USING "BIG DATA" APPROACHES TO BETTER UNDERSTAND THE INTERNATIONAL STUDENT EXPERIENCE

Katherine Yngve, Associate Director of Learning Outcomes, CILMAR
& Intercultural Learning Specialist, OIRAE

Lisa Lambert Snodgrass, PhD, Assistant Professor, Educational
Leadership & Policy Studies

STATEMENT OF THE PROBLEM

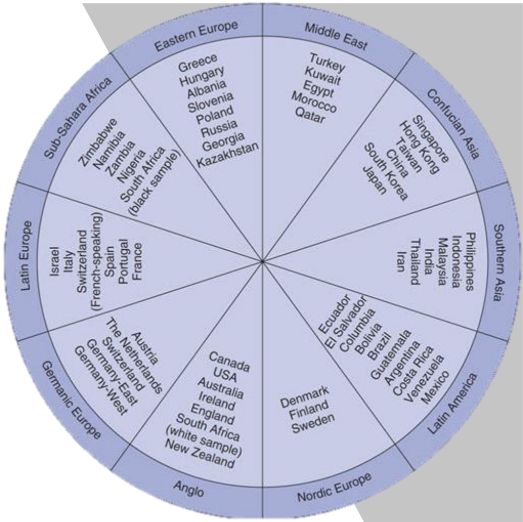
- In institutional research, it is common to disaggregate findings about US student populations into categories based on such things as race or ethnicity, socio-economic status, and gender identity.
- By contrast, findings about international students are most typically reported in binary “domestic or not” configurations or atomized by nationalities.

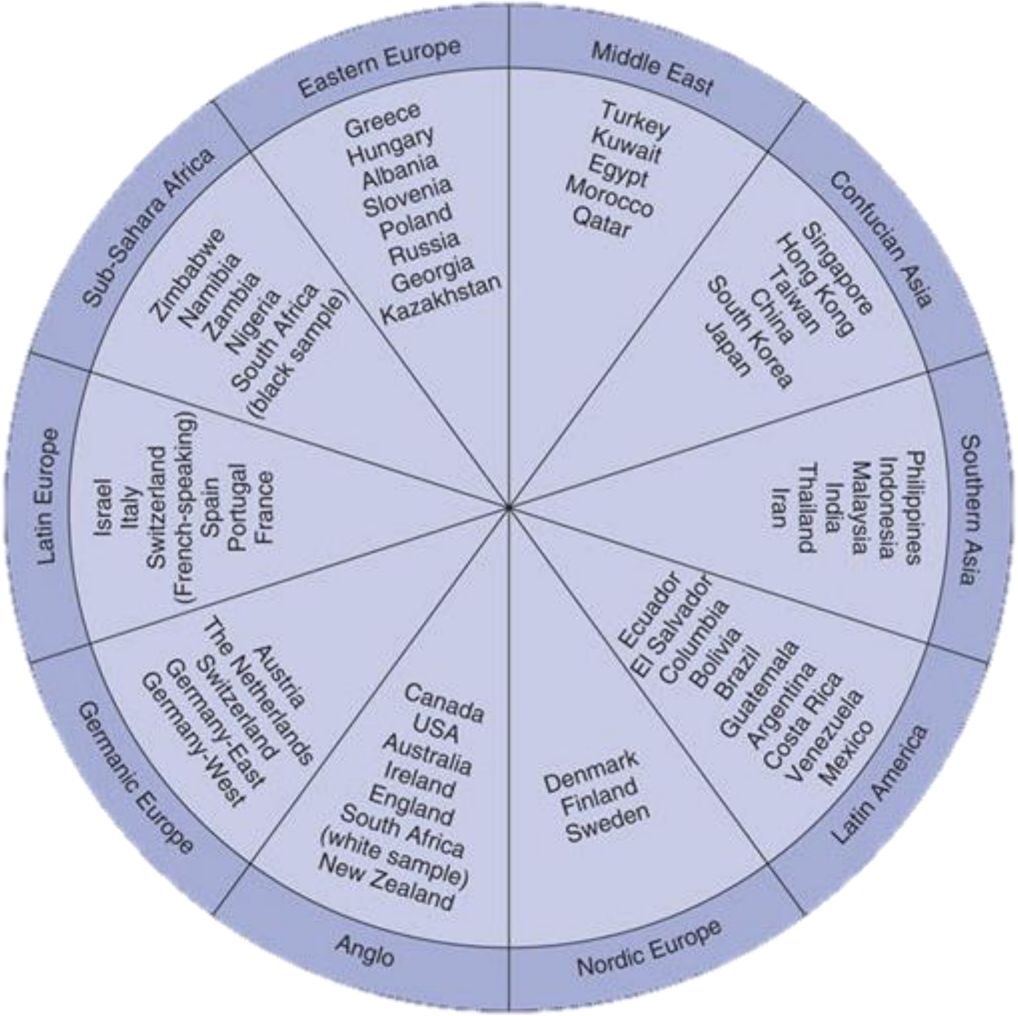
SOLUTION: DATA CLUSTERS

The GLOBE Project (2004)

- 62 societies; 17,300 middle managers; 951 organizations
- Based on Hofstede’s research into value dimensions
- Organized the data into **regional clusters** as a method to
    - Analyze similarities and differences between cultural groups
    - Make meaningful generalizations about culture, leadership, and organizational effectiveness
- 10 distinct groups:

Anglo	**Latin Europe**	**Nordic Europe**	**Germanic Europe**	**Easter Europe**
Latin America	Middle East	Sub-Saharan Africa	Southern Asia	Eastern Asia





https://globeproject.com/results/

Cluster Dimensions of Culture

Characteristics:

- *Anglo* – competitive & results oriented
- *Eastern Asia* – results-driven, encourage collaboration toward goals over the individual
- *Eastern Europe* – forceful, gender equality, collegial
- *Germanic Europe* – value competition, aggressiveness, results oriented
- *Latin America* – loyal, devoted to friends & family
- *Latin Europe* – individual autonomy
- *Middle East* – devotion/loyalty to own people, gender disparities
- *Nordic Europe* – long-term success priority, gender equity
- *Southern Asia* – strong familial ties, concern for community
- *Sub-Sahara Africa* – other focused, strong family devotion

SO WHAT:

- Research Method
  - Student Experience in the Research University (SERU) survey
  - Intercultural Knowledge & Competence VALUE Rubric (AAC&U)
  - Population: all undergraduate students enrolled in fall 2016
    - Sample: 2, 944 SERU respondents

Table 1. Race/ethnicity

Classification	**Percentage**
Asian	6.4
Black or African American	3.1
American Indian or Alaska Native	.16
International	23
Two or more	2.2
Unknown	2.5
White	58.2%

- Item Selection: based on best fit for each category of the IKC VALUE rubric

Category	Item Selected
Curiosity	During this year, how often have you found a course so interesting that you did more work than was required? Have you completed an on-campus academic experience with an international or global focus?
Openness	How often in the classroom have you interacted with someone with views that are different than your own? In your major, how often have you reconsidered your own position on a topic after assessing the arguments of others? How would you characterize your political orientation?
Self-Awareness	
Worldview	How often in the classroom have you appreciated the world from someone else's perspective? How often outside the classroom have you appreciated the world from someone else's perspective? When you started here, what was your ability to understand international perspectives? Now, what is your ability to understand international perspectives?
Verbal and Non-verbal Communication	During this year, how often have you communicated with a faculty member by email or in person? How often do you communicate with an instructor outside of class about issues and concepts derived from a course? How often in the classroom do you discuss and navigate controversial issues? How often outside the classroom do you discuss and navigate controversial issues? How important have student organizations been in learning how to resolve disputes? When you started here, how would you rate your oral communication skills? Now, how would you rate your oral communication skills?
Empathy	How frequently have you helped a classmate better understand the course material when studying together? How many hours have you spent performing community service or volunteer activities?

SAMPLE: WORLD VIEW CATEGORY

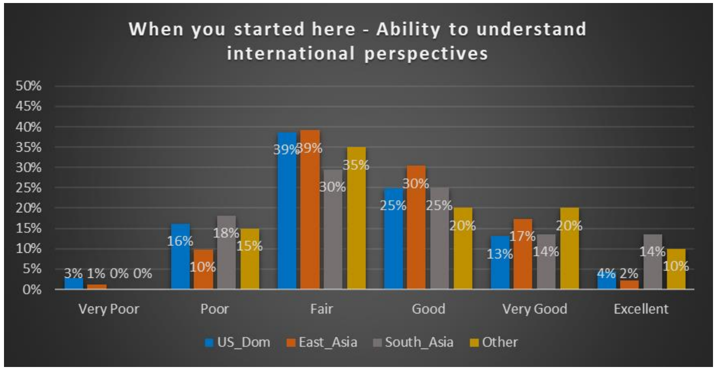


Figure 13: Percentage of students rating their ability to understand international perspectives when they began at the university.

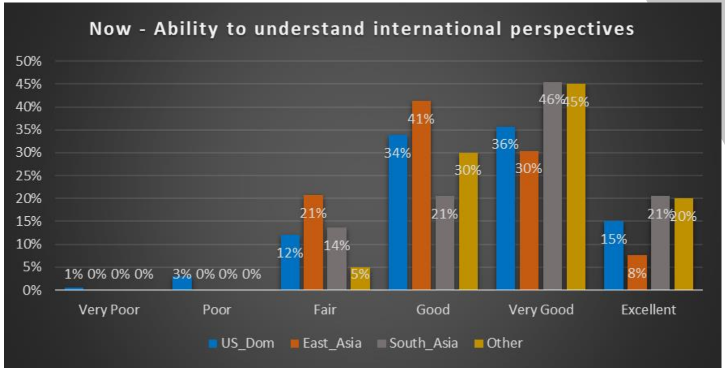
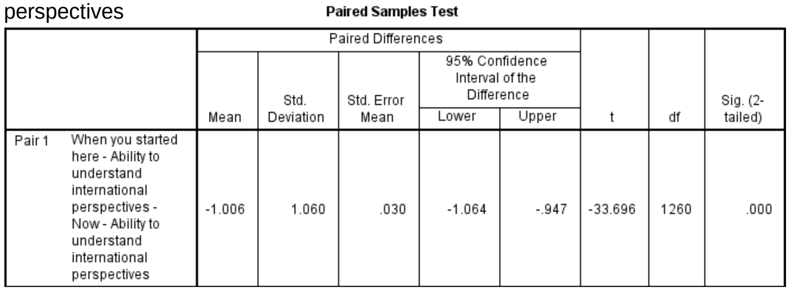


Figure 14: Percentage of students rating their present ability to understand international perspectives.

Paired t-test of When you started and Now – ability to understand international perspectives



Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	When you started here - Ability to understand international perspectives - Now - Ability to understand international perspectives	-1.006	1.060	.030	-1.064	-.947	-33.696	1260	.000

Goodman and Kriskal's Gamma values by country cluster for Cross-tabulation of when you started and Now – ability to understand international perspectives

Country Cluster	Gamma Value	Approximate Significance
U.S. Domestic	*G* = 0.55	p = 0.000
East Asia	*G* = 0.65	p = 0.000
South Asia	*G* = 0.79	p = 0.000
Other	*G* = 0.59	p = 0.000

NOW WHAT:

Data suggest that:

- Not all groups of international students at Purdue are having the same educational experiences & outcomes.
- We can take, in larger-scale institutional research, practical measures to avoid inaccurately clumping them together as “the same.”

How might this methodology be useful/implemented at your institution?

- Your ideas
- More of your ideas

- Data may be used to inform differentiated advising, mentorship, and program development based on clusters.

THANK YOU!

Questions ?

Katherine Yngve,

Assoc. Director of Learning Outcomes,
Center for Intercultural Learning,
Mentorship, Assessment & Research
kyngve@purdue.edu

Lisa Lambert Snodgrass, **PhD**,
Assistant Professor,
Educational
Leadership & Policy Studies
lsnodgra@purdue.edu