Using Big Data to Assess the Impact of International Education

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UNIVERSITY SYSTEM OF GEORGIA
Research and Policy Analysis

CASSIE The Consortium for Analysis of Student Success through International Education

What is CASSIE?

National collaborative led by the University System of Georgia to:

- Conduct rigorous research assessing the contribution of international education to college completion
- Provide participating campuses info about how outcomes for students in international education compare to similar institutions
- Build capacity among participating campuses for collaboration between IR and International Education offices to promote better assessment
- Funded by 3-year Title VI grant from US DOE, Office of International and Foreign Language Education
- Led by University System of Georgia in partnership with Institute of International Education (Open Doors)

Research Questions:

Evaluate the relationship between students' participation in international education such as Education abroad, advanced foreign language study, Title VI programs, and their academic outcomes. Specifically:

- Likelihood of graduating in 4 or 6 years
- Time to degree
- Achievement as reflected in GPA

Previous Research

Historically, research on education abroad pertains to demographic, academic, and program design factors relating to participation rates.

- More research has examined outcomes, such as intercultural sensitivity and personal growth, knowledge and skills acquired abroad, etc.
- Supposition has been that education abroad has negative impact on semesters to graduation, especially for students at risk and students enrolled in "lock-step" STEM and pre-professional degree programs

Georgia Learning Outcomes of Students Studying Abroad Research Initiative (GLOSSARI)

- U.S. DOE International Research & Studies Program Grant 2006-10 looked at students from Georgia public institutions to identify characteristics that predict study abroad participation and identify cognitive learning outcomes and academic impact of study abroad
- Found that education abroad increases probability of timely graduation, especially for African American students

Data Sample

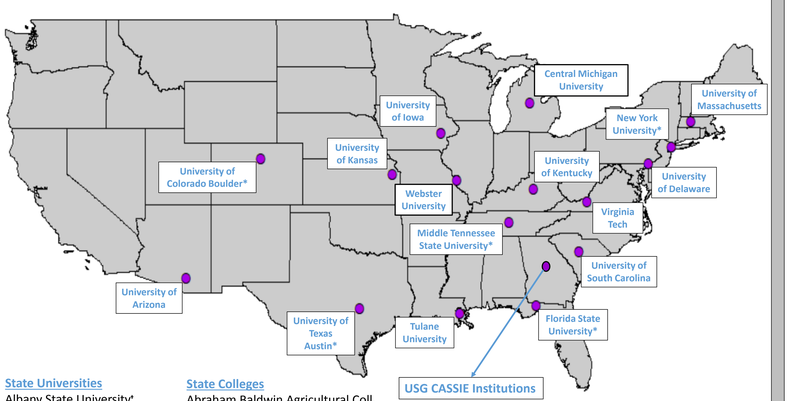
Population:

- All IPEDS First Time Freshman in Fall 2010 & 2011 who sought an Associate's, Bachelor's, or Bachelor's with combined Master's
- All students, not just those with IE experience, to create treated and control groups

Term-by-term data and:

- Prior academic achievement-SAT, high school GPA
- Demographic characteristics-Sex, Race/Ethnicity, Pell receipt
- IEA experiences (e.g. education abroad, foreign language study, Title VI)
- Academic progress-Hours earned, degrees awarded, college GPA

Participating Schools



State Universities
Albany State University*
Clayton State University
Columbus State University
Fort Valley State University*
Georgia College & State Univ.
Georgia Southwestern St. Univ.
Middle Georgia State Univ.
Savannah State University*
University of North Georgia

State Colleges
Abraham Baldwin Agricultural Coll.
Atlanta Metropolitan State College
College of Coastal Georgia
Dalton State College*
East Georgia State College
Georgia Gwinnett College
Georgia Highlands College
Gordon State College
South Georgia State College

Research Universities
Augusta University
Georgia State University
Georgia Tech
University of Georgia

Comprehensive Universities
Georgia Southern University
Kennesaw State University
University of West Georgia
Valdosta State University

• = participating in study; not yet included in national sample results
* = SA population not large enough to include in analysis

Statistical Methodology

Participation in international education is self-selected:

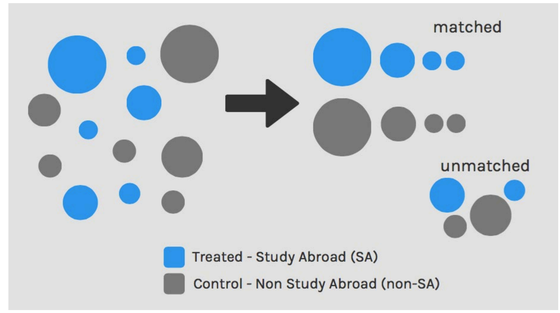
- Impact on student outcomes may not be due to the international education experience itself, but other unobserved factors the student possesses
- Simple comparison of treated and control can result in biased estimates

Exact and Nearest Neighbor Matching

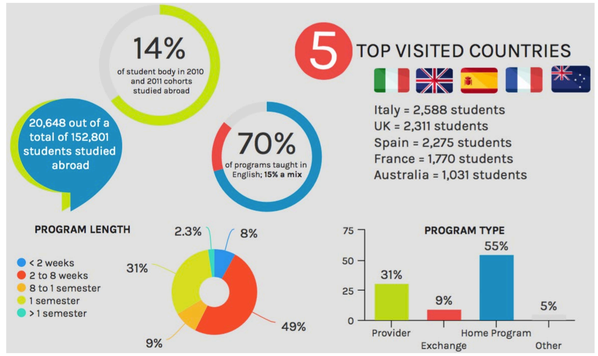
- Without matching, the outcomes of students who SA are compared against those who don't SA. This ignores other differences that can exist across SA and non-SA students
- Matching students who study abroad with others with similar background characteristics allows us to find a "statistical twin" who did not study abroad to isolate the effect of a study abroad experience
- With matching, students are first matched to each other on the control variables. Then, the outcomes of only matched SA and non-SA students are calculated

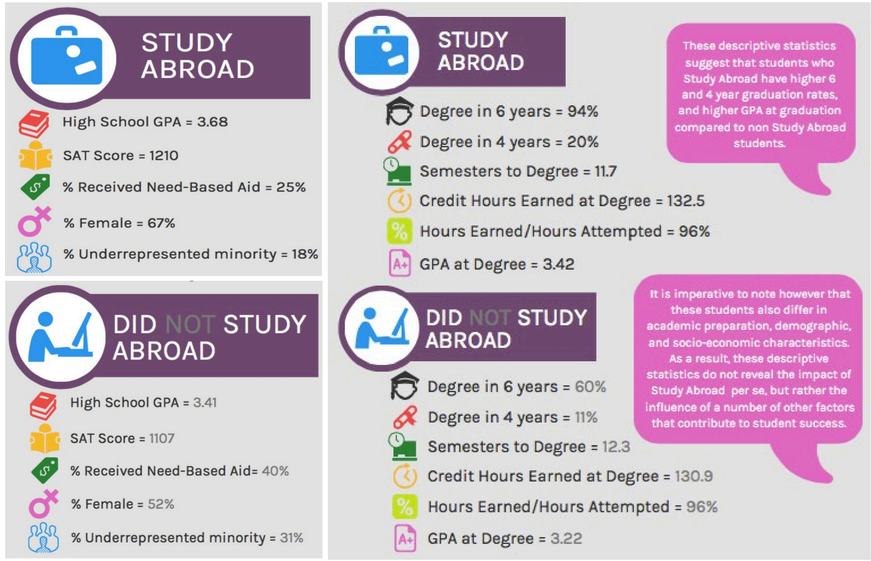
Matching Characteristics/Control Variables:

1. High School GPA
2. SAT/ACT Score
3. Pell/Financial Aid
4. Race/Ethnicity
5. Gender
6. Age at matriculation
7. Major
8. Full time (or part-time)
9. Number of terms enrolled



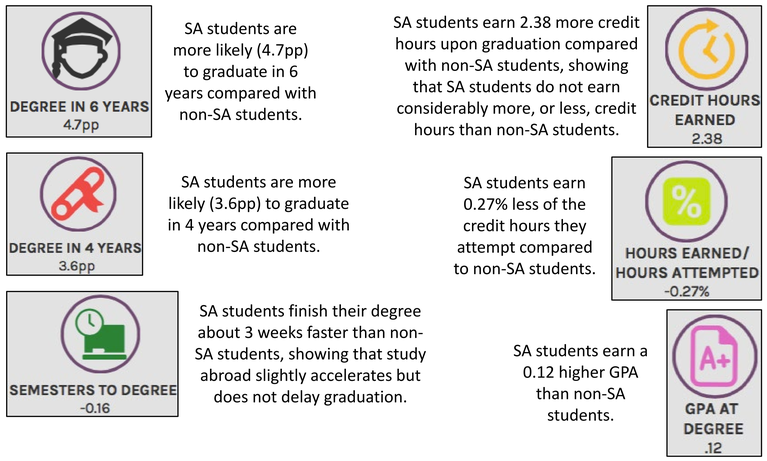
Descriptive Statistics: CASSIE National Sample



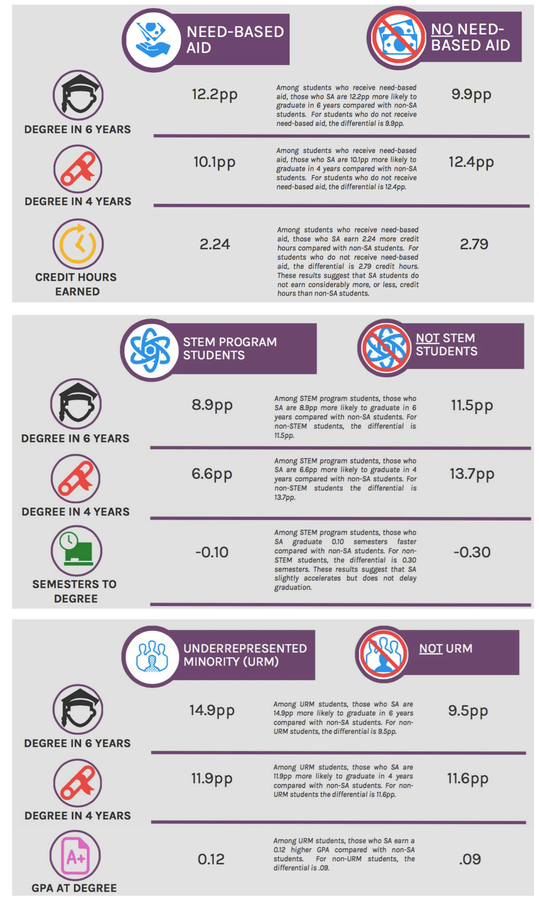


Underrepresented minorities are defined here as American Indian/Alaskan Native, Black or African American, Hispanic, and Native Hawaiian/Pacific Islander. 'Semester to Degree' 'Credit Hours Earned at Degree' 'Hours Earned/Hours Attempted' and 'GPA at Degree' are all conditional on graduation.

Matching Estimates - All



Matching Estimates – Subgroup (USG Sample Only)



Next Steps

- Integrating remaining national partner school data into the data set and results
- Examining characteristics of study abroad programs (language of instruction, program length) on student outcomes
- Analysis of foreign language course taking and Title VI participation on student outcomes