

Senior International Students' Perceptions of Gains While Attending U.S. Colleges

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Abstract

Using the 2015-2017 National Survey of Student Engagement (NSSE) data from senior college students (n=13,950), this study explores the variations of senior international students' perceptions of gains while attending 1,029 U.S. colleges/universities. Results indicate that seniors from the African Sub-Saharan region gained the most in terms of academic and personal skills while seniors from Canada perceived gains the least.

Background

Perceived gains in higher education can be defined as a set of benefits, self-reported by students, gained due to their experience at institutions of higher education (Pascarella, Mayhew, Rockenbach, Bowman, Seifert, Wolniak, & Terenzini, 2016). Knowledge increase in a particular subject, critical thinking skills, and ability to work with people of different backgrounds are some examples of the benefits of higher education (Association of American Colleges & Universities, 2007).

As the demand for institutions of higher education to demonstrate the quality of the education they provide increases, "perceived gains" become more important than before. The concept of perceived gains, which scholars deem to be one of the concepts that could indicate the extent of the quality of students' learning experience during their undergraduate education (Norton & Martini, 2017), is useful for institutions of higher education.

While many scholars are interested in studying how students perceive benefits of attending U.S. higher education institutions, few are interested in investigating the same topic in the context of international students. **As a growing population of students in U.S. higher education, international students are important at least for two reasons.** First, international students contribute to the diversity of student body in U.S. institutions of higher education. With their diverse backgrounds, they enhance the experience of international education within a particular college/university (Anderson, Carmichael, Harper, & Huang, 2009). Second, as international students almost pay full tuition, they contribute to the financial aspect of an institution of higher education. They even contribute to the local economy of where they are situated in (Schoch and Baumgartner, 2004; Anderson et al., 2009).

Considering the small number of studies on how much international students perceive the benefits of attending U.S. colleges/universities and the importance of international students in the context of U.S. higher education, this study is aimed at investigating such a topic. **In this study, we attempt to elaborate on how much international students from different geographical regions of origin perceive the benefits of attending U.S. colleges/universities.** We also attempt to show if student majors, which were grouped into Biglan's classification (Biglan, 1973), affect those variations.

Research Questions

In this study, we explore to what extent senior international students' perceptions of gains of attending U.S. colleges vary by geographical regions of origin. Specifically, this study is guided by the following questions:

- How do perceived gains vary by geographical regions of origin among senior international students studying in the U.S.?
- After accounting for student majors, are the variations still statistically the same?

Method

Data Source

We used data from the administrations of the **National Survey of Student Engagement (NSSE)** from 2015 to 2017. In general, NSSE is an annual survey that measures students' participation in universities and colleges in the U.S. and Canada (Kuh, 2003; National Survey of Student Engagement, 2011). The survey asks responses from freshmen and senior students about their college experiences. One set of questions asks how students perceive the benefits of attending U.S. colleges/universities.

Sample Characteristics – Senior International Students' Geographical Regions of Origin

Senior international students from Asia	6,314	45.3%
Senior international students from Latin America & Caribbean	2,447	17.5%
Senior international students from Europe	1,823	13.1%
Senior international students from Middle East & North Africa	1,357	9.7%
Senior international students from Africa Sub-Saharan	1,104	7.9%
Senior international students from Canada	683	4.9%
Senior international students Oceania	221	1.6%
Total senior international students in this study	13,950	100%

Method (continued)

Sample Characteristics (continued) – Senior International Student Majors by Biglan's Classifications

Senior international students in Hard Majors Category (e.g., Mathematics, Physics, Chemistry, etc.)	33.3%
Senior international students Soft Majors Category (e.g., Education, Social Sciences, Psychology, etc.)	66.7%
Senior international students in Life Majors Category (e.g., Biology, Nursing, Veterinary Science, etc.)	27.9%
Senior international students in Non-Life Majors Category (e.g., Mathematics, Accounting, Urban Planning, etc.)	72.1%
Senior international students in Pure Majors Category (e.g., Mathematics, Physics, Statistics, etc.)	27.5%
Senior international students in Applied Majors Category (e.g., Engineering, Accounting, Education, etc.)	72.5%

Measure*

Self-Reported Perceived Gains (Cronbach's Alpha: .91)

How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?

- Writing clearly and effectively
- Speaking clearly and effectively
- Thinking critically and analytically
- Analyzing numerical and statistical information
- Acquiring job-or-work-related knowledge and skills
- Working effectively with others
- Developing or clarifying a personal code of values and ethics
- Understanding people of other backgrounds (economic, racial/ethnic, political, religious, nationality, etc.)
- Solving complex real-world problems
- Being an informed and active citizen

*Each item has four response options that were coded *Very Little = 0, Some = 20, Quite a Bit = 40, and Very Much = 60*. Those 10 items are then averaged together to create Self-Reported Perceived Gains scale measure.

Analytical Approach

Analysis of Variance (ANOVA) was used to answer the first research question and Analysis of Covariances (ANCOVA) was used to answer the second research question. We used senior international students from the African Sub-Saharan region as the reference group because they had the highest average score for perceived gains.

Findings

Research Question #1 – Mean Comparisons of Senior International Students' Perceived Gains

Geographical Regions of Origin	Sample	Mean	Standard Deviation	Mean Difference	Effect Size
Africa Sub-Saharan	1,080	45.74	12.81	-	-
Latin America & Caribbean	2,422	41.62	13.44	4.12*	.31
Asia	6,239	39.83	12.35	5.91*	.48
Oceania	218	39.57	14.23	6.17*	.43
Europe	1,795	39.31	13.45	6.43*	.48
Middle East & North Africa	1,326	38.32	13.35	7.42*	.55
Canada	678	37.43	12.91	8.31*	.64

Notes:

Results are compared to senior international students from the Africa Sub-Saharan region.

* $p < .001$

Effect size is the mean difference divided by the pooled standard deviation

Research Question #2 – Mean Comparisons of Senior International Students' Perceived Gains with Student Majors as Covariates

Geographical Regions of Origin	Sample	Mean	Standard Deviation	Mean Difference	Effect Size
Africa Sub-Saharan	942	45.90	12.63	-	-
Latin America & Caribbean	2,145	41.49	13.38	4.41*	.33
Oceania	193	40.10	13.89	5.80*	.42
Asia	5,498	39.79	12.28	6.11*	.50
Europe	1,572	39.39	13.32	6.51*	.49
Middle East & North Africa	1,055	38.30	13.35	7.60*	.57
Canada	615	37.50	12.85	8.40*	.65

Notes:

Results are compared to senior international students from the Africa Sub-Saharan region.

* $p < .001$

Effect size is the mean difference divided by the pooled standard deviation

F Regions (6, 12019) = 43.85, $p = .000$

F Hard/Soft (1, 12019) = 18.49, $p = .000$

F Life/Non-life (1, 12019) = 7.37, $p = .007$

F Pure/Applied (1, 12019) = 11.74, $p = .001$

Discussion

Regarding the previous research, this study addresses one of the limitations of the study conducted by Zhao, Kuh, & Carini (2005) such that it has shown that **international students who come from different regions of origin have a different level of perceived gains**. This finding implies that international students who come from different geographical regions of origin have different perceptions of benefits of attending U.S. institutions of higher education. **The differences might occur due to differences in students' cultural backgrounds**. This hypothesis is in line with Gudykunst and Hammer (1988) who implied that geographical regions of origin, as a source of cultural differences, are related to international students' adaptation and engagement. Referring to their work, international students who have internalized cultural values and norms are likely to bring those values and norms while they are engaging in learning and other activities.

In terms of adding student majors in the calculation of mean differences, the significant result of student majors as covariates in relationship with student engagement, which could affect students' perception of gains, has been indicated by prior research as well. For example, Nelson Laird, Shoup, Kuh, & Schwarz (2008) found that majors can affect how students integrate and reflect on their learning, a dimension of student engagement, in certain ways. As noted by them, students who integrate and reflect on their learning more frequently are more likely to perceive more gains during their collegiate education. Nelson Laird et al. (2008) discovered that students who are in the category of either Soft, Non-life, and/or Pure are more likely to integrate and reflect on their learning compared to students who are in the category of either Hard, Life, and/or Applied. They emphasize that the largest difference occurs between hard and soft category – this is in line with the findings in this study in a way that **the hard/soft category is the only significant group when accounting student majors as covariates while counting the mean difference for students' perceived gains**.

As implied in prior studies, there are at least two reasons that could explain why the differences between major categories occur. First, while soft disciplines are more likely to encourage students to analyze and synthesize concepts (Braxton & Nordvall, 1985), hard disciplines tend to require students to memorize facts and procedures (Smart & Ethington, 1995). Second, while faculty members in soft disciplines are likely to have high expectations for students to think critically about concepts, faculty members in hard disciplines are likely to ask students to follow the established formulas and consensus (Lattuca & Stark, 1995; Braxton, Olsen, & Simmons, 1998).

Knowing that there are differences among international students who come from different geographical regions of origin in terms of perceiving benefits of attending U.S. colleges/universities, institutions of higher education in the U.S. that are interested in attracting international students should develop a strategic plan to study those students. This principle can go in various ways such as **not lumping international students into one big category – instead, group international students based on their geographical regions of origin at least or by their countries of origin would be ideal**. Another way to better serve international students based on the findings from this study is by extending the roles of international office services and cultural centers that might have existed within U.S. colleges/universities.

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