

## The Influence of Country of Origin and Academic Level on Asian Students' Gains of Learning

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### Abstract

*The author examines whether gains of learning of Asian students are the same or different if they are from (a) East Asia, (b) South and Central Asia, or (c) Southeast Asia at undergraduate and graduate levels. Results indicated that East Asian students' gains of learning in personal development, science and development, general education, vocational preparation, and intellectual skills were statistically different from other students from South and Central Asia and Southeast Asia. Graduate Asian students' gains of learning in all domains were found higher than undergraduate Asian students' gains of learning. Based on these findings, the author offers implications and recommendations for educators and practitioners to improve international students' support and their college learning experiences.*

**Keywords:** Asian students, gains of learning, college access, international students

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Current literature shows that Asian students come from cultures where great values are usually placed on spending time with friends, but cultural barriers can hinder Asian students from developing intercultural friendships in international contexts (Gareis, 2012; Trice, 2004). In transferring to an international institution, Asian students can face a higher level of adjustment problems (Gebhard, 2012) and can experience a painful process of academic adaptation (Campbell & Li, 2008). Gareis (2012) found that “students from East Asia often had no American friends at all” (p. 12). Because of cultural and language differences, Asian students encounter social, cultural, and educational challenges upon their entry to the host institutions in America (Lee & Rice, 2007).

There were 525,849 Asian students (i.e., 64.16% of the total 819,644 international students) who attended American colleges and universities in 2012–2013 (Institute of International Education [IIE], 2013). The top three sending countries—China (28.7%), India (11.8%), and South Korea (8.6%)—comprised nearly half (49.1%) of the total international enrollment in U.S. higher education (IIE, 2013). Students from Asia primarily study degree

programs at the graduate level (46% of the total), and at the undergraduate level (36%), with the remaining 18% in non-degree programs (IIE, 2013).

If Asian students undergo a series of issues and challenges in adjusting and assimilating with American academic and social cultures, to what extent do Asian students believe they are achieving important learning objectives (gains) attending the American colleges and universities? There are five types of gains (see, Pace & Kuh, 1998) associated with the student college experience: personal development (e.g., developing values and ethical standards; understanding your abilities, interests and personality; pursuing ideas and finding information), science and technology (e.g., understanding the nature of science and technology; understanding new development and application in science and technology), vocational preparation (e.g., gaining job related information; acquiring background and specialization for future education), general education (e.g., developing an understanding and enjoyment of art, music, and drama; becoming aware of different philosophies, cultures, and ways of life), and intellectual skills (e.g., writing clearly and effectively, using computers and other information technologies). Despite the fact that Asian students represent the largest international population in the institutions of American higher education, bring diversity on campus, and contribute to economy, there is insufficient study that focuses on their college experience and learning outcomes.

## **Methods**

### **Research Questions**

The current study examines how learning outcomes, also known as gains of learning, of Asian students are similar or different if students are from (a) East Asia, (b) South and Central Asia, or (c) Southeast Asia, at undergraduate and graduate levels. In other words, do Asian students report different gains of learning (e.g., in personal development, science and technology, general education, vocational preparation, and intellectual skills)? Do undergraduate Asian students report different gains of learning than graduate Asian students in significant ways?

### **Participants**

Asian international students were invited to participate in an online survey from the selected 25 research universities in the United States in Spring 2012. The researcher coordinated with the staff members of the office of international programs at the selected U.S. universities to distribute the survey to Asian international students. The staff members agreed to distribute the survey to only a small portion of Asian student population, and the researcher did not verify the actual numbers of Asian students enrolled in the participating universities. Among 705 participants, there were 365 undergraduate and 340 graduate students. Fifty-five percent ( $n = 390$ ) of the participants identified as East Asian, 31% ( $n = 219$ ) as South and Central Asian, and 14% ( $n = 96$ ) as Southeast Asian. The following Asian countries were listed and grouped based on the IIE (2013) classification for the purpose of this study: China, Hong Kong, Japan, South Korea, Taiwan, Mongolia (East Asia); Bangladesh, India, Nepal, Pakistan, Sri Lanka, Kazakhstan (South and Central Asia); Burma, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam (Southeast Asia).

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## Survey Instrument and Dependent Variables

The College Student Experiences Questionnaire developed and revised by Pace and Kuh, (1998) was used in this study. This instrument is nationally used in measuring college student outcomes. There are 25 self-report items, also known as “gains of learning” with Likert-type responses to assess learning outcomes of students (e.g., To what extent do you feel you have gained or made progress in “developing your own values and ethical standards,” 1 = *very much*, 4 = *very little*). The dependent variables for this study were gains of learning in (a) personal development, (b) science and technology, (c) general education (d) vocational preparation, and (e) intellectual skills. The Cronbach’s alphas for the five domains of gains of learning scales ranged from .79 to .88.

## Data Analysis

For data analysis, first, simple descriptive statistics, frequencies, and correlations on the variables were examined to check the relationships of the variables and to assess assumptions of future analyses. Second, multivariate analysis of variance (MANOVA) was conducted to examine two research questions to assess gains of learning differences on three Asian student groups—East Asian, South and Central Asian, and Southeast Asian. The five dependent variables—gains of learning in (a) personal development, (b) science and technology, (c) general education (d) vocational preparation, and (e) intellectual skills—were derived from the College Student Experiences Questionnaire. A non-significant Box’s M test ( $p = .007$ ) indicates homogeneity of covariance matrices of the dependent variables across the levels of gains of learning.

## Results

The MANOVA in this study revealed that, in general, statistically significant differences existed among three different groups of Asian students in their gains of learning. The multivariate effect was significant by students’ country of origin group levels,  $F(10, 1396) = 4.342, p < .001$ , partial  $\eta^2 = .03$ . The tests showed that there were significant differences across gains of learning levels: personal development,  $F(2, 702) = 6.20, p < .05$ , partial  $\eta^2 = .01$ ; science and technology,  $F(2, 702) = 5.56, p < .05$ , partial  $\eta^2 = .01$ ; general education,  $F(2, 702) = 6.51, p < .05$ , partial  $\eta^2 = .01$ ; vocational preparation,  $F(2, 702) = 3.58, p < .05$ , partial  $\eta^2 = .01$ ; and intellectual skills,  $F(2, 702) = 4.10, p < .05$ , partial  $\eta^2 = .01$ . The data in Table 1 represent statistical mean differences and the overall effect size (i.e., partial  $\eta^2 = .03$ ) for the country of origin on Asian students’ gains of learning in the five domains. The partial eta-squared indicates that students’ country of origins have a small effect on their gains of learning.

As Table 1 illustrates, East Asian students perceived a greater gain of learning in personal development, science and technology, vocational preparation, and intellectual skills than students from South and Central Asia and students from Southeast Asia. Similarly, Asian students from South and Central Asia perceived greater gains of learning in general education than students from East Asia and Southeast Asia.

To examine the second research question, MANOVA was performed. The multivariate effect was significant by students’ academic level,  $F(5, 699) = 9.94, p < .001$ , partial  $\eta^2 = .06$ .

Further tests showed that there was a significant difference in gains of learning only in general education  $F(1, 703) = 30.96, p < .001$ , partial  $\eta^2 = .04$  among undergraduate and graduate Asian students. In the other four domains, the significance difference was not found; general education,  $F(1, 703) = 1.72, p > .05$ , partial  $\eta^2 = .002$ ; science and technology,  $F(1, 703) = .01, p > .05$ , partial  $\eta^2 = .000$ ; vocational preparation,  $F(1,703) = 1.69, p > .05$ , partial  $\eta^2 = .002$ , and intellectual skills,  $F(1, 703) = 0.86, p > .05$ , partial  $\eta^2 = .001$ . The data in Table 2 represent statistical mean differences and the overall effect size (i.e., partial  $\eta^2 = .06$ ) for Asian students' gains of learning in the five domains. The partial eta-squared indicates that students' academic levels have a moderate effect on their gains of learning.

**TABLE 1**

**Difference in Gains of Learnings (DV) Among Asian Students in Different Asian Country of Origins**

Variables	East Asia ( <i>n</i> = 390)	South & Central Asia ( <i>n</i> = 219)	Southeast Asia ( <i>n</i> = 96)	Significance <sup>a</sup>
Gains in personal development	1.92	1.77	1.76	1 vs. 2; 1 vs. 3
Gains in science and technology	2.22	2.00	2.04	1 vs. 2; 2 vs. 1
Gains in general education	2.26	2.37	2.05	1 vs. 3; 2 vs. 3; 2 vs. 1; 3 vs. 2
Gains in vocational preparation	2.10	1.96	2.03	1 vs. 2; 1 vs. 3; 2 vs. 1; 3 vs. 1
Gains in intellectual skills	2.06	1.92	1.93	1 vs. 2; 2 vs. 1

*Note.*  $F(10, 1396) = 4.342, p < .001$ , partial  $\eta^2 = .03$ ; 1 = East Asia, 2 = South & Central Asia, 3 = Southeast Asia. <sup>a</sup>Only statistically significant differences are noted here.

**TABLE 2**

**Difference in Dependent Variables and Gains of Learning Among Undergraduate and Graduate Asian International Students**

Variables	Undergraduate students ( <i>n</i> = 365)	Graduate students ( <i>n</i> = 340)	Significance
Gains in personal development	1.82	1.88	Non-significance
Gains in science and technology	2.12	2.13	Non-significance
Gains in general education	2.12	2.42	Significance
Gains in vocational preparation	2.07	2.09	Non-significance
Gains in intellectual skills	1.98	2.02	Non-significance

*Note.*  $F(5, 699) = 934, p < .001$ , partial  $\eta^2 = .06$

As Table 2 illustrates, graduate Asian students perceived greater gains of learning in personal development, science and technology, vocational preparation, and intellectual skills than undergraduate Asian students. However, out of five domains of gains of learning, there was

a statistical significance only in gains in general education. The estimated 95% confidence interval between under undergraduate and graduate students in gains of learning in general education was [3.047, 2.343] and [2.194, 2.495].

### **Discussion**

The findings of this study help educators understand that Asian students' gains of learning vary across the various regions of Asia. Particularly, Asian students are culturally and academically different. It may also address the issues related to stereotypes and discrimination made towards this student population that Asian student are passive learners, or *Other* students (Campbell & Li, 2008; Lee & Rice, 2007). The findings indicate that country of origin is an important element to explore in regard to positive academic development, personal and intellectual development, and critical thinking (Zhao, Kuh, & Carini, 2005) but there is no precise study in the context of Asian students' gains of learning to compare as such. The results from the current study reveal that there is a variation among Asian students' gains of learning across regions. East Asian students reported higher levels of gains of learning in personal development (e.g., developing values and ethical standards; understanding abilities, interests, and personality; pursuing ideas and finding information), science and technology (e.g., understanding nature of science and technology; understanding new development and application in science and technology), vocational preparation (e.g., gaining job related information; acquiring background and specialization for future education), and intellectual skills (e.g., writing clearly and effectively, using computers and other information technologies) compared to students from South, Central, and East Asian regions. Similarly, Asian students from South and Central Asian regions reported higher gains of learning in general education (e.g., developing an understanding and enjoyment of art, music, and drama; becoming aware of different philosophies, cultures, and ways of life) than students from other Asian regions.

### **Implications for Practice and Research**

This study offers implications for educators and practitioners that should be considered within the context of limitation inherent in the current study. First, the sample was limited to Asian graduate and undergraduate students from research universities. Second, this sample does not represent Asian students attending in small or medium private and public colleges and universities in the US. Finally, the researcher did not include other important variables such as length of stay, grade point average, and gender variables of Asian students in the current study.

Despite these limitations, the results of the current study offer several implications for practice. Asian students' college experience and gains of learning can be added to promote more diverse and multicultural teaching. This study will promote a better understanding of Asian students who come from different regions of Asia—East, South, Central, and Southeast—and their learning experiences. Campus administrative staff and faculty members should consider the cultural variations when dealing with students from different geographical and cultural backgrounds without building on stereotypes. Future study should examine a different sample that includes Asian and non-Asian student participants from a variety of institutions to study the topic in a broader context.

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