

Comparing Gendered Differences in U.S. and Cambodian Students' Participation in STEM

PURPOSE

If boys' preference for math and science were biological, it would be the same everywhere. But it's NOT (Charles & Bradley, 2002; Penner, 2008; Else-Quest, Hyde, & Linn, 2010).

How do female and male university students in the US and Cambodia differ in their participation in STEM fields?

FINDINGS

Within-country variation in attitudes toward women in science

- Perhaps the search for female scientists should go to the countryside
- Women in science fields in provincial universities were encouraged by male and female relatives
 - IT & other sciences perceived as pragmatic
- In the globalized cities, women are not shy of math – but major in accounting over IT

National and original survey data

- Women did major in sciences, despite traditional gender norms
- Women's participation was high in all fields, other than engineering



From left to right, a predominantly female accounting course and predominantly male IT course in a Siem Reap (global tourism capital), private university



Focus group students in nursing and IT from a provincial state university: female students on the left and male students on the right

Proportion of Women Enrolled in Scientific and Other Major, by Scholarship and Paid Funding Status		
Major Type	% Women, Years 1-4	
	Scholarship	Paid
Natural Sciences & Engineering		
STEM - Agriculture	33.07%	24.77%
STEM - Earth & Environment	53.90%	37.81%
STEM - Engineering	29.24%	5.40%
STEM - Health	43.27%	47.59%
STEM - Natural Sciences	39.16%	31.97%
STEM - Technology	16.99%	8.02%
STEM-Related Majors		
Accounting	68.33%	74.17%
Education	27.39%	28.68%
Rural Development	44.47%	30.34%
Social & Behavioral Sciences	45.99%	35.70%
Non-STEM Majors		
Agri-Business	29.40%	19.46%
Architecture	17.59%	17.74%
Business	43.99%	41.68%
Fine Arts	29.89%	29.44%
Foreign Languages	43.52%	39.71%
Foundation Year	80.00%	46.40%
Humanities	36.38%	35.94%
Humanities / Fine / Liberal Arts	35.33%	34.39%
Khmer Culture / Studies	42.40%	53.69%
Law	32.39%	23.88%
Liberal Arts	0.00%	38.53%
Tourism	46.24%	39.23%

Source: Cambodian Ministry of Education, Youth, and Sport, Department of Higher Education, Education Management Information System data, 2011-2012.

Note: N institutions = 614 universities. N students = 181,968. Authors' calculations.

NEXT STEPS

Two papers: (1) predicting the gender gap with Cambodian Census data & (2) students' perceptions of college & career



Cambodian higher education institutions range by size, funding status, region, focus, and age. 90% of students attend a university that is less than 10 years old. Opportunities and expectations are changing rapidly. From left to right: students after class at a public university in Phnom Penh: female students working on laptop and talking on a bench off the campus motorbike stand, groups of single-sex and mixed students sitting together; students (mostly male) working in the library at a Siem Reap private university; debate team students competing at a private university in Phnom Penh.

Dr. Lara Perez-Felkner, College of Education,
(850) 645-8450, lperezfelkner@fsu.edu