# Developing a Survey Exploring the Impact of Global Undergraduate Experiences on Engineers' Career Pathways

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## Project Overview

### Background

- It is important that engineers develop global skills to succeed in the increasingly globalized work environment.
- *Global engineering competency* (GEC) describes the capabilities necessary for engineering work in a global context.
- We have little evidence of whether existing global engineering programs prepare students for their professional careers.

### Purpose

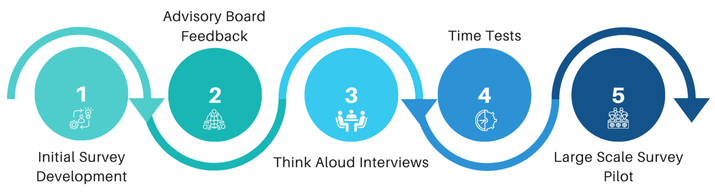
The purpose of this project is to explore the impact of global experiences during and after the undergraduate years on global career outcomes for engineers.

### Research Questions

RQ1: How do global career outcomes (GEC and global work activities) compare between engineers who participated in global programs as undergraduate students and those who did not?

RQ2: What global experience, global self-concept, and career choice variables are predictors of global career outcomes (GEC and global work activities)?

### Survey Development Process




**Annotated survey available on project website.**

## Data Collection

We are conducting a multiple-case study of three long-running global engineering programs. We have been able to take advantage of their strong alumni networks and recognition within their individual universities to improve recruitment processes.

**Case 1**
THE UNIVERSITY OF RHODE ISLAND
International Engineering Program

**Case 2**
University of CINCINNATI
International Co-op Program

**Case 3**
PURDUE UNIVERSITY
Global Eng. Alliance for Research & Education

### Recruitment & Response

Global Programs Group Recruitment → Comparison Group Recruitment → Additional Recruitment as Needed

- Initial email before survey opens
- Survey opening email
- Two follow up reminders
- Social media posts on Linked In
- Targeted specific groups (e.g., majors)
- Individual Linked In messages

**Total Survey Responses: 1223**

Global Group (Global Programs) **595**

Comparison Group (No Global Programs) **628**

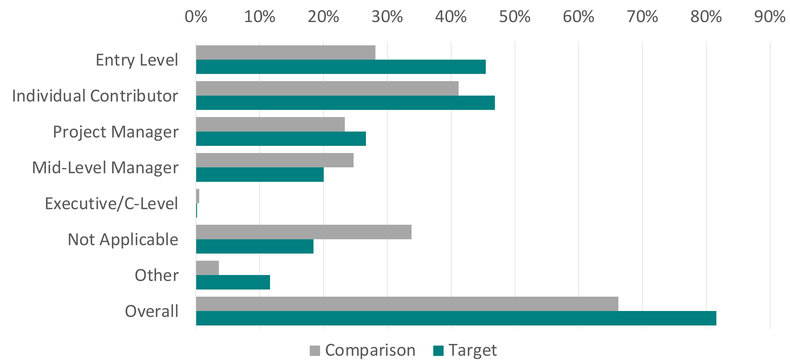
**Similar across groups:** major, industry, gender, and race/ethnicity.
**Difference:** Comparison group is farther into career, on average.

## Results

**Global group had higher mean scores (small to medium effect sizes) than comparison group for:**

- **Global engineering competency**
- **Frequency** of completing global work activities
- **Confidence** in completing global work activities
- **Interest** in completing global work activities

**Global group reported more global experiences at work, and earlier in their careers.**




**Regression analysis results:**

✓**Global learning experiences** are a **significant but limited predictor** of global work outcomes.

✓**Global self-confident and interest variables** are **stronger predictors** of global work outcomes.

**For more information and results, visit our Project Website!**



GLIDE
GLOBAL LEARNING INITIATIVES FOR THE DEVELOPMENT OF ENGINEERS