

Assessing the Spectrum of International Undergraduate Engineering Educational Experiences



NSF EEC-1160404

Collaborative Research: Assessing the Spectrum of International Undergraduate Engineering Educational Experiences

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Overview of the day

- Workshop built around your feedback
- Short sessions with data to drive conversations and share expertise across different schools
- Structured note protocol to share conversations
- Hourly email/phone breaks

Schedule	Time
Big picture of the results	9:15-9:50
Hallmarks of success	10:00 – 10:50 11:00 – 11:50
Working lunch Perspectives from our International Partners	12:00 – 12:50
How to use the findings from the Delphi study – Semantic map	1:00 – 1:50
How have institutions used the data from the study	2:00 – 2:30
What should our community be doing next for international education	2:30 – 2:55
Closing the loop	2:55 – 3:00



Need to measure global preparedness in engineers

- It's expensive!
- Anecdotal methods

Research Focus

- Identify experiences
- Determine impact



Background

Study 1 –

- Delphi study with SMEs
- Useable Framework



Study 2 –

- 4 school mixed methods study
- Specific experiences & contribution



Study 3 –

- Large 14 school study with single instrument
- Catalog impacts and accessible database



Our Research Focus:



To enhance engineering students' global competency and preparedness...

We must:

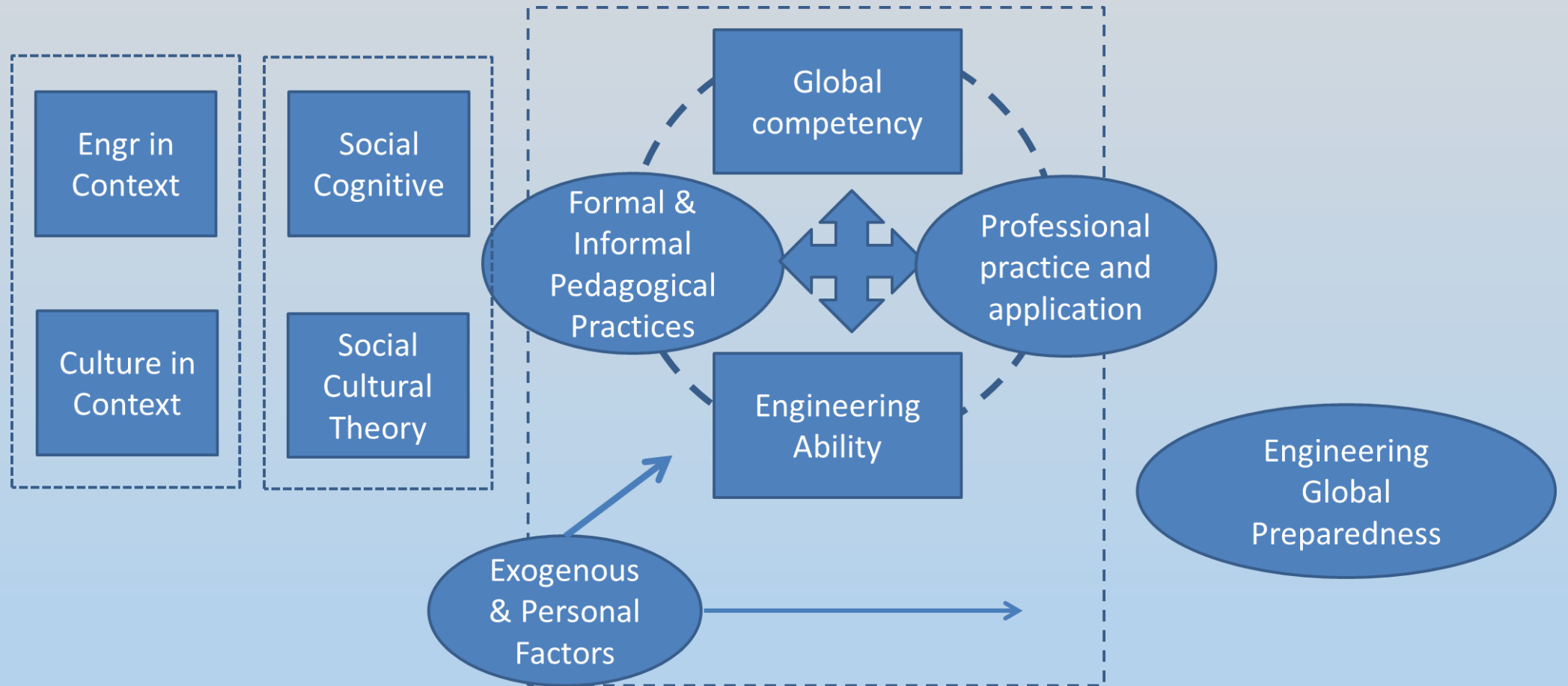
- *Better **identify the various ways** that global preparedness can be developed both in and out of formal curricula*
- *Better understand how **each approach enhances students' global awareness, preparedness, competency***
- ***Measure the impact** that certain experiences have on engineering students*



Study 1

- Develop an operational model of elements of a globally prepared and competent engineer
- Determine the types of learning experiences necessary to produce such an engineer

Our Theoretical Framework



**Context
Factors**

**Precursor
Theories**

**Mediating
Experiences**

"Maturation"

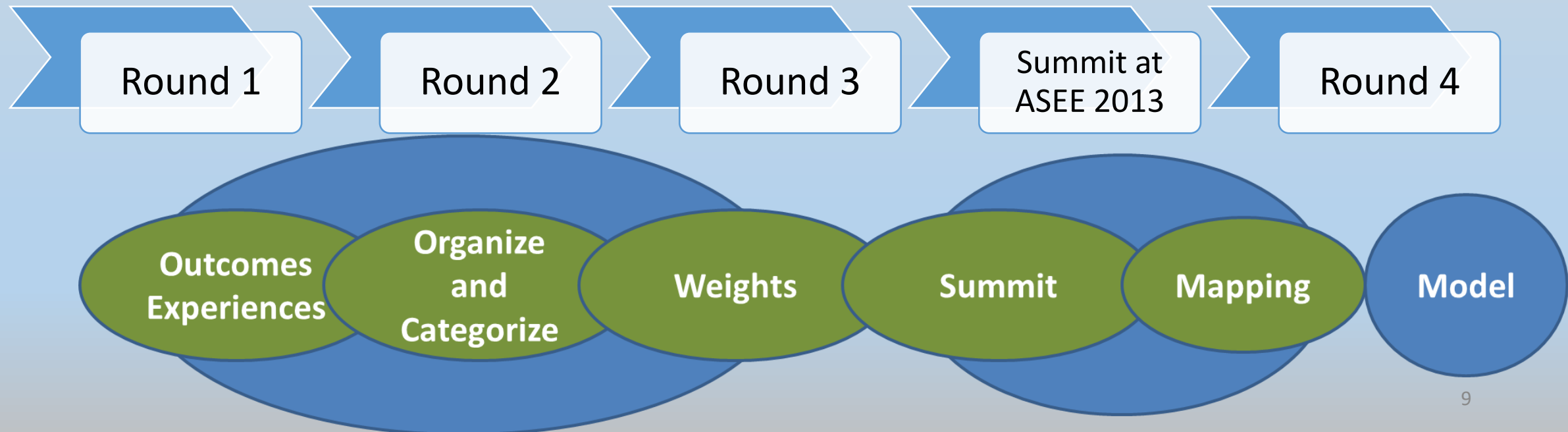
Approach

- 18 SME's recruited
 - International education associations
 - Universities with recognized programs
 - Leaders in engineering education assessment
- Pertinent outcomes
 - Operational model of outcomes
 - Expansive weighted list of experiences
 - Constructs that define the quality of the experience

Approach

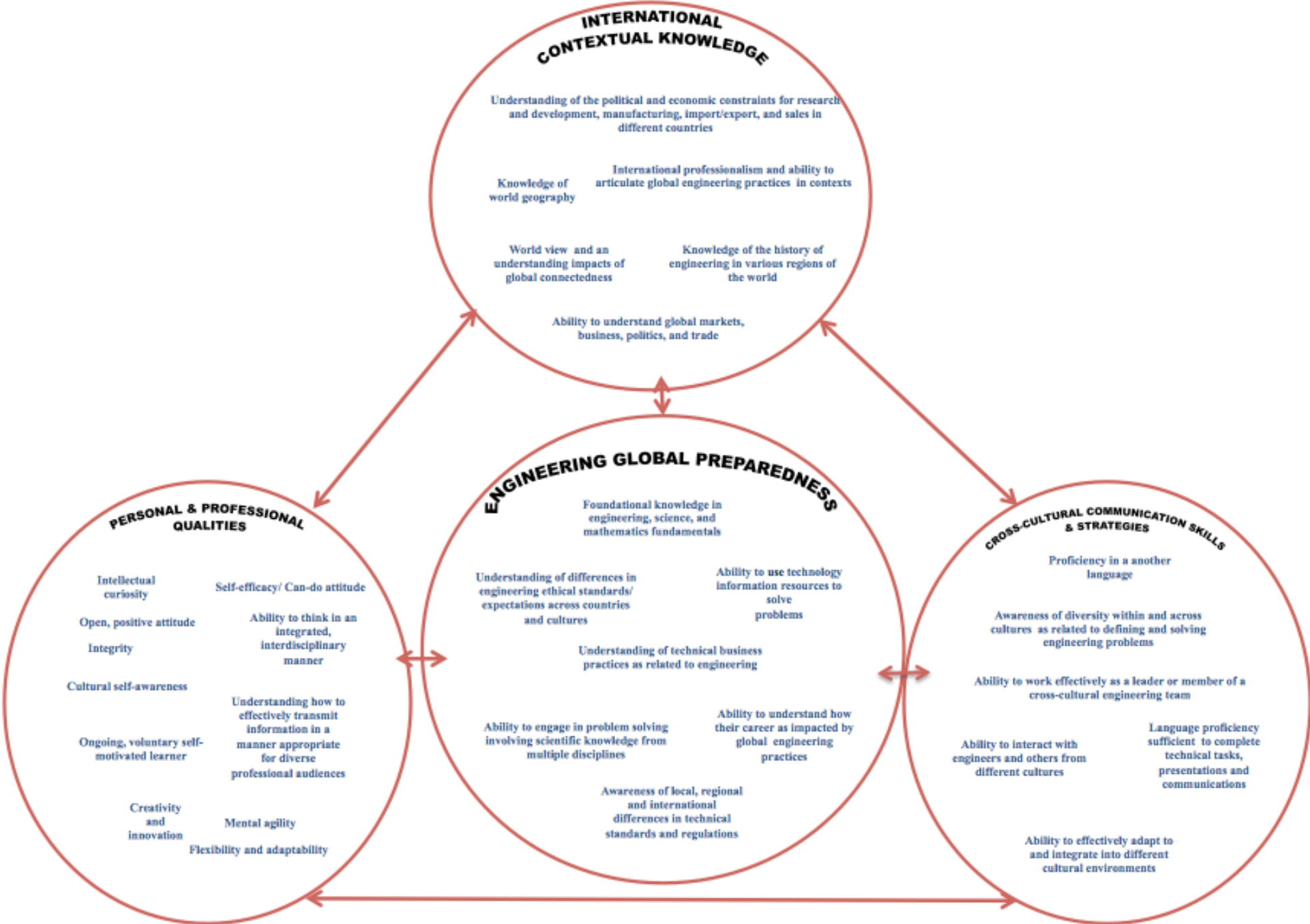
Delphi Study

...reach consensus about constructs of engineering global preparedness and essential components of learning experiences to obtain preparedness



Outcome 1

Operational Model of Outcomes

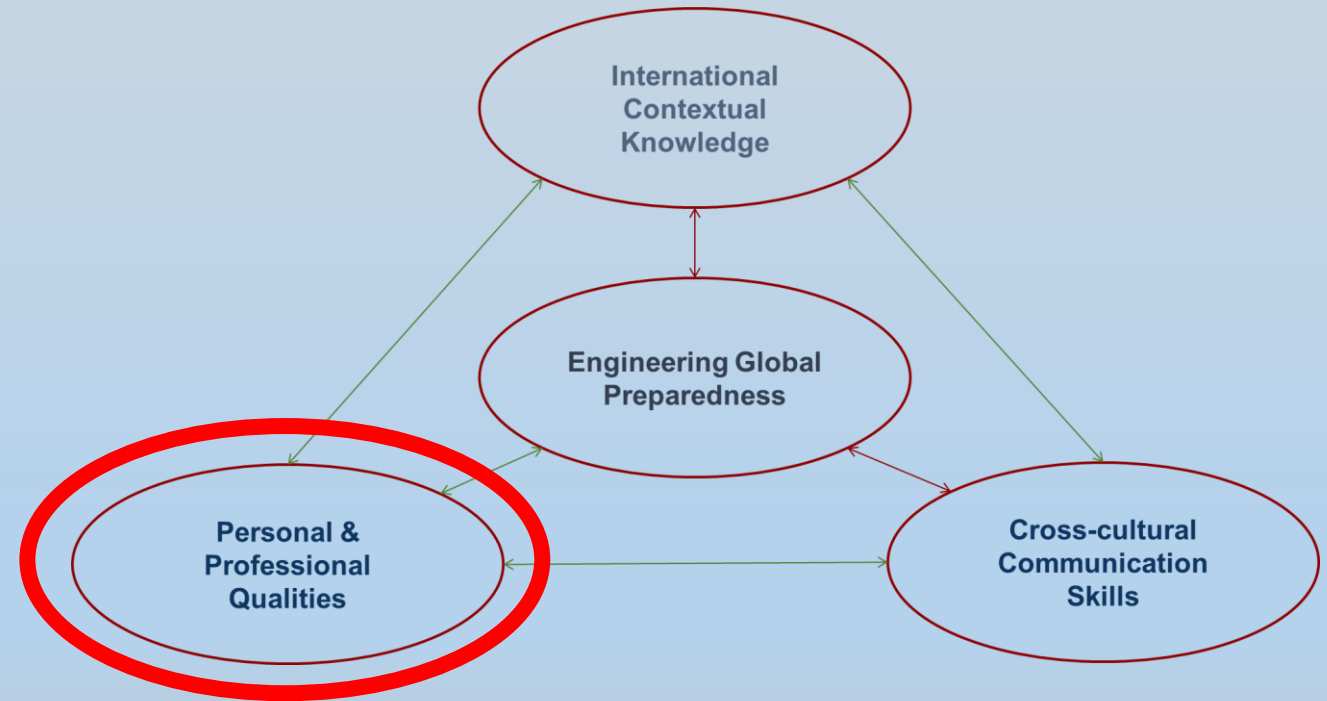


Outcome 1

Attributes of Personal & Professional Qualities

- Intellectual curiosity
- Open, positive attitude
- Cultural self-awareness
- Self-motivated learner
- Creativity and innovation
- Self –efficacy/can do attitude
- Ability to think in an interdisciplinary manner
- Understanding how to effectively transmit information in a manner appropriate for diverse professional audiences

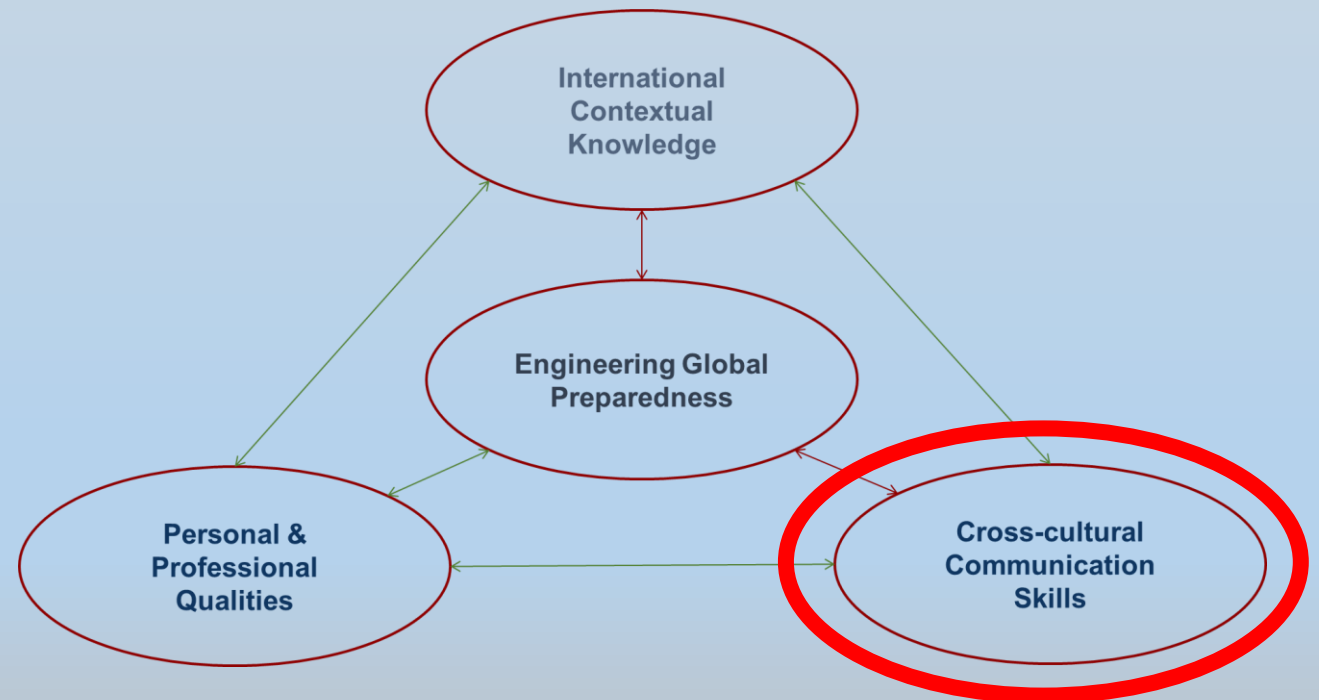
- Mental agility
- Flexibility and adaptability



Outcome 1

Cross-Cultural Communication Skills & Strategies

- Awareness of diversity within and across cultures
- Work effectively in cross-cultural engineering teams
- Interact with others from different cultures
- Have language proficiency technical tasks & communications
- Effectively adapt to different cultural environments



Outcome 1

International Contextual Knowledge

- Understanding of the constraints for R&D, manufacturing, supply chain & sales in countries
- Knowledge of world geography
- International professionalism and ability to articulate engineering practices in contexts
- Understanding of global connectedness/world view
- Knowledge of engineering history in various world regions

- Understanding of global markets and politics



Outcome 1

Attributes of Engineering Global Preparedness

- Foundational knowledge
- Differences in engineering ethical standards/expectations
- Use technology
- Technical business practices
- Career is impacted by global engineering
- Engage in problem solving
- Awareness of local, regional and international differences in technical standards and regulations

Readiness to engage and effectively operate under uncertainty in different cultural aspects and address engineering problems



Outcome 2

Weighted list of experiences

Curricular

Answer	Avg. Value	Std. Dev
Team project that includes working in person with an international team	83.2	9.4
Dual degree program requiring 1-2 years at a partner university	79.7	21.7
Study abroad programs of at least one semester	77.3	14.2
Immersion program at a foreign university; instruction in <u>local language</u>	77.2	23.5
...instruction in <u>English</u>	74.4	15.4
Summer school abroad	70.8	13.2

Co-curricular

Answer	Avg. Value	Std. Dev
Internship/Co-op in a foreign country	92.0	4.6
Technical research project conducted in foreign country	87.1	5.1
An international service learning/volunteering project	82.6	11.4
Assigned tasks that require country exploration during formal work/study/research abroad	76.8	10.8

Outcome 3

Constructs that define the quality of the experience

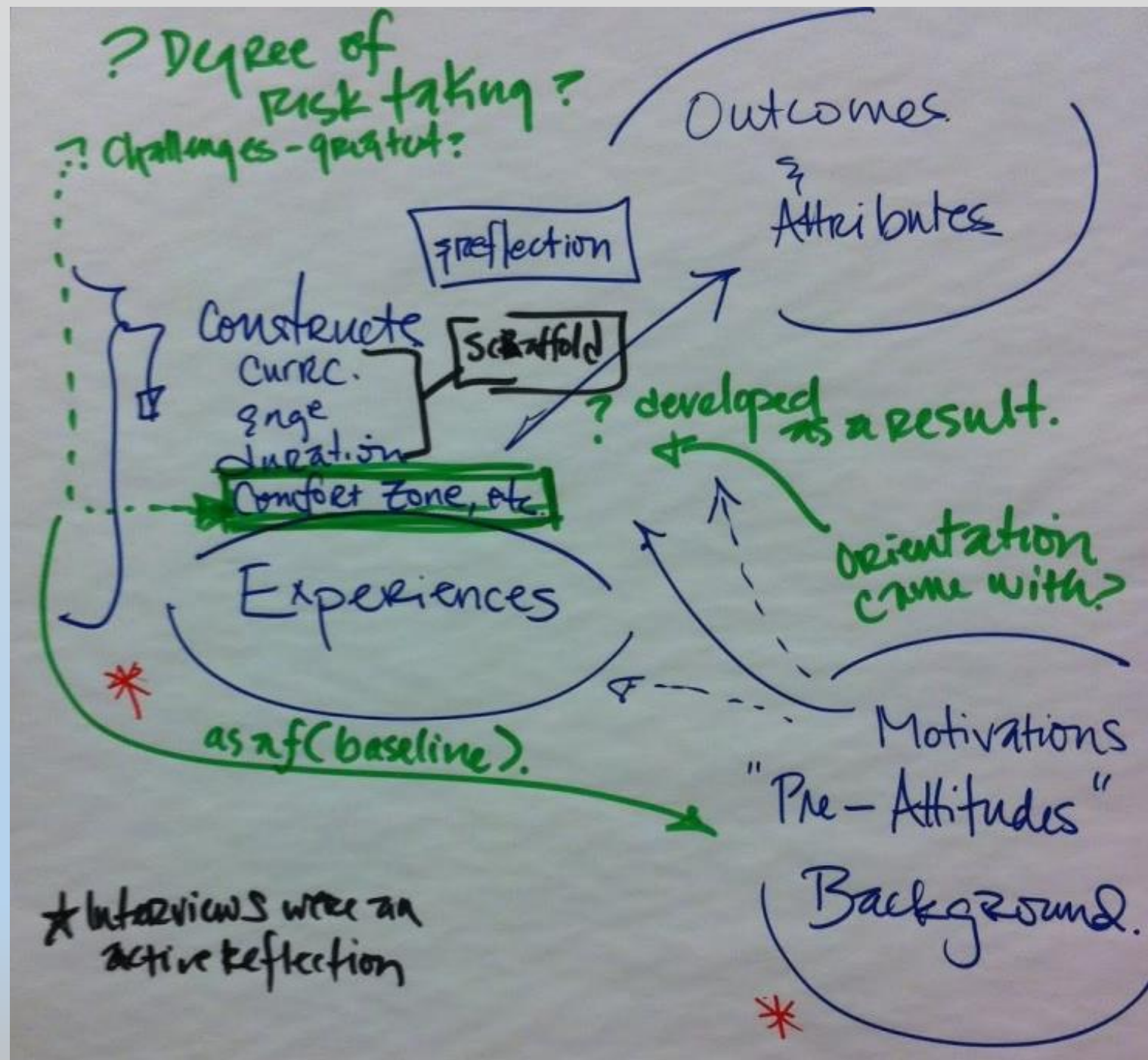
- Constructs
 - Comfort zone
 - Curricula based
 - Duration
 - # of times
 - Engineering related
- Limited consensus among SMEs
- **Emergent theme: importance of student reflection**



Study 2

- Capture quantitatively and qualitatively how the various experiences contribute to obtaining the attributes of global preparedness/competency

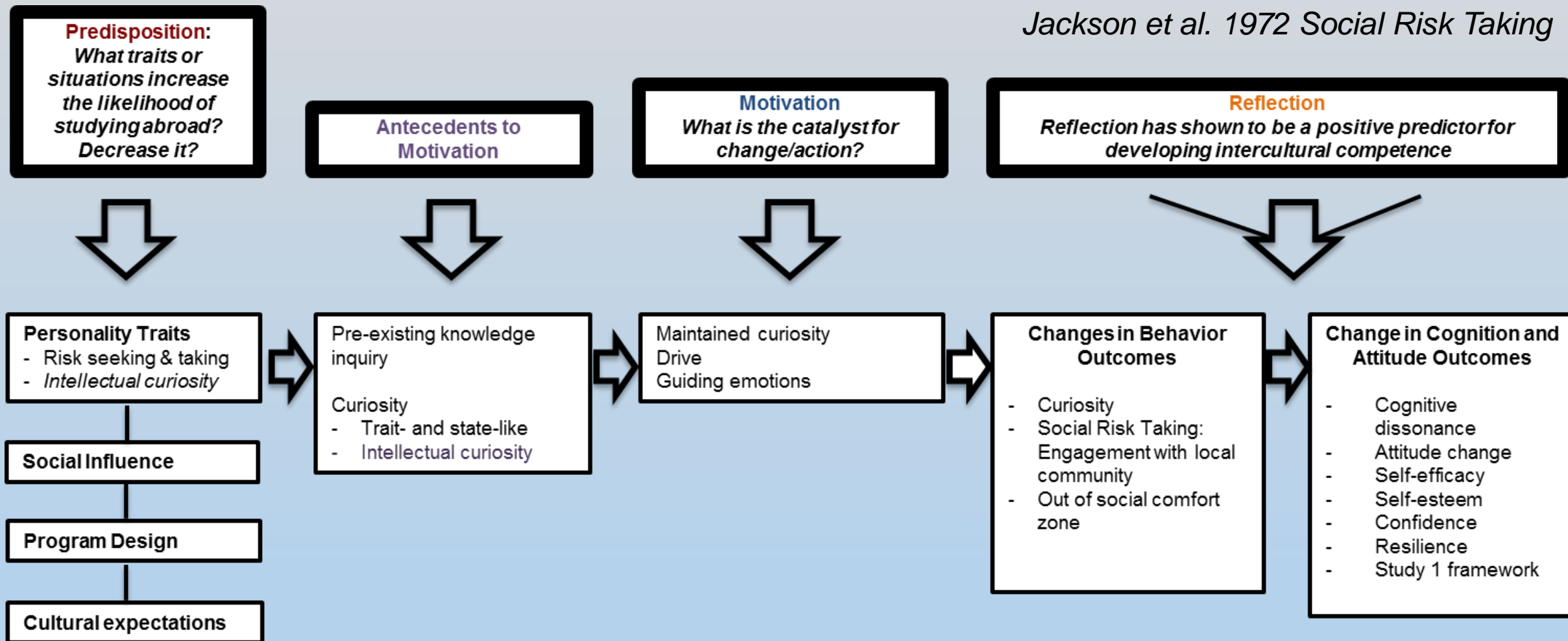
Initial Theoretical Framework



“Refined” Theoretical Framework

*Adapting Prochaska & DiClemente’s
Trans-theoretical Model of Change*

Jackson et al. 1972 Social Risk Taking



Approach

Mixed Methods with 4 Engineering Schools

Quantitative

- Survey instrument
 - Experiences (study 1)
 - Background information (study 1)
 - Outcome Measures
 - Engineering Global Preparedness Index (EGPI)
 - Global Perspective Inventory (GPI)
- Freshmen & seniors with and without experiences

Qualitative

- Individuals - scored high on one or both outcome measures
- 59 One-on-one interviews
- Coding scheme based on framework
 - Round-robin Negotiated Agreement Coding approach
- Qualitative Comparative Analysis (QCA)

Dependent Variables

- Engineering Global Preparedness Index
 - *Global Engineering Ethics and Humanitarian Values*
 - *Global Engineering Efficacy*
 - *Engineering Globalcentrism*
 - *Global Engineering Community Connectedness*
 - Global Perspectives Inventory
 - Nationally normed instrument
 - Measures global learning and development in three domains
- Cognitive dimensions
 - Knowing
 - Knowledge
 - Intra**r**personal dimensions
 - Affect
 - Identity
 - Inter**e**personal dimensions
 - Social Interaction
 - Social Responsibility

Pertinent Outcomes

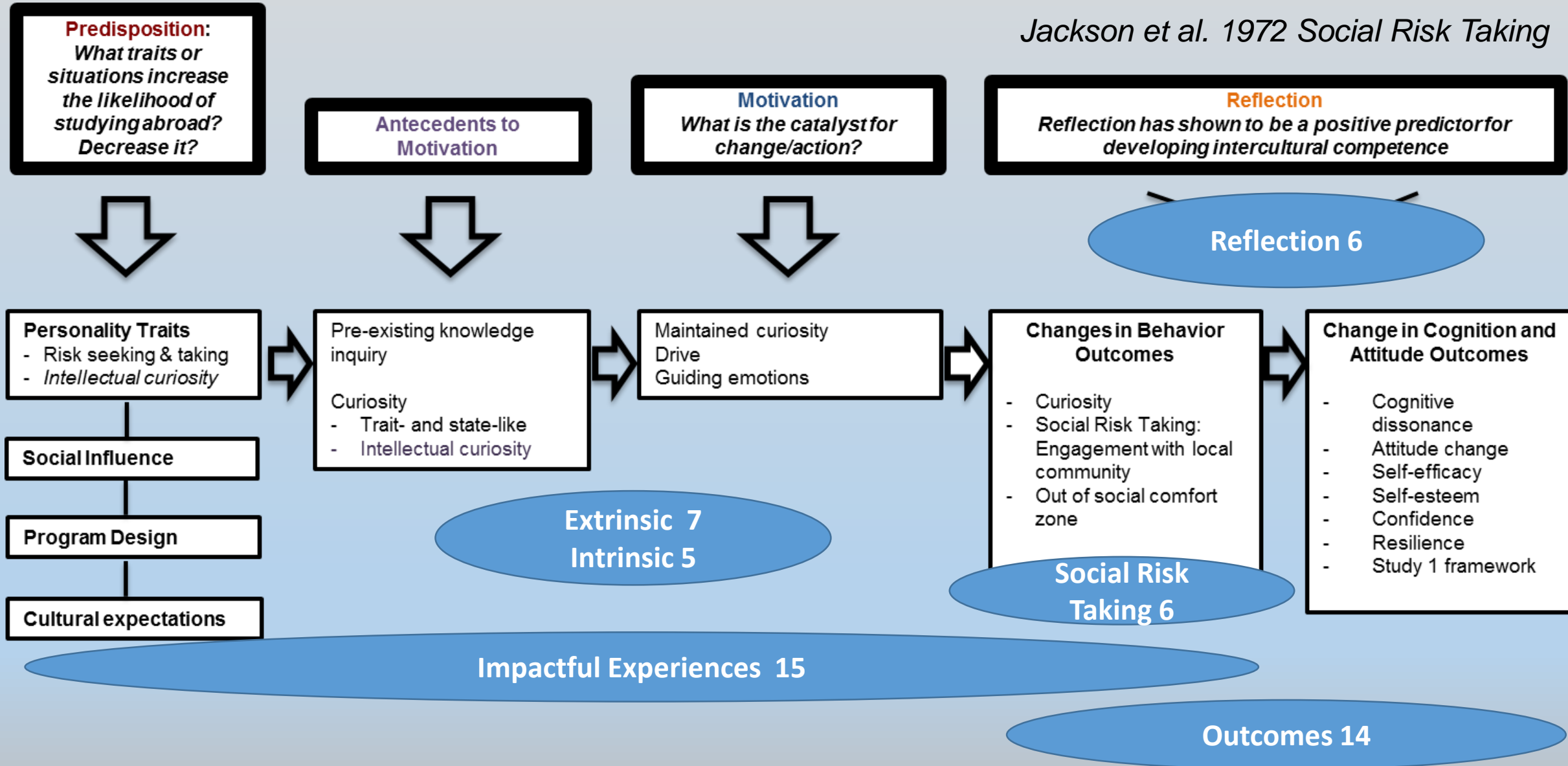
Quantitative

- 4 regression models with GPI as dependent variable
 - Cognitive
 - Intrapersonal
 - Interpersonal
 - Total
- Significant variables in 2 or more models
- Total engineering relevance (+)
 - *The more engineering relevant experiences a student had, the higher the GPI score*
- Minimum comfort zone (+)
 - *The higher the minimum score across all experiences, the higher the GPI score*
- Number of experiences (+)
- Reflection (+)
 - *If the student had an experience where reflection was required, the GPI score was higher*

Refined – Theoretical Framework

*Adapting Prochaska & DiClemente's
Trans-theoretical Model of Change*

Jackson et al. 1972 Social Risk Taking



Pertinent Outcomes

Qualitative

- Qualitative Comparative Analysis
 - Deterministic technique

- High scorers tend to
 - *Be interested in the program reputation*
 - *Have experienced social risk taking, but worked through it constructively*
 - *Have increased independence as a result of their experiences*
- High scorers identified experiences as salient
 - *Working on cross-cultural teams*
- High scorers come from families where parents have advanced degrees

Pertinent Outcomes

Additional

- A large number of engineering students begin college with a substantial international background that is reflected in their GPI scores
- Demographic variables do impact GPI
 - Parents' education
 - Community environment
 - Place of birth
 - ...
- The impact of engineering international experiences is to **move students** towards being a globally prepared engineer
- This helps us to target student cohorts when resources are limited



Study 3

- Analyze the impact of various international experiences using a reduced version of the instrument (based on Study 2)
- Use statistical modeling to map student outcomes and international experiences to estimate the degree of impact experiences have on global preparedness

Approach

Independent Variables

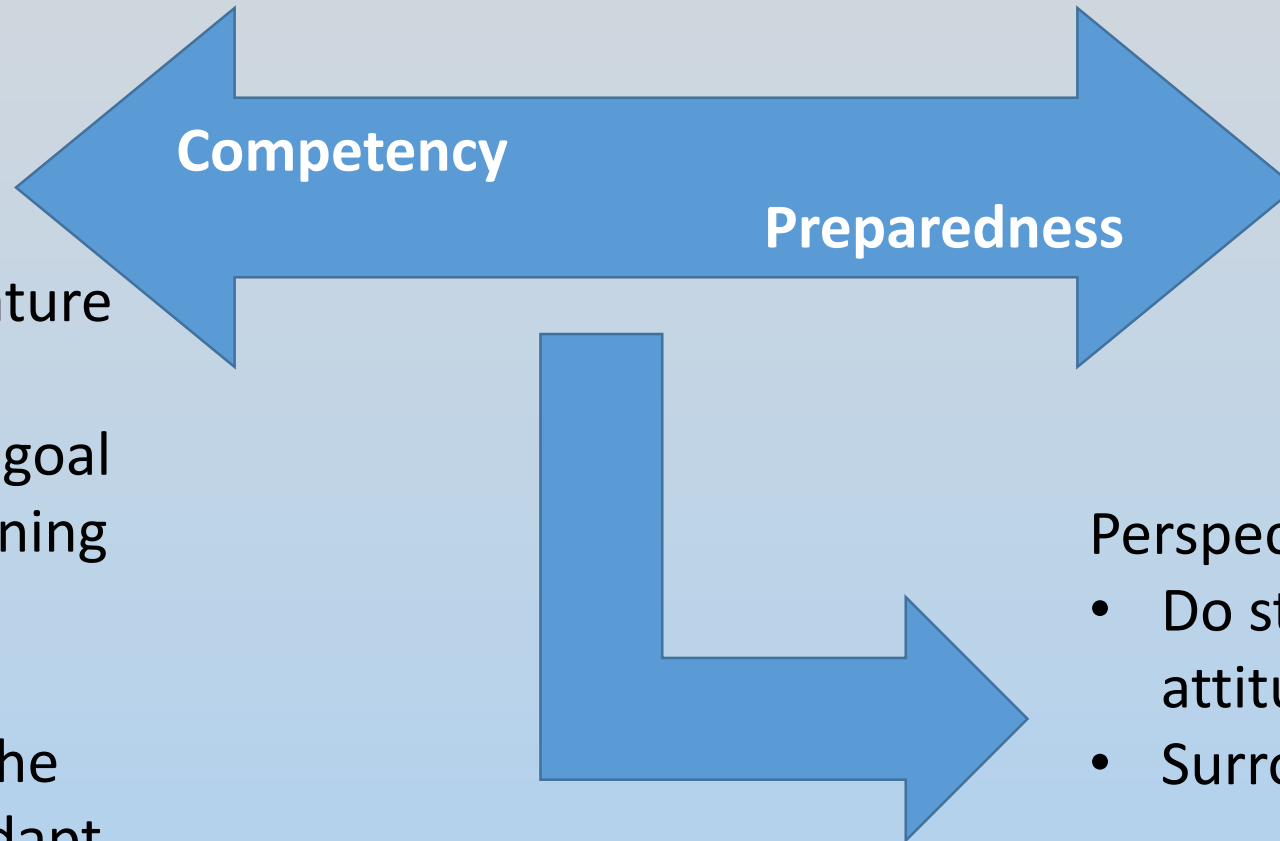
International Coursework & Service Learning Related Experiences

- Study abroad
- Internship
- Project abroad
- Personal tourism abroad
- Second-language course
- Engineering course with a global focus
- Non-engineering course with a global focus
- Engineering-focused service learning
- Non-engineering-focused service learning
- International roommate(s)

Specific components of experiences:

- Duration of experience(s)
- Number of experiences
- Comfort zone while in experience(s)
- Amount of reflection during/after

What are we measuring?



- Dominant in literature
- Complex learning goal with multiple learning dimensions
- Appreciation for the culture and can adapt engineering abilities to the environment

Perspectives –

- Do students have attitudes of appreciation
- Surrogate measure

Approach

Dependent Variable

- Global Perspectives Inventory
 - Nationally normed instrument
 - Measures global learning and development in three domains

- Cognitive dimensions
 - Knowing
 - Knowledge
- Intra**a**personal dimensions
 - Affect
 - Identity
- Inter**e**personal dimensions
 - Social Interaction
 - Social Responsibility

COGNITIVE	KNOWING	Degree of complexity of one's view of the importance of cultural context in judging what is important to know and value
	KNOWLEDGE	Degree of understanding and awareness of various cultures and their impact on our global society and level of proficiency in more than one language
INTRA- PERSONAL	IDENTITY	Level of awareness of one's unique identity and degree of acceptance of one's ethnic, racial, and gender dimensions of one's identity
	AFFECT	Level of respect for and acceptance of cultural perspectives different from one's own and degree of emotional confidence when living in complex situations, which reflects an "emotional intelligence" that is important in one's processing encounters with other cultures
INTER- PERSONAL	SOCIAL RESPONSIBILITY	Level of interdependence and social concern for others
	SOCIAL INTERACTION	Degree of engagement with others who are different from oneself and degree of cultural sensitivity in living in pluralistic settings

Cross-Institutional Study

Instrument

- 7 background
- 3 educational
- 35 GPI
- 3 international
- 7 international/intercultural experience

Administration

- Pilot studies 7-9 minutes to complete
- \$9.99 Amazon gift card
- Target 200/institution
 - 30 freshmen
 - 110 seniors with experience
 - 60 seniors without experience

Cross-Institutional Study

Launched
Spring 16 and
Fall 16

Engineering Schools

- University of Pittsburgh
- Clemson University
- Georgia Tech
- Brigham Young University
- North Carolina State University
- University of Rhode Island
- Michigan State University
- Worcester Polytechnic Institute
- Louisiana State University
- University of Virginia
- University of Michigan
- University of Colorado Boulder
- Lehigh University
- University of Southern California

Seniors – What are their experiences?

<i>ALL Seniors – INTERNATIONAL EXPERIENCES</i>	<i>All</i>	Students w/ Intl Exp Pre-College Only	%	Students w/ Intl Exp During College Only	%	Students w/ Intl Exp Both Pre and During College	%
Personal tourism	1014	162	58%	112	21%	740	27%
Second language course	671	67	24%	55	11%	549	20%
U.S. based research project that examines a global issue	123	0	0%	18	3%	105	4%
Non-engineering focused service learning program	170	12	4%	18	3%	140	5%
University housing with international focus	73	1	0%	15	3%	57	2%
Engineering focused service learning program	130	2	1%	26	5%	102	4%
Study Abroad	428	3	1%	104	20%	321	12%
Engineering course with a global focus	259	2	1%	54	10%	203	7%
Non-engineering course with a global focus	335	5	2%	54	10%	276	10%
U.S. engineering course with an international project	66	3	1%	13	2%	50	2%
Internship/co-op/technical research project conducted internationally	121	3	1%	36	7%	82	3%
Dual degree program with an international university	11	0	0%	3	1%	8	0%
Other	110	18	6%	15	3%	77	3%
<i>No international experiences</i>	292						
Total	3803	278	100%	523	100%	2710	100%

Results – Reported via Effect Sizes

- Simple way to quantify the ‘size’ of the difference between two groups
- Measured in terms of the number of standard deviations the means differ by

- Cohen’s d

$$d = \frac{M_1 - M_2}{SD_{pooled}}$$

0 - 0.2	> 0.2 - 0.5	> 0.5 - 0.8	> 0.8
none	low	medium	large
effect sizes (absolute value)			

- Hedges’ g
 - Corrects for biases due to small sample sizes

Impact of seniors who have no experience

11 of 14 schools presented (have to save some data on journal papers!)

What is the Impact?

- Seniors with *no experiences* are similar to freshmen with *no experiences*
- Low effect sizes in the negative direction!

		Freshmen None to Senior None		
School		Cog	Intra	Inter
1		-0.13	-0.28	-1.25
2		-0.97	-0.02	-0.50
3		-2.22	-0.75	0.13
4		-0.30	-0.82	-0.55
5		0.35	0.53	0.02
6		-0.33	0.11	-0.17
7		0.55	1.43	0.98
8		0.26	0.73	-0.63
9		0.19	0.29	-0.22
10		-0.38	-0.39	0.11
11		-0.26	0.07	-0.44
	average	-0.29	0.08	-0.23
	0 - 0.2	> 0.2 - 0.5	> 0.5 - 0.8	> 0.8
	none	low	medium	large
effect sizes (absolute value)				

What is the Impact?

- Seniors with experiences *prior to college* have consistently higher GPI scores than seniors with no experience
- Low effect sizes

	Senior None to Senior Pre		
School	Cog	Intra	Inter
1	0.39	0.13	-0.16
2	1.06	0.18	1.6
3	0.61	0.87	0.35
4	0.1	0.81	0.33
5	0.25	0.13	-0.08
6	0.59	0.63	0.46
7	0.24	0.36	-0.08
8	0.02	-0.36	0.25
9	0	0.17	-0.05
10	0.51	0.16	0.49
11	0.3	0.1	0.58
average	0.37	0.29	0.34
0 - 0.2	> 0.2 - 0.5	> 0.5 - 0.8	> 0.8
none	low	medium	large
effect sizes (absolute value)			

What is the Impact?

- Seniors with experiences *only in college* have consistently higher GPI scores than seniors with no experience
- Moderate effect sizes for the cognitive dimension

School	Senior None to Senior College		
	Cog	Intra	Inter
1	0.75	0.22	0.3
2	0.79	0.51	0.72
3	0.78	0.7	0.06
4	0.85	0.76	0.63
5	0.25	0.47	-0.02
6	0.83	0.53	0.82
7	0.65	0.63	0.1
8	-0.02	-0.25	0.38
9	0.11	-0.06	0.36
10	0.17	0.1	0.07
11	0.3	0.09	0.7
average	0.50	0.34	0.37
0 - 0.2	> 0.2 - 0.5	> 0.5 - 0.8	> 0.8
none	low	medium	large
effect sizes (absolute value)			

What is the Impact?

- Seniors with experiences *prior to and in college* have consistently higher GPI scores than seniors with no experience
- Moderate and large effect sizes

School	Senior None to Senior Both		
	Cog	Intra	Inter
1	1.15	0.57	0.74
2	1.16	0.39	1
3	1.27	1.07	0.49
4	0.85	0.96	0.83
5	0.45	0	-0.02
6	0.91	0.56	0.61
7	1.4	1.2	0.53
8	0.58	0.08	0.73
9	0.53	0.44	0.15
10	0.4	0.31	0.37
11	0.4	0.07	0.47
average	0.83	0.51	0.54
0 - 0.2	> 0.2 - 0.5	> 0.5 - 0.8	> 0.8
none	low	medium	large
effect sizes (absolute value)			

Diving Deeper

- One experience IN COLLEGE

Comparison	Cognitive	Intrapersonal	Interpersonal	Total
Seniors with no experiences (<i>n=393</i>) vs. Seniors with one experience (<i>n=105</i>)	0.34	0.37	0.26	0.42

Most frequent international experiences for high scoring seniors who only had 1 experience in college

- Engineering Course with Global Focus
- Study Abroad
- Internship/research conducted internationally
- Personal Tourism

Pertinent Outcomes

Takeaways

- Should not dismiss the value of personal tourism in building global perspectives
- Exposure to international experiences throughout one's life both prior to and during impacts perspective
- Parental education contributes to high scores, but...
 - Parental background and experience are key factors
 - Figueroa-Rivera, A. & Ragusa, G. (2014). Understanding the Impact of Formal and Informal Pedagogical Support on First Generation Hispanic STEM Student Success. *Association of American Colleges and Universities (AACU) Conference*. Atlanta, Georgia. November 6, 2014.
- Seniors with no experience graduate without the necessary knowledge and attitudes
 - *Where do we begin the intervention?*
 - *This begins our first breakout session...*

Email/Personal Break

9:50 – 10:00

Hallmarks of Success – 1

Experiences that have Impact

10:00 – 10:50

Classification of Experiences

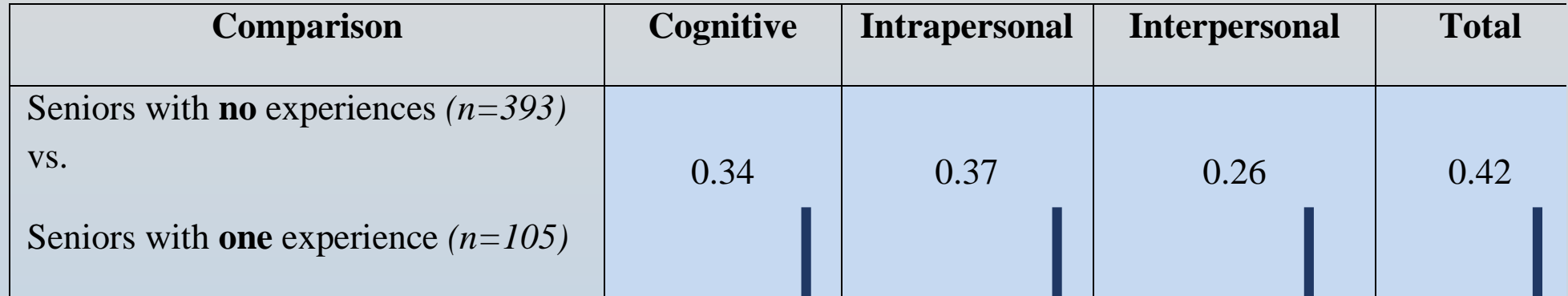
International
Coursework
&
Service
Learning
Related
Experiences



- Study abroad
- Internship
- Project abroad
- Personal tourism abroad
- Second-language course
- Engineering course with a global focus
- Non-engineering course with a global focus
- Engineering-focused service learning
- Non-engineering-focused service learning
- International roommate(s)

One Experience in College

Comparison	Cognitive	Intrapersonal	Interpersonal	Total
Seniors with no experiences (<i>n</i> =393) vs. Seniors with one experience (<i>n</i> =105)	0.34	0.37	0.26	0.42



Most frequent international experiences for high scoring seniors who only had 1 experience in college

- Engineering Course with Global Focus
- Study Abroad
- Internship/research conducted internationally
- Personal Tourism

World Cafe

- Learn about programs from multiple universities
- Select two institutions to learn from
- 15 minutes discussion
- Switch
- 15 minutes discussion
- Qualtrics survey
- Table will share Ah-ha's

Dani Ascarelli
Drexel
Global Focus
Course

Reid Bailey
UVA
Study
Abroad

Kent
Rissmiller
WPI
Tech Project
Abroad

Jennifer
Evanuik Baird
Georgia Tech
Internships
Abroad

Type of Experience - INTERNSHIP

Global Internships and Education Abroad

Program Description:

- Develops and implements a full set of services to ensure MSU engineering students maximize early opportunities in the workplace and obtain competitive placements upon graduation
- Students can receive assistance in identifying a career path, enhancing their resume, preparing for interviewing, and seeking full time positions. Employers can create a stronger brand by increasing involvement in the College.

Category

International Internship Offering

Apply



Program Highlights

<https://www.egr.msu.edu/careers/find-your-opportunity>

4 FTEs, right off the lobby, fun atmosphere, they're in student's faces in a positive engagement from Freshman year

Drop in, have fun, employers in the lobby all the time

100 companies in 100 days: Employer development GR, DET, LAN, JACKSON

Social aspect of student experience wrapped into student experience

Tips for Replication:

Institutionalizing relationships with employers

Meeting Students On Own Terms and EARLY

Twitter, Instagram, SnapChat, FB connections, WeChat, etc

Garth Motschenbacher + 3 staff & 15 student peers

- <https://www.egr.msu.edu/careers/find-your-opportunity>
- <http://www.egr.msu.edu/global/map/international-presence>



MICHIGAN STATE UNIVERSITY

Program Details

- **Tenure of the program**
 - 2005 prior, focus was on Co-Op Career Services embedded in EGR to find internships/careers
- **Participation rates (annual):**
 - 50+/Internships 150+/-
- **Target population:**
 - Sophomore-Senior year
- **Duration of experience:**
 - Summer
- **Engineering related?**
 - All
- **Course credit?**
 - 1 credit (Pre-employment, presentation to Employer and a graded report)
- **Service component?**
 - None
- **Reflection component?**
 - Report on what the work assignment entailed, did it make you want to pursue this field, etc.



Hallmarks Of Success

Email/Personal Break

10:50 – 11:00

Hallmarks of Success – 2

Impact Factors

11:00 – 12:00

Approach

Independent Variables

International Coursework & Service Learning Related Experiences

- Study abroad
- Internship
- Project abroad
- Personal tourism abroad
- Second-language course
- Engineering course with a global focus
- Non-engineering course with a global focus
- Engineering-focused service learning
- Non-engineering-focused service learning
- International roommate(s)

Specific components of experiences:

- Duration of experience(s)
- Number of experiences
- Comfort zone while in experience(s)
- Amount of reflection during/after



Seniors with one experience only in college (from 11 out of 14 REE schools)

Duration

N=93	Cognitive	Intrapersonal	Interpersonal	Total
Did not travel abroad (n=6)	3.29	3.97	3.33	3.53
Less than 1 month (n=50)	3.47	3.93	3.32	3.57
More than 1 month (n=37)	3.55	3.98	3.40	3.64

Engineering Related

N=93	Cognitive	Intrapersonal	Interpersonal	Total
No (n=47)	3.51	3.92	3.27	3.57
Yes (n=46)	3.43	3.93	3.39	3.59

Seniors with one experience only in college (from 11 out of 14 REE schools)

Course Credit

N=93	Cognitive	Intrapersonal	Interpersonal	Total
No (n=37)	3.51	3.95	3.31	3.59
Yes (n=56)	3.48	3.95	3.38	3.60

Reflection

N=93	Cognitive	Intrapersonal	Interpersonal	Total
No (n=62)	3.54	3.98	3.34	3.62
Yes (n=31)	3.40	3.90	3.38	3.56

Service

N=93	Cognitive	Intrapersonal	Interpersonal	Total
No (n=73)	3.51	3.94	3.33	3.59
Yes (n=20)	3.42	3.99	3.42	3.61

Seniors with one experience only in college (from 11 out of 14 REE schools)

Comfort Level Change

N=93	Cognitive	Intrapersonal	Interpersonal	Total
No change (n = 52)	3.44	3.91	3.36	3.57
Change of 1 (n=33)	3.55	3.99	3.32	3.62
Change of 2 (n=7)	3.61	4.04	3.49	3.71

- 1 – Comfortable
- 2 – Somewhat comfortable
- 3 - Not comfortable

The higher the number, the bigger change in comfort level.

For example, a value of 2 means the student started at “not comfortable” and ended at “comfortable

Seniors with one experience only in college (from Pitt only data)

Number of Experiences

N=118	n	Average number of xp	Cognitive	Intrapersonal	Interpersonal	Total
2 types	70	3.7	3.61	3.99	3.36	3.66
3 types	34	5.3	3.65	4.14	3.65	3.81
4-7 types	14	8.6	3.68	3.99	3.51	3.73

World Cafe

- Learn about programs from multiple universities
- Select two institutions to learn from
- 15 minutes discussion
- Switch
- 15 minutes discussion
- Qualtrics survey
- Table will share Ah-ha's

Mary Anne Walker
Mich State
Internships

Miranda Roberts
Univ of Mich
Study Abroad

Gayle Elliott
Univ of Cincinnati
Internship

Andrew Wingfield
UC-Boulder
Global Focus Course

Sigrid Berka
Univ of RI
Study Abroad

Lunch!

Check your name tag for your table number

12:00 – 12:50

Agenda

Conversation topic on tables

Perspectives from our international participants

Dan Kramer, Institute of International Education

Email/Personal Break

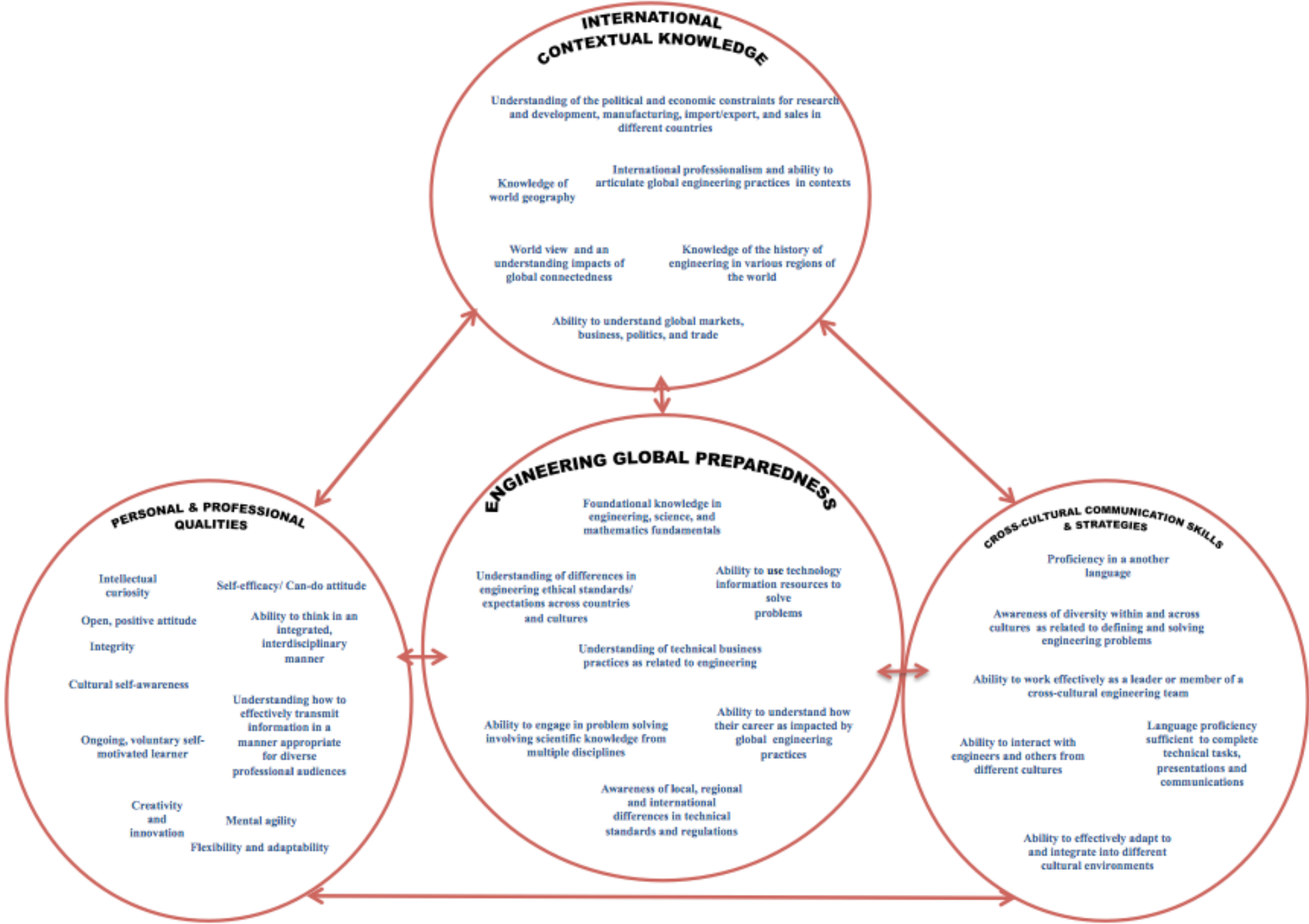
12:50 – 1:00

Using the Semantic Map

Study 1

1:00 - 1:50

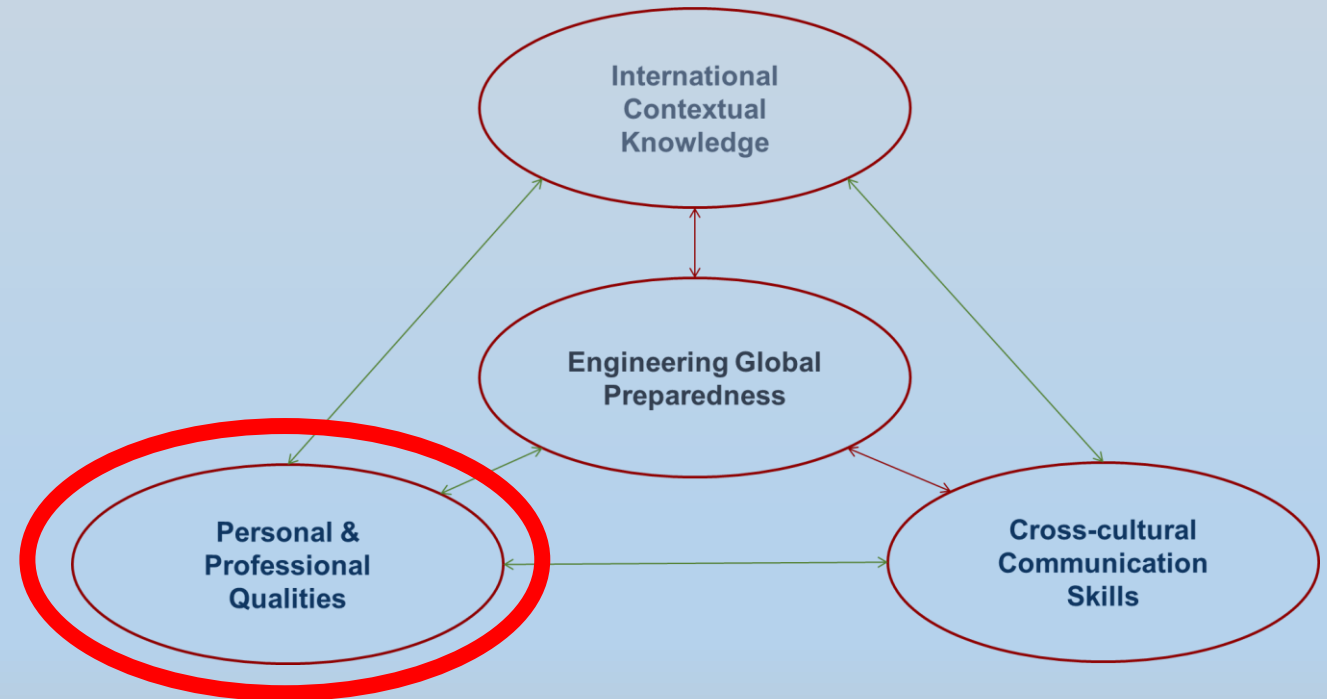
Operational Model of Outcomes



Attributes of Personal & Professional Qualities

- Intellectual curiosity
- Open, positive attitude
- Cultural self-awareness
- Self-motivated learner
- Creativity and innovation
- Self –efficacy/can do attitude
- Ability to think in an interdisciplinary manner
- Understanding how to effectively transmit information in a manner appropriate for diverse professional audiences

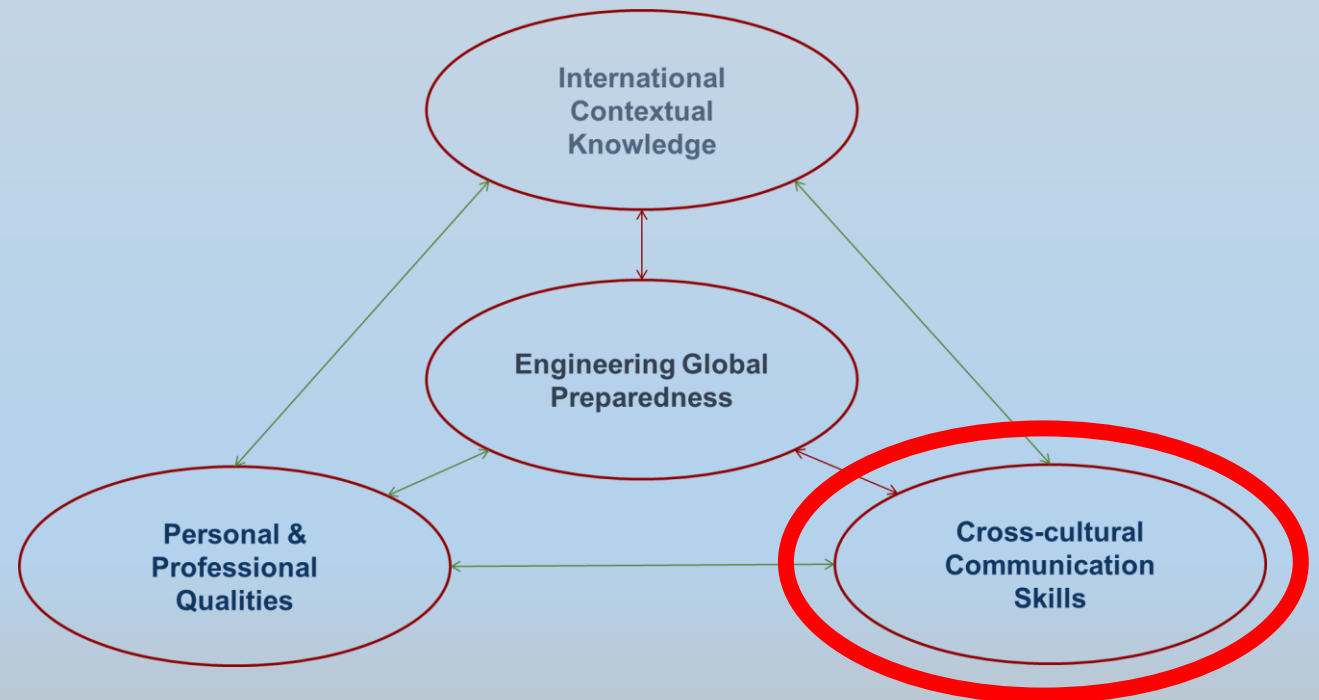
- Mental agility
- Flexibility and adaptability



Cross-Cultural Communication Skills & Strategies

- Awareness of diversity within and across cultures
- Work effectively in cross-cultural engineering teams
- Interact with others from different cultures
- Have language proficiency technical tasks & communications

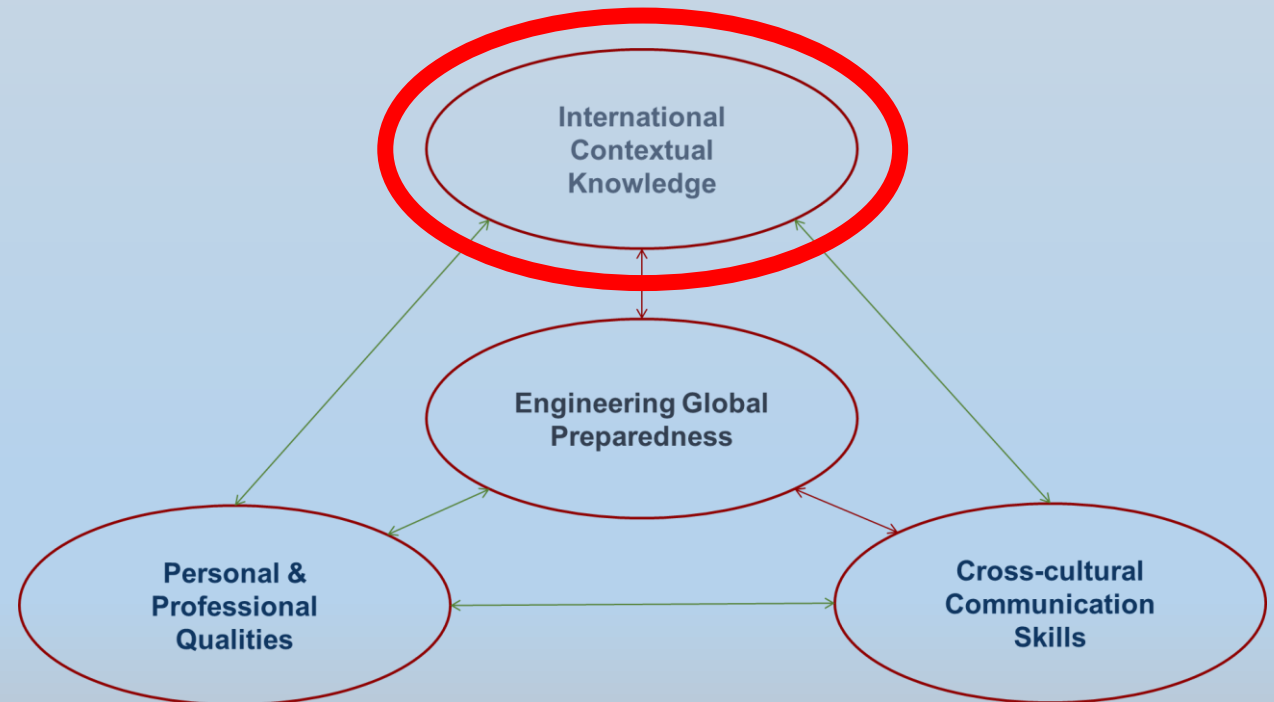
- Effectively adapt to different cultural environments



International Contextual Knowledge

- Understanding of the constraints for R&D, manufacturing, supply chain & sales in countries
- Knowledge of world geography
- International professionalism and ability to articulate engineering practices in contexts
- Understanding of global connectedness/world view
- Knowledge of engineering history in various world regions

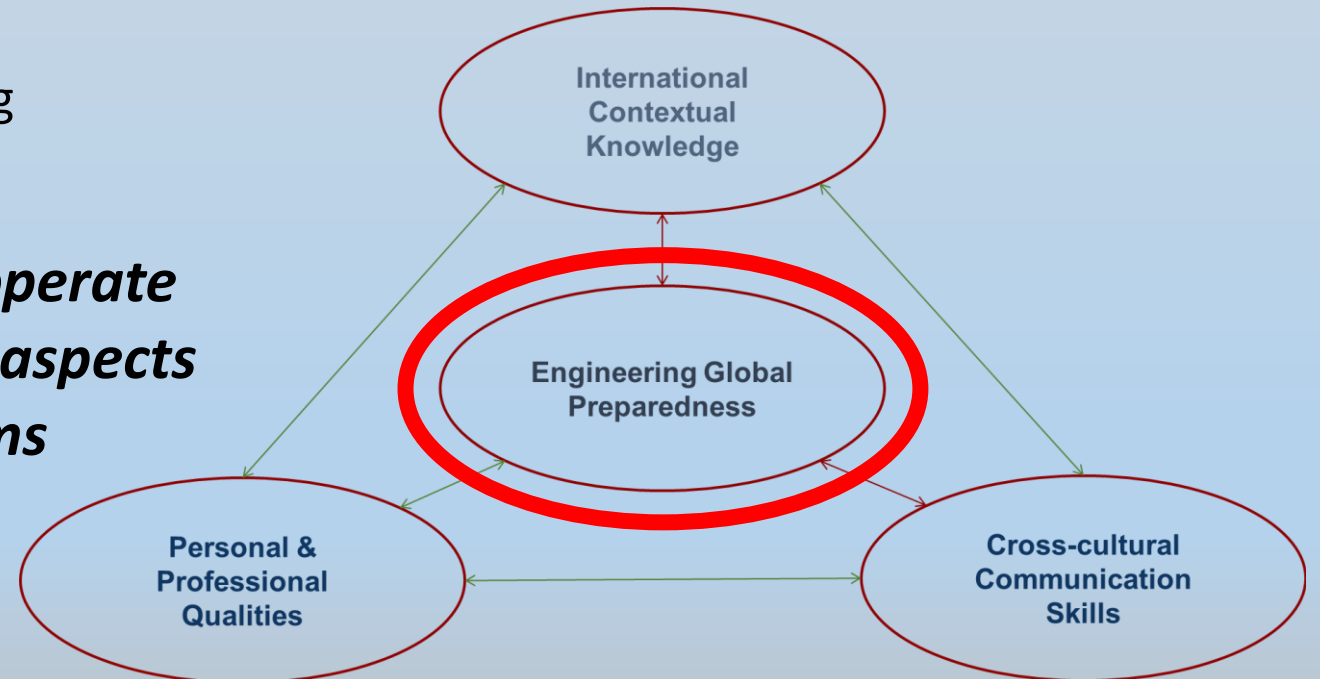
- Understanding of global markets and politics



Attributes of Engineering Global Preparedness

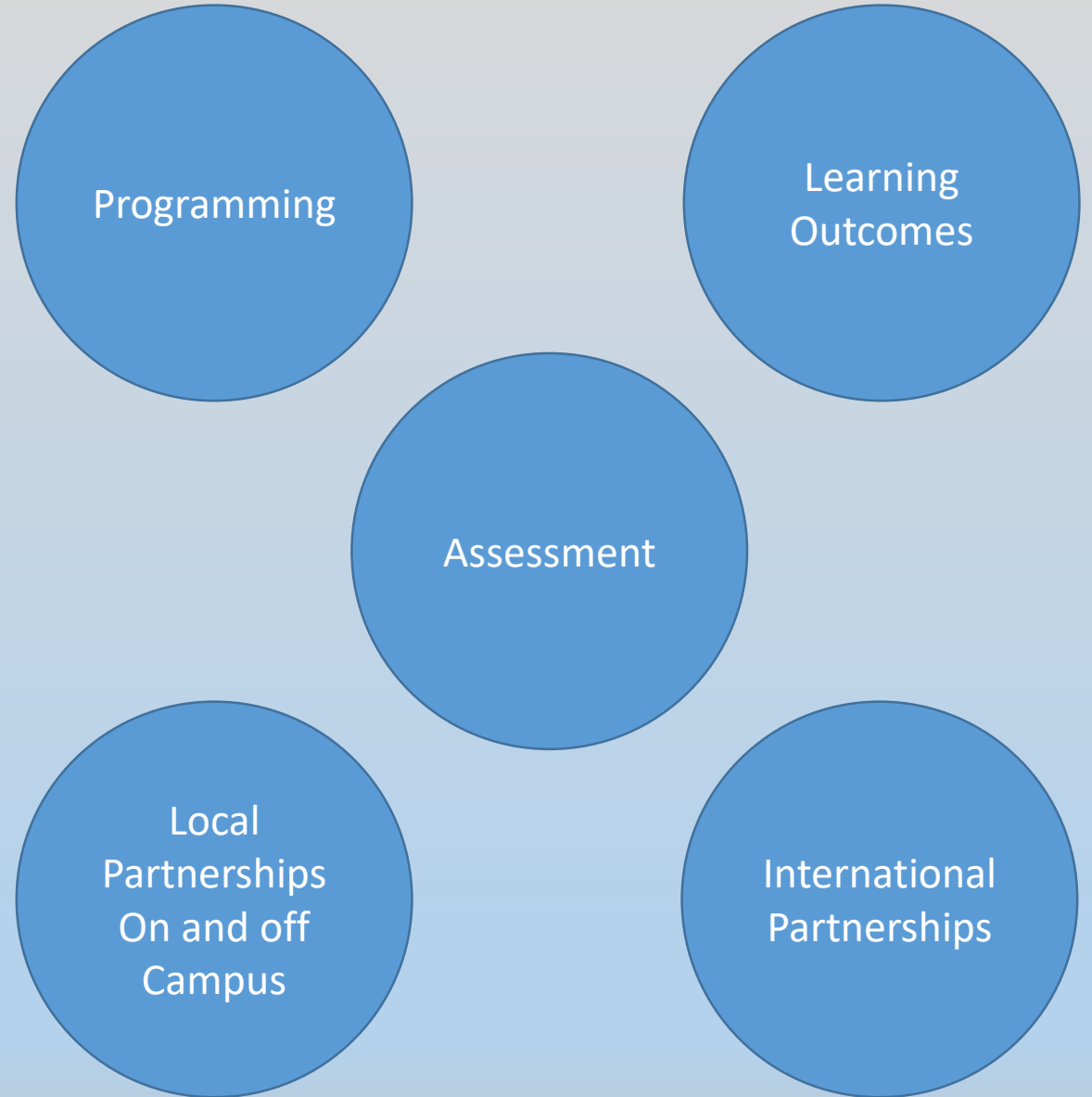
- Foundational knowledge
- Differences in engineering ethical standards/expectations
- Use technology
- Technical business practices
- Career is impacted by global engineering
- Engage in problem solving
- Awareness of local, regional and international differences in technical standards and regulations

Readiness to engage and effectively operate under uncertainty in different cultural aspects and address engineering problems



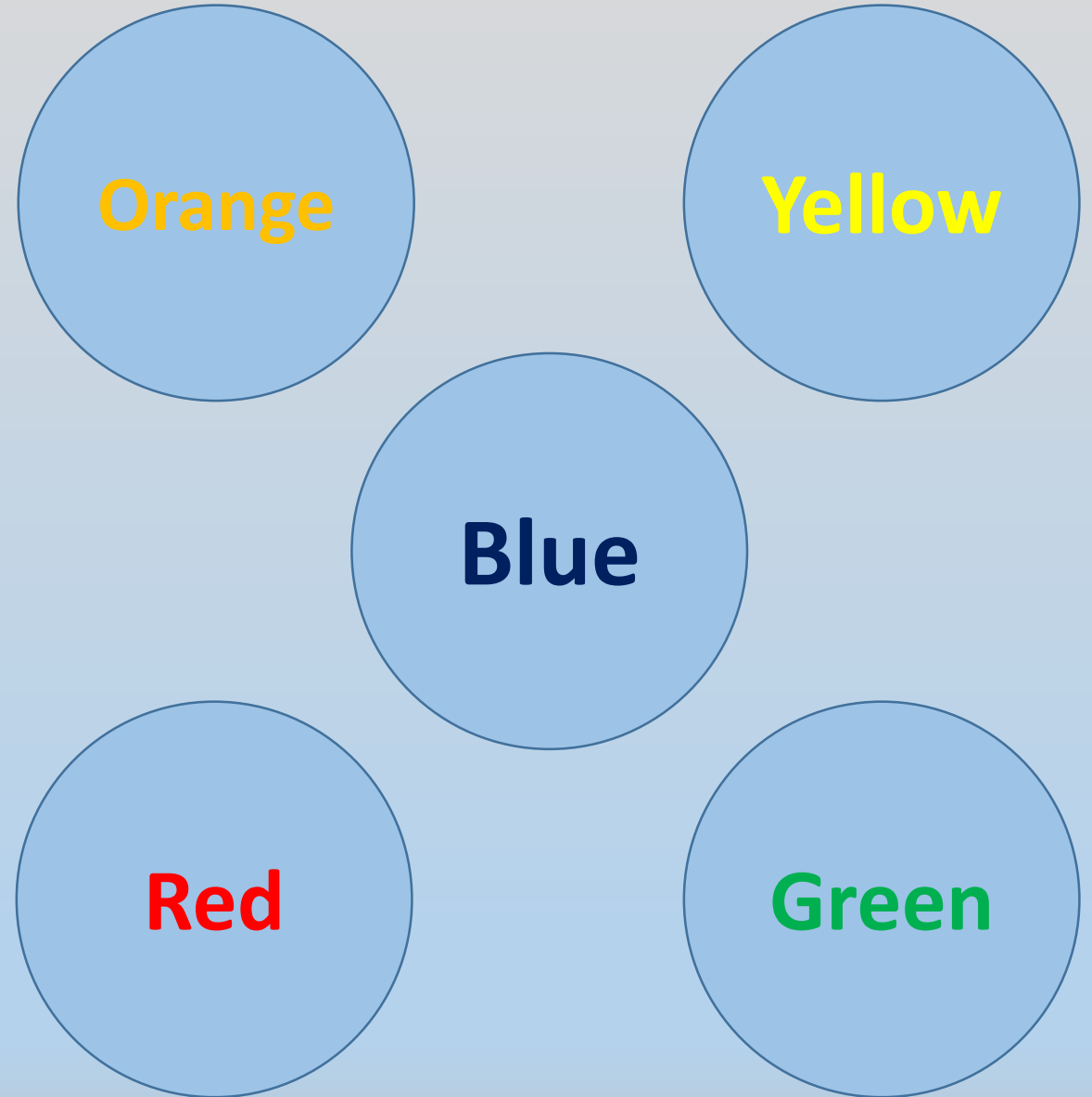
Jigsaw exercise

- Check your name tag for your topic area
- Discuss in your group how you might use the map to aid in that topic area
- Take notes for yourself as you will share
- 15 minutes
- Then...



Jigsaw exercise

- Cross pollinate!
- Check your name tag for your **color** and go to that table
- Your new table will have people who have been in discussions from other topic areas
- Discuss in your group what each of you learned from the first group's discussion
- 15 minutes
- Qualtrics survey – major Ah-ha's



Email/Personal Break

1:50 – 2:00

How have Institutions Used Data

Study 3

University of Rhode Island
Michigan State University
University of Pittsburgh

2:00 – 2:30

What should we be doing next for International Engineering Education?

2:30 – 2:55

Open Forum

Moderated by Lisa Benson

- *What is next in international engineering education? Some have indicated that it is lagging behind other areas of education research, especially in STEM. What else should we be looking at?*
- *What are the issues facing international education; and how do we answer them?*

Closing Remarks

Post workshop summaries

Evaluation survey

Post workshop fun?

2:55 – 3:00