

Is 'gender' speakable in the community of physics in Taiwan?

By

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Outlines

1. The Various Educational Routes in Taiwan
 - **台灣學制圖**
2. Percentages of Females in **General** Fields
3. Student Participation in Specific Fields: **Humanities**, **Social Sciences**, and **Science and Technologies**
4. Percentages of Females in **Physics**
5. The Working Group on Women in Physics (**WGWIP**)
6. Beyond Numbers: **Gender Culture** in Physics

大專生女性比率

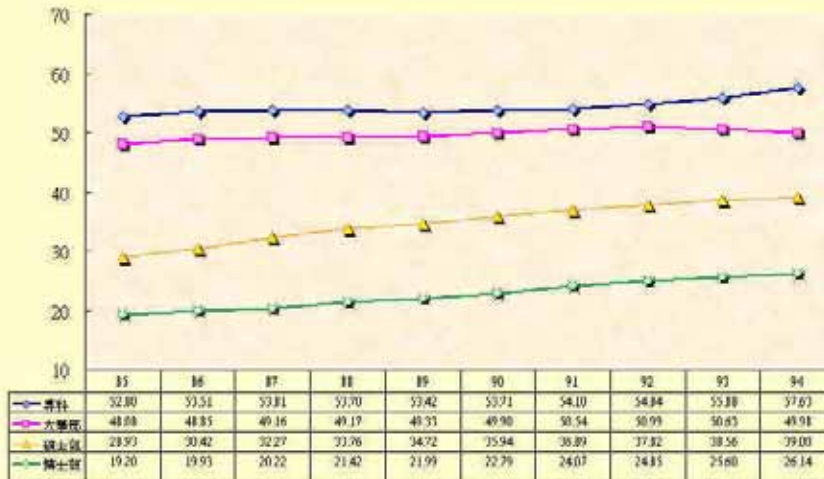


表1-1-5 各級教育教師女性所占比率 以專任教師計算

Table 1-1-5 Percentage of Female Teaching Staff in Public and Private Institutions by Level of Education, Based on Head Counts 2002 年 (Source: OECD indicators, 2004) 單位: %

	學前教育	初等教育	初級中等	高級中等教育		中等以上	高等教育			
			教育	高中	高職	非高等教育		專科	大學校院	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
亞洲										
中華民國	98.1	68.1	66.1	54.3	57.4	48.1	-	34.5	50.5	33.8
2003年	98.1	68.1	66.1	54.3	57.4	48.1	-	34.5	50.5	33.8
2004年	98.4	67.9	67.3	55.4	58.4	49.1	-	34.3	61.1	33.5
中國大陸 ¹	97.5	52.2	43.8	40.2	37.5	48.8	...	...	...	45.4
日本 ²	98.0	65.0	40.0	29.2	x(4)	x(4)	x(4,9,10)	...	36.1	14.1
南韓 ¹	99.4	72.2	61.9	32.0	31.4	33.0	-	...	31.3	26.6
泰國	...	...	...	...	...	...	...	...	...	...
菲律賓 ¹	97.0	87.3	76.2	76.6	76.6	-	...	...	x(10)	54.7
馬來西亞 ¹	99.7	66.9	x(4)	63.3	64.1	46.2	40.7	...	47.0	43.5
印尼	98.1	54.4	42.1	37.4	39.7	32.6	-	...	x(10)	38.5
印度 ¹	92.0	36.0	36.0	32.0	32.0	47.9	21.9	...	40.0	37.0

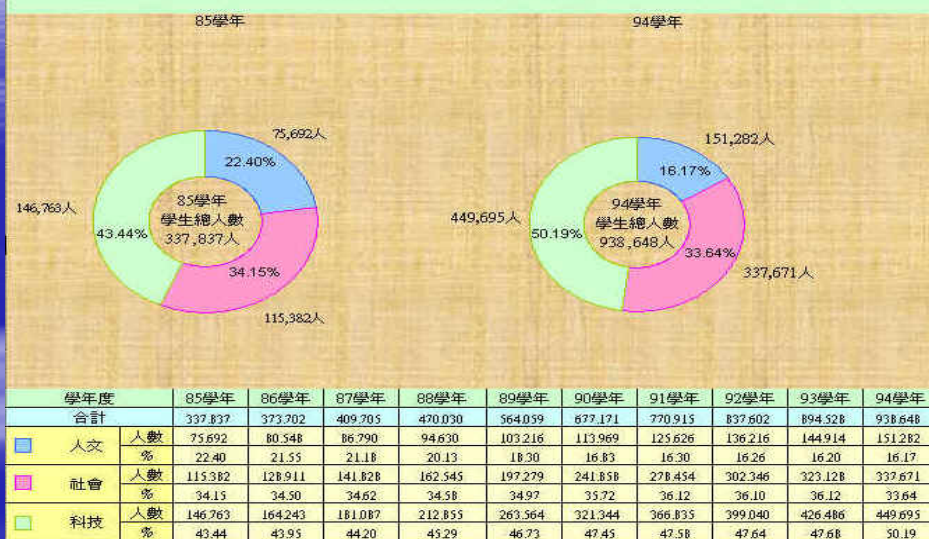
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	學前教育	初等教育	初級中等	高級中等教育			中等以上	高等教育		
	(1)	(2)	(3)	(4)	高中	高職	(7)	(8)	專科	大學校院
					(5)	(6)			(9)	(10)
美洲										
美國	91.1	88.2	64.8	52.1	52.1	-	50.4	...	x(10)	42.1
加拿大	68.1	68.1	68.1	68.4	68.1	70.1	x(10)	...	47.6	33.9
歐洲										
英國	96.7	81.8	59.2	53.9	52.7	55.0	x(4)	...	35.0	x(9)
法國	78.7	78.7	63.0	50.0	52.7	45.7	...	...	33.9	33.9
德國	95.1	82.4	59.4	31.7	34.7	28.9	38.1	...	47.0	28.5
義大利	97.6	95.3	73.8	54.5	x(4)	x(4)	n	...	34.2	30.4
西班牙	91.6	71.0	59.8	45.4	x(4)	x(4)	x(4)	...	44.4	35.2
比利時	92.5	78.9	x(4)	58.6	x(4)	x(4)	x(4)	...	x(10)	38.8
荷蘭	...	80.1	x(4)	32.5	27.7	41.5	...	...	x(11)	33.1
大洋洲										
澳大利亞	...	...	...	...	...	...	...	...	...	37.9
紐西蘭	98.8	86.5	66.1	58.3	58.3	58.3	58.3	...	59.0	54.9

資料來源: 2004年經濟合作發展組織「各國教育概觀」。(Education at a Glance, OECD Indicators 2004, Tab. D7.2)
 附註: 1. 資料為2001年。 2. 日本之高級中等教育資料係推估數。

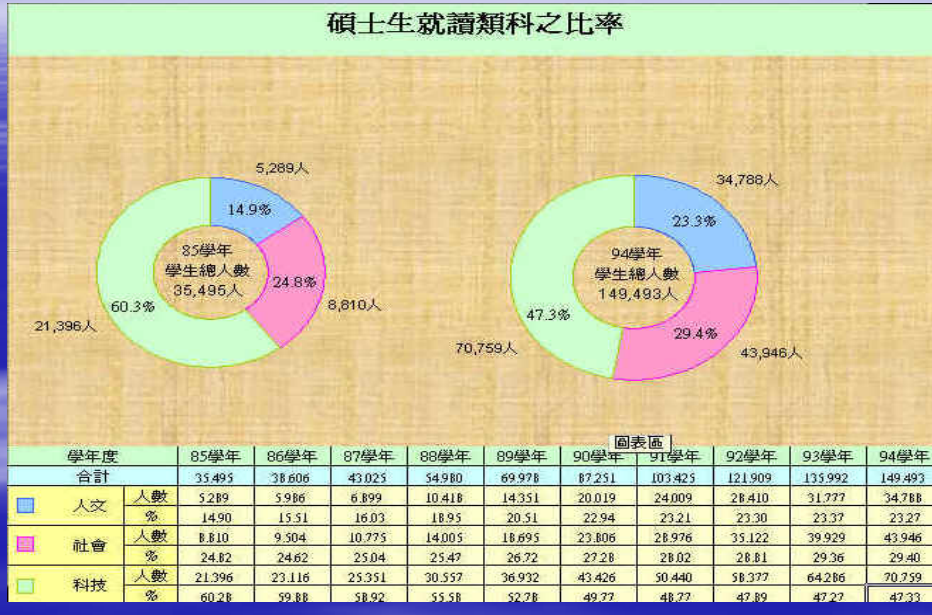
3. Student Participation in Specific Fields-1

大學生就讀類科之比率



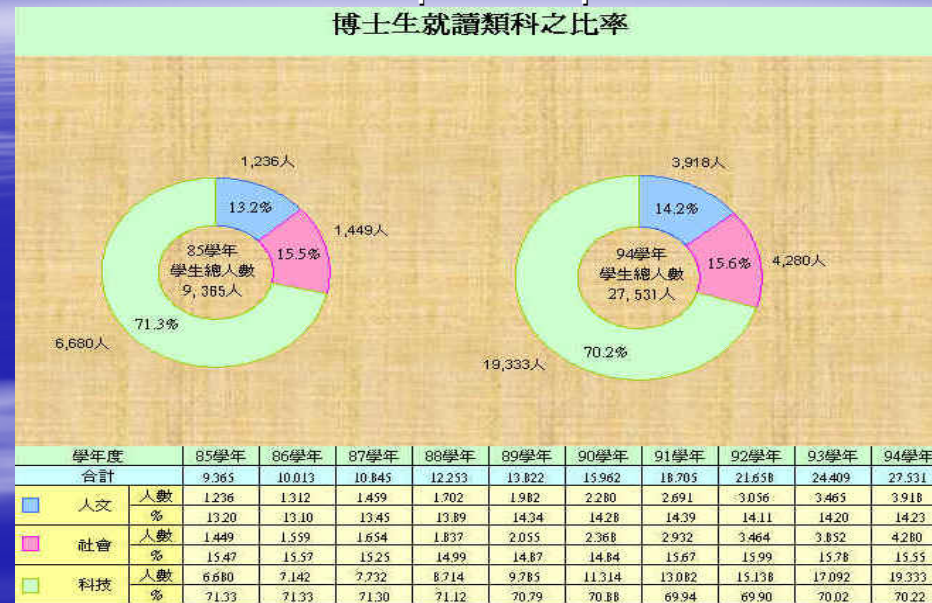
3. Student Participation in Specific Fields-2

碩士生就讀類科之比率

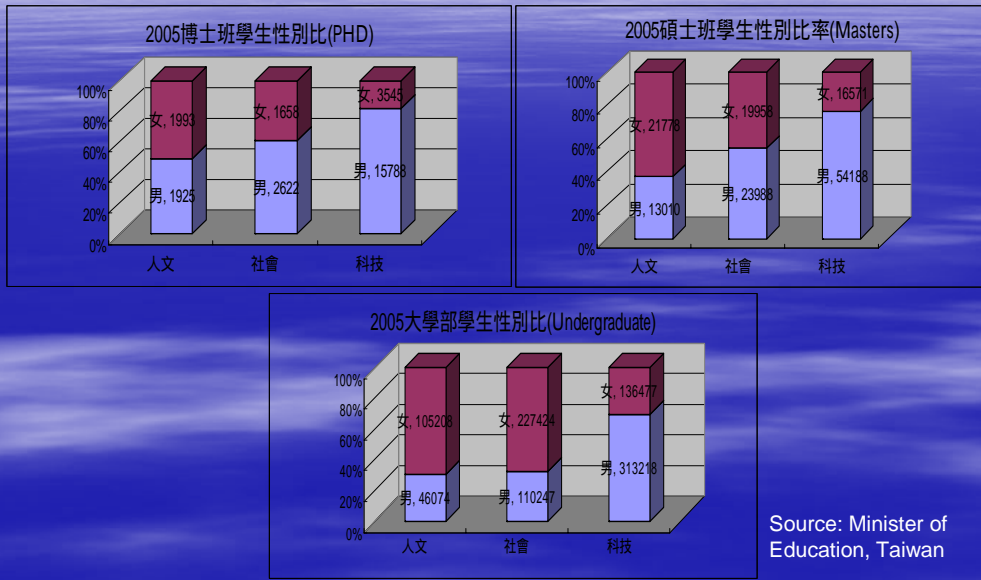


3. Student Participation in Specific Fields-3

博士生就讀類科之比率

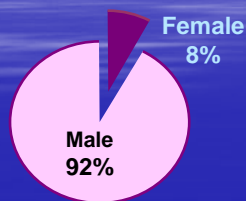


3. Percentages of Females in Specific Fields

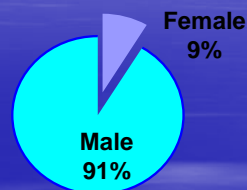


4. Percentages of Females in Physics-1998

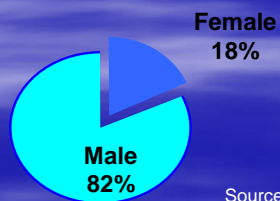
Faculty Positions



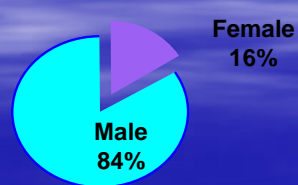
PhD Student



Master's Student

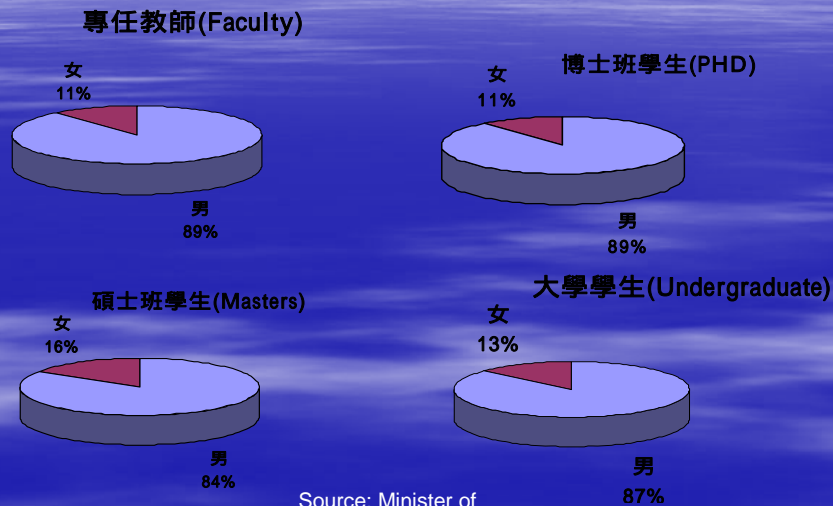


Undergraduate Student



Source: H.N. Yang (2000)

4. Percentages of Females in Physics-2005



5. The Working Group on Women in Physics (WGWIP)

- The 1999 initiatives of IUPAP (International Union of Pure and Applied Physics)

- My involvement and research on WGWIP of Taiwan starting 2001

- Doctoral research fieldwork (December 2001 to June 2002)
- Follow-up contact and assistance up to now
- Professional advice on gender and science
- Administrative support
- Project executive

**Working Group of Women in Physics in Taiwan
(WGWIP in Taiwan)- *Established Since 2000***

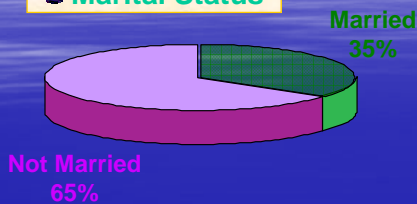
Our Missions

1. To initiate and implement exchange programs among professional female scientists, including academic resource information and career developments.
2. To support the female education and promote the new generation of female physicists.
3. To institute female-friendly policies and regulations which will be beneficial to both male and female physicists.
4. To strengthen the international collaboration on humanity within the scientific community. (Recog. J. R. Kuo)

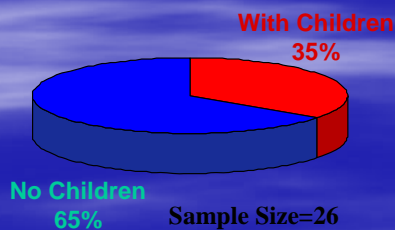
IUPAP Survey Outcome-7

Personal Aspects

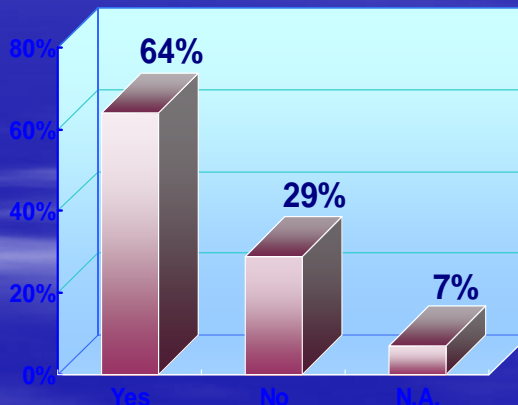
Marital Status



Family Status



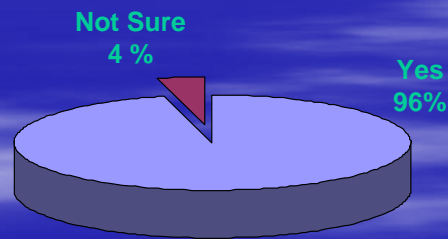
Does The Situation of Women Physicists in Taiwan Needs to be Improved? (Sample Size=28)



IUPAP Survey Outcome-8

We Are Positive with Our Choices

Would You Choose Physics Again?
(Sample Size=28)



Milestones for WGWIP in Taiwan

- ✓ **Nov. 2000**- Established the WGWIP under Physical Society of Republic of China (PSROC) in Taiwan.
- ✓ **Jan. 2001**- Held first discussion session for female physicists in annual meeting of PSROC.
- ✓ **Oct. 2001**- Started first meeting with female graduate students.
- ✓ **Feb. 2002**- Became an official committee under PSROC.
- ✓ **Mar. 2002**- Attending IUPA International Conference on Women in Physics.
- ✓ **May 2002**- Held the first joint symposium with female chemists. (Became a regular promotion activity under PRPC.)
- ✓ **Dec. 2003**- Offered the first scholarship for female graduate students in physics (**Wu Chien Shiung Scholarship**).
- ✓ **Mar. 2004** – Initiated the bill of Female Tenure O'clock at National Taiwan University (Have already implemented in NTHU)
- ✓ **June 2005** - Made the first film for Female Physicist in Taiwan.
- ✓ **July 2006**- First Summer camp for under-/graduate students with female Physicists.

(Recog. J.R. Kuo)

The IUPAP International Conference on Women in Physics
Paris, France, 2002



2002 female physicist and chemist
joint symposium



The film on women in physics in
Taiwan, released 2005

物理好丰采 影片首映會
台灣女性物理人的精采人生
女生向前走
物理好未來

議程

- 2:00 開幕典禮
- 2:00-2:20 貴賓致詞
- 2:20-2:30 影片介紹
- 2:30-3:10 放映「物理好丰采」影片
- 3:10-3:30 茶會
- 3:30-4:30 「性別與科技」論壇

日期: 2005年6月27日
時間: 2:00-4:00 PM
地點: 台灣大學藏書物理館
二樓國際演講廳

中華民國物理學會女性工作委員會

The Obvious And Not So Obvious

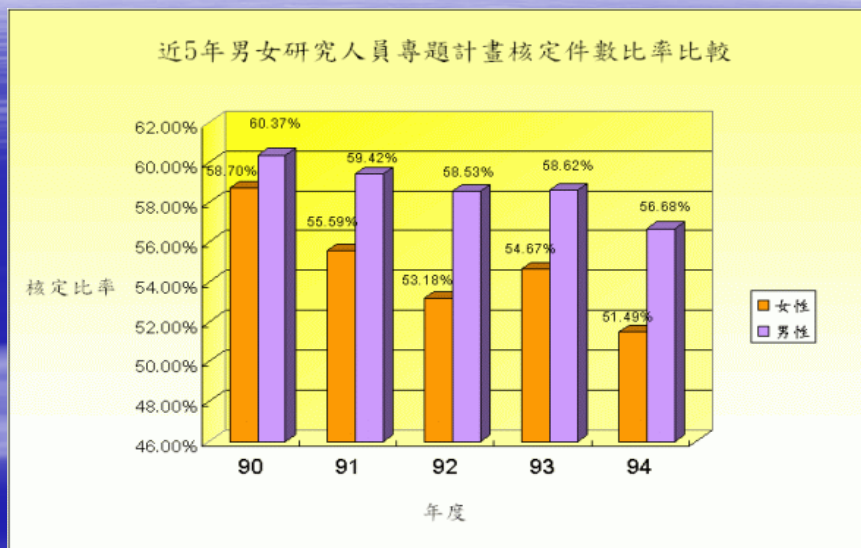
2005 Principle Investigators in Physics Projects (國
科會物理計畫主持人)
(data: Department of Natural Sciences, NSC)

Total PIs: **440**
Female PIs: **28 (6.4%)**

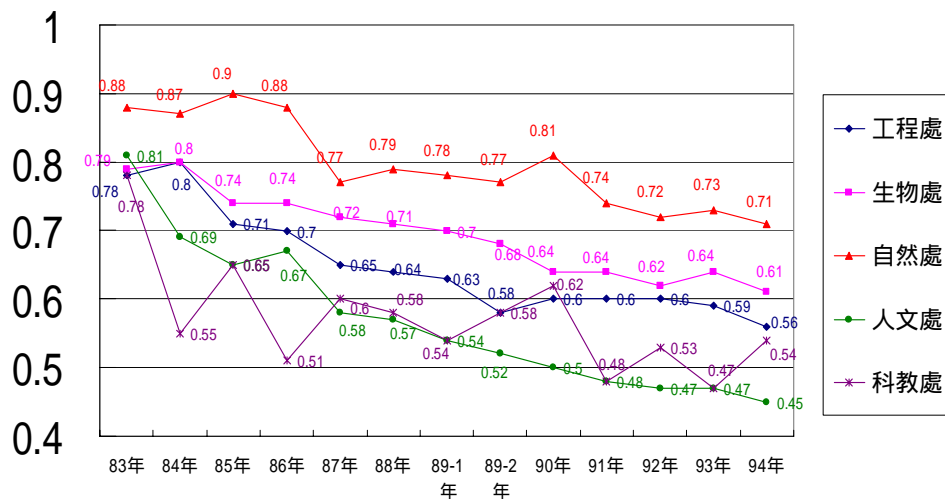
Male: 412/556 (~74%)
versus
Female: 28/47 (~60%)

(Recog. J. R. Kuo)

Gendered Approval Rates of NSC Grants 2001-2005



Chances of Approval of NSC Grants



What we can do ?

-- In a predominately male society like "Physics"

- To **assist** removing the obstacles in balancing the career and family for WIP.
- To **build** the confidence of WIP to grow in academia and characters.
- To **cultivate** a positive atmosphere of acceptance, sensitivity, and encouragement.
- To **develop** fully the gifts unique of WIP in research, teaching, and management.
- To **establish** the "mentor" system to provide advice, opportunity, and resource.
- To **foster** networking and collaboration among WIP.

(Recogn. J. R. Kuo)

6. Beyond Numbers: Gender Culture in Physics Is Gender Speakable?

- **Challenges from within**
 - Demanding a “non-feminist” leader
 - Reinforcing hierarchical power structure
- **Challenges from other women physicists**
 - Commanding presence vs. trustworthy sharing
 - Betraying the image of “Chinese” women
- **Is gender a legitimate topic in physics?**
 - Generational differences and the feminist movement in Taiwan
 - Relations with “feminist” other groups
- **Challenges from male colleagues**
 - Their hurt feelings
 - Problems “out there” or “in” the departments

Conclusion

- Forming a WGWiP is somehow a gesture to speak out “gender” in physics, while it requires careful negotiations and “non-feminist” “men-friendly” self representations of the members.
- Sheer increase of numbers does not guarantee increase of rights if the genderculture of physics remains unchallenged.