcomes in the 2007 and 2008 Academic Year

Review status		Accredited		Accredited conditionally		Failure		
Year	Number of programs	Number	%	Number	%	Number	%	
2006		362	279	77%	71	19.6%	11	3%
2007	Spring	242	159	65.7%	55	22.7%	27	11.6%
	Fall	264(458*)	386*	84.3%	65*	14.2%	7*	1.5%
2008	Spring	231(418*)	376*	89.95%	42*	10%	0	0%
	Fall	266(455*)	425	93.41%	30	6.59%	0	0%
Total		1366		82%		14.62%		1.5%

Table : Exemption from HEEACT accreditation by Type and Number

	IEET	CST	NTNU	AACSB
Year starting accrediting	2004	2004	2006	2003
Type	Specialized vs. national	Specialized vs. national	Specialized vs. national	Specialized vs. international
Program	Engineering	Chemistry	Taiwan Culture and Humanity	Business
Number	249	25	28	67

2011 Institutional Accreditation

- Diversification and Features:
 - Emphasize institutional mission and identity
- Governance :
 - Resource integration and sufficient allocation
- Quality Culture :
 - Well-developed internal QA mechanism
- Student learning outcomes:
 - will be the focus of the 2011 accreditation
 - but how to evaluate student learning outcomes?
 - understanding/ measure/ faculty involvement / administrative support



Rankings of Academic Performance

- **Performance-based ranking**
 - **A variety of ranking projects have been conducted**
 - **Only top institutions in the rankings are published to the public**

Universities with 5 year-50 Billion Program

Institution	Accredited	Conditionally accredited	failure	Exemption
National Taiwan University 台大				unpublished
National Cheng Kung University 成功	100	13	0	52(3Taiwan Chinese Literature /3 Chemistry /46IEET
National Tsing Hwa University 清華	71	6	0	4 (3 Chemistry / 1Taiwan Chinese Literature
National Jiao Tong University 交通	55	3	0	37 (23AACSB/ 14IEET
National Central University 中央	71	7		20 (3 Chemistry / 17IEET
National Sun Yat-sen University 中山				unpublished
National Yangming University 陽明				unpublished
National Chung Hsing University 中興	89	1		25 (3 Chemistry / 1Taiwan Chinese Literature /21IEET
National Chengchi University 政治	78	3	0	30(3 Taiwan Chinese Literature / 30 AACSB)
Chang Gung University 長庚	26	2	0	17 (IEET)
National Taiwan University of Science and Technology 台科大	Accredited by Taiwan Evaluation Association (institution graded first rank; Faculties and program :5 Faculties graded first rank;16 programs graded first rank; one program graded second rank)			



Ranking projects

- WOS Papers Ranking (Taiwan)**
- ESI Papers Ranking (Taiwan)**
- Performance Assessment on University and Industry Collaborations (Taiwan)**
- Patent ranking (Taiwan)**
- Performance ranking of scientific papers for world universities (Global)**
- College Navigator in Taiwan (Taiwan)**



Performance ranking of scientific papers of world class universities (by institution and by field)

- ❑ Bibliometric ranking published first by HEEACT in 2007**
- ❑ 2009 edition has been published**
- ❑ Goal : analyze and rank the scientific paper performances of the top 500 universities in the world.**

Criteria and Indicators

Criteria	Indicators	Weight	
Productivity	Number of articles in the last 11 years (1997-2007)	10	20
	Number of articles in the current years(2007)	10	
Impact	Number of citations in the last 11 years (1997-2007)	10	30
	Number of citations in the last 2 years (2006-2007)	10	
	Average Number of citations in the last 11 years (1997-2007)	10	
excellence	H-index of the last 2 years (2006-2007)	20	50
	Number of highly cited papers(1997-2007)	15	
	Number of articles in high-impact journals in the current year (2007)	15	

□ <http://ranking.heeact.edu.tw/en-us/2008/TOP/100>

Ranking outcomes

- ❑ institutions in US and UK still play predominant positions in the international higher education landscape.
- ❑ only 2 universities in the Asian-Pacific region are ranked within the world's top 30 universities, and both of them are from Japan. (University of Tokyo(14) , Kyoto University(28))
- ❑ 7 Taiwan universities on top 500 in 2009 version

Top 10 World Universities (USA) 163 on top 500)

World rank	Country	National rank	Institutions	Scores	Rank (FTE)
1	USA	1	Harvard University	96.14	1
2	USA	2	Johns Hopkins University	52.67	8
3	USA	3	Stanford University	51.63	2
4	USA	4	University of Washington - Seattle	48.98	10
5	USA	5	University of California - Los Angeles	47.56	9
6	USA	6	University of Michigan - Ann Arbor	45.71	11
7	USA	7	Massachusetts Institute of Technology	44.86	3
8	USA	8	University of California - Berkeley	44.26	6
9	USA	9	University of Pennsylvania	44.03	14
10	USA	10	Columbia University	42.92	15

Top 10 Canadian Universities (21 on top 500)

World rank	Country	National rank	Institutions	Scores	Rank (FTE)
11	Canada	1	University of Toronto	42.14	13
31	Canada	2	The University of British Columbia	30.47	64
36	Canada	3	McGill University	28.30	105
71	Canada	4	University of Montreal	22.64	62
87	Canada	5	University of Alberta	21.62	168
94	Canada	6	McMaster University	20.43	41
145	Canada	7	University of Calgary	17.35	112
196	Canada	8	University of Ottawa	15.15	156
199	Canada	9	The University of Western Ontario	15.08	130
203	Canada	10	Laval University	14.96	173

Hong Kong Universities on Top 500

World rank	Country	National rank	Institutions	Scores	Rank (FTE)
185	HK	1	The Univ. of Hong Kong	15.68	280
231	HK	2	The Chinese Univ. of Hong Kong	13.65	286
325	HK	3	The Hong Kong Univ. of Science and Technology	10.96	294
420	HK	4	City Univ. of Hong Kong	8.98	372
470	HK	5	Hong Kong Polytechnic Univ.	8.12	349

Table 7: Ranks of Taiwan's Universities in HEEACT Performance Ranking for World Universities (2007-2009)

Taiwan Institutions	2007	2008	2008 Rank by number of faculty	2009	2009 Rank by number of faculty
National Taiwan University	185	141	114	102	67
National Cheng Kung University	360	328	204	307	145
National Tsing Hua University	429	366	260	347	215
National Chiao Tung University	471	463	327	456	290
National Yang Ming University	/	475	385	493	365
Chang Gung University				479	380
National Central University				482	378³

College Navigator in Taiwan (just published on 21, Oct, 2009)

- **Goal**
 - **internationalize Taiwan higher education**
 - **Provide more simplistic information for local students**
- **Target institutions**
 - **69 4-year colleges and universities evaluated by HEEACT from 2006 to 2010.**
- **Feature**
 - **respect for user's needs in selection of indicators and weightings by their own through the web-based platform. .**

Model of Criteria

- **users will be able to rank**
 - **rank module:**
 - **the institutions they are interested in by region, type, size and program.**
 - **select any institutions directly**
 - **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.**

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, student/ faculty ratio, total expenditure per student, number of articles published in SCI/ SSCI/ AHCI 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, etc.	24
Preference	location, size, type, program/ discipline, etc.	5
General information	history, enrollment, number of programs, and website, room and board, student service, accreditation status, governmental grants, scholarship, tuition, student clubs, accommodation, etc.	16



College Navigator in Taiwan

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Criteria & Indicators

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**PERSONALIZE
YOUR RANKING**

Latest News

Exporting your results

Users are allowed to save their results as .xls file.



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College Navigator



Choosing Indicators (at least 5 and up to 10 at a time)

i: detail information

Peer assessment	<input checked="" type="checkbox"/>	i Academic survey
Student selectivity	<input type="checkbox"/>	i Enrollment rate
	<input type="checkbox"/>	i Number of national academic awards by students
Student demographics	<input type="checkbox"/>	i Proportion of graduate students
	<input checked="" type="checkbox"/>	i Faculty-student ratio
Faculty resources	<input type="checkbox"/>	i Proportion of full-time faculty
	<input type="checkbox"/>	i Proportion of professors with Ph.D.
	<input type="checkbox"/>	i Proportion of faculty above assistant professor
	<input type="checkbox"/>	i National Academy membership
	<input checked="" type="checkbox"/>	i Number of articles published in SCI per faculty



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College Navigator



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

Academic survey	20	%
Faculty-student ratio	10	%
SCI	15	%
AHCI	12	%
Total NSC grants in Sciences per faculty	23	%
Total holdings per student	20	%
Total	100	%

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College Navigator



Mode 1. Narrow the Choices according to your preferences

Region: Detail

- All
- Region (North Central South East)

Type:

- All
- Type (Public Private)

Field/Program: Detail

- All
- Field (Engineering &IT Humanity & Social Sciences Biomedicine Sciences)

Size:

- All
- Size (Below 4999 5000~9999)



rd arrow, the indicator is in the top 30% of all institutions)

ideward arrow, the indicator is between 31% and 69% of all institutions)

ard arrow, the indicator is in the bottom 30% of all institutions)

re not submitted in the form requested by HEEACT)

Rank	Institution	Academic survey	Enrollment rate	Number of national academic awards by students	Proportion of graduate students	Faculty-student ratio
1	National Taiwan University	↑	↑	↑	↑	↑
2	National Tsing Hua University	↑	↑	↑	↑	↑
3	National Taiwan Normal University	↑	↑	↑	↑	↑
4	National Chiao Tung University of Science	↑	↓	↑	↑	→
5	National Central University	↑	→	↑	↑	↑
6	National Chengchi University	↑	↑	→	↑	→

Export to Excel Questionnaire

Close Window



National Taiwan University

No. 1, Sec. 4, Roosevelt Road, Taipei, 10617 Taiwan(R.O.C)

Year founded: 1945

Campus setting: 1,354,304 square meters

Total enrollment: 32,716

Number of undergraduates: 17,615

Number of graduates: 15,101

Website: <http://www.ntu.edu.tw/english/>

Directions: [Detail](#)

Programs/ Degrees Offered

Undergraduate degree: 59

Master degree: 100

Ph.D. degree: 88

Master Programs for working students: 26

Financial Aid / Accreditation Outcomes

5 Year -5 Billion Research Project in 2008: 30 million dollars

2007 Scholarship: 556,479,315 dollars

2007 Endowment: 127,055,434 dollars ([Detail](#))

2007 equipment budgets: 963,242,992 dollars

Other Information

Application: [Detail](#)

Tuition and Fees:

Outstanding Alumni: [Detail](#)

Num. of Student Studying Abroad: 169

Num. of English Taught Courses: 785

Campus Housing: Yes/ \$NT 3500~9300 ([Detail](#))

Num. of Student Clubs: 566 ([Detail](#))

[Close window](#)



College Navigator in Taiwan - Survey

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Q1. Definitions of indicators are clearly stated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2. Selection of indicator number is reasonable. (between 2-11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3. Presentation of ranking outcome is clear and understandable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4. Presentation of basic information for each institution is clear and understandable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q5. Information provided is useful for me to select a school to study.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q6. It is pretty convenient for me to operate this ranking tool.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q7. Speed of this system is moderate and doesn't take me too much time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q8. Functions in the system are highly stable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9. Web pages are presented clearly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q10. Contrast of color is nice and comfortable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q11. Information on the web-pages is easily read.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other comments:					
<div style="border: 1px solid gray; height: 60px; width: 100%;"></div>					
					<input type="button" value="Reset"/> <input type="button" value="Submit"/>

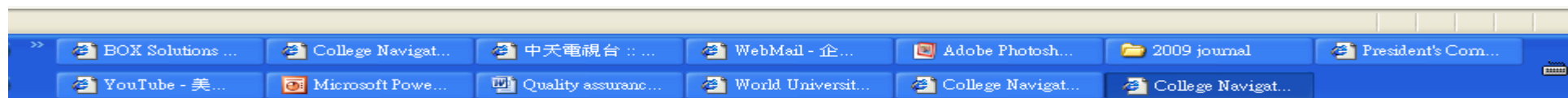


Table : Top 10 indicators by the number of usage times

Indicators	Usage times
Academic survey	8073
Expenditure per student	6729
Enrollment rate	5848
Faculty-student ratio	5223
Average proportion of graduated students	5209
Number of national academic awards by students	3807
Total holdings per student	3802
Total NSC grants per faculty	3404
Proportion of full-time faculty	3139
Proportion of professors with Ph.D.	3039

Good things to share with

- Transparency
- Independence
- Professionalism
- Taking care of public demand

Role of Accrediting Agencies in Taiwan Perspective

- Implementing different types of accreditations
- Developing multi-dimensional evaluation tools, including ranking, accountability, TQM , etc .
- Enhancing objectivities
- Healthier relationship between accreditors and institutions



Conclusion

- For Accreditor**
 - **As a quality proxy for institutions**
 - Development of various tools for quality assessment**
 - **Self enhancement**
 - Reviewers' training**
 - International partnership and collaboration**
 - **International accreditation**
 - **Mutual recognition**
- For higher education institution**
 - **As a knowledge innovator for society**
 - **Market -driven force**
 - **Quality culture**
 - **International competitiveness**

Questions and Comments

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