PURDUE UNIVERSITY
GLOBAL ENGINEERING PROGRAMS

DEVELOPING AND ASSESSING INTERCULTURAL COMPETENCE IN SHORT-TERM GLOBAL ENGINEERING EXPERIENCES IN COLOMBIA

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Abstract

This work-in-progress poster presents preliminary data gathered during the Global Engineering program *Professional, Intercultural, and Global Development in Colombia*. Our institution has a long standing relationship with various Higher Education Institutions (HEIs) in Colombia and this particular global experience involved a collaboration with Universidad del Norte, in Barranquilla.

UNIVERSIDAD DEL NORTE

An important goal of Purdue's Global Engineering Programs (GEP) initiatives is to provide students with transformative experiences which contribute to prepare them to compete and thrive in the 21st century global workforce. This includes creating programs that develop students' intercultural and global skills.

A common view among scholars assessing global experiences is that program duration matters in terms of intercultural development. However, these preliminary findings support the idea that intercultural learning can be very robust when programs are intentionally designed and qualified educators intervene in students' learning, even in programs of short duration. In addition, the culture in Latin America, and in Colombia in particular, may be more conducive to develop these skills as locals are more willing to share deeper aspects of their own culture very soon after meeting visiting foreign students.

Design & Assessment

Pre and Post *Intercultural Development Inventory* (IDI)[1]:
- Used to determine students' development along the *Intercultural Development Continuum*; administered once at the beginning of the program and once at the end of the program.
- Used to provide individual coaching tailored to students' individual *Developmental Orientation* (DO).

AFS/Sentio's *Global Competence Certificate Program* (GCC)[2]:
- Comprehensive educational program to support student's development before, during and after the experience.
- The program focuses on four core developmental areas: self-awareness; awareness about others; emotional intelligence; bridges to others.

Cultural and intercultural activities:
- The curriculum was designed with various activities to promote intercultural competence: interactions with local and international students; lessons about region's cultural heritage; visits to museums, important heritage landmarks, and multinational corporations; communicative Spanish language courses; Spanish dance lessons; sessions with local Engineering faculty so that students would gain understanding of engineering-specific challenges in the region and the research/initiatives conducted in order to address them, among others.

Student individual activities:
- Overall program reflection
- IDI plan tailored activities
- GCC activities

Demographics:
- Students (*N*=16): males (*N*=14); females (*N*=2).
- Majors: Mechanical Engineering (*N*=13); Aerospace and Aeronautical Engineering (*N*=2); Electrical Engineering (*N*=1); freshmen-senior level students.
- Age range: 18-22.
- Distribution by nationality: 9 USA, 3 India, 1 Thailand, 1 Saudi Arabia, 1 Egypt, 1 Nigeria.

Results

The overall group increase along IDI's *Intercultural Development Continuum* was **13.90 POINTS**.
- A variance of +/- 7 points in the IDI continuum is considered significant.
- The group mean variance was statistically significant $p < .0001$.
- The **range** of point variance between the *pre* and the *post* assessment was: -12.95 to 41.03.

11 STUDENTS Increased one or more DOs.

INTERCULTURAL DEVELOPMENT CONTINUUM

DENIAL	POLARIZATION	MINIMIZATION	ACCEPTANCE	ADAPTATION
55-69 POINTS	70-84 POINTS	85-114 POINTS	115-129 POINTS	130-145 POINTS
Misses difference	Judges difference	De-emphasizes difference	Deeply comprehends difference	Bridges across difference

Modified from the Developmental Model of Intercultural Sensitivity (DMIS), M. Bennett, 1986

- These results are much better than average for short-term programs. Some students moved from *Denial* to the cusp of *Acceptance* (a 41.03 point increase). This is a developmental leap that for many could take years.

VARIANCES BETWEEN IDI PRE-DO AND POST-DO

QUALITATIVE DATA
The word cloud to the left represents the 100 most common terms used in participants' overall program reflections.

[1]Intercultural Development Inventory (IDI): https://idiinventory.com/

[2]Global Competence Certificate: http://www.afsusa.org/afs-next/gcc/