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Asian Students are Less Likely to Participate in University Classes:

Does That Mean They Don't Learn as Much?

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Abstract

There is a belief among educators in the United States that students who are actively engaged and participating in classroom settings will perform better than those who are not. Asians, however, stereotypically do not participate in class as much as U.S. students. For this study we investigated whether student engagement is a good measure of student ability (i.e., achievement) at an undergraduate university. Using data collected from the National Survey of Student Engagement (NSSE), focus groups, and student information from the university database, we compared participation/engagement of our Asian and U.S. students. Our results indicate that although Asians do not participate as much as their U.S. peers, they perform equally well. It is believed that Asians compensate for their lack of participation through more individual preparation.

Asian Students are Less Likely to Participate in University Classes:

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American classrooms are often structured to maximize involvement and encourage student participation under the assumption that by so doing, student performance will also increase (Chickering & Gamson, 1987; Finn & Rock, 1997). America is also not the only nation whose educational structure emphasizes participation (Wilkinson & Olliver-Gray, 2006). In many elementary, secondary, and post-secondary classes, participation is even included as a portion of the student's grade because of the overwhelming belief that it is a necessity for students to display concepts they are taught (Bean & Peterson, 1998). More often than not, this type of participation refers to in-class verbalization, such as asking or answering questions, as well as participation in classroom discussions.

In the past, utilizing data from the National Survey of Student Engagement (NSSE), participation has been shown to be a positive correlate of performance. For example, Kuh, Laird, and Umbach (2004), using NSSE data, found that activities involving student interaction in and out of the classroom increase student achievement.

A modified version of the (NSSE) was designed to measure student engagement at the classroom level (Ahlfeldt, Mehta, and Sellnow, 2005). Using this measure, researchers found that "Students [participated] more in a classroom and also [reported] a better understanding of course concepts when steps [were] taken to actively engage them." The survey contained 14 questions in the following format: "*During your class, about how often have you done each of the following? Asked questions during class or contributed to class discussions.*" The self-reported level of student involvement was examined in 56 different classes across seven colleges

ranging from Engineering to Communication, and from English to Biology at a mid-western University. Subjects assigned to the treatment condition were taught using an innovative method known as problem-based learning (PBL). PBL was designed to increase classroom participation by having students work in small collaborative groups. The research found students in classes implementing PBL had significantly higher levels of student engagement. The authors urge all instructors to increase student engagement as it leads to "...a better education and more sophisticated skill development..." (Ahlfeldt et al., 2005).

Due to the abnormally high lack of concept retention in physics, educators have recently been reforming teaching methods in this field to increase participation and presumably academic performance (Ahlfeldt et al., 2005). Hake (1998) investigated the effect Interactive Engagement methods (IE) had on improved conceptual retention in introductory level physics classes. These are defined as methods "designed at least in part to promote conceptual understanding through interactive engagement of students in heads-on (always) and hands-on (usually) activities which yield immediate feedback through discussion with peers and/or instructors" (Hake, 1998). He compared the effects of two different methods of instruction on student performance in physics courses. The first type of instruction was more traditional making "...little or no use of IE methods, relying primarily on passive-student lectures, recipe labs, and algorithmic-problem exams" (Hake, 1998). The second type of instruction, termed Interactive Engagement, made "...substantial use of IE methods" (Hake, 1998). Students in IE courses performed significantly better on standardized physics tests than students in traditional courses, thus adding additional support to the belief that classroom participation improves performance.

Overall, the relevant literature appears to support the concept that class participation can lead to substantial academic improvement. Furthermore, that these improvements were found in

a variety of classes, ranging from ones that naturally are supportive of class participation (English) to ones that do not naturally require such a component (Physics), indicates the substantial influence class participation can have (Ahlfeldt et al., 2005; Rubin & Hebert, 1998).

Although research on class participation in America has thus far found a positive correlation between participation and performance; class participation in some other countries has traditionally not been emphasized and may even be discouraged. For example, traditional Asian classrooms include teaching methods that are authoritarian, expository, and teacher-centered rather than student-centered (Wong, 2004). Yet Fowler (2005) has found that "active learning", a teaching technique which increases participation by allowing the students to teach each other, can be greatly effective in Asian countries. He used these techniques in teaching negotiation and conflict resolution in both Laos and Vietnam. It seems that increasing participation in Asian countries may also increase performance as it does in the U.S.

American classrooms are becoming increasingly diverse (Keller, 2001), potentially effecting the impact of participation based teaching methods. Utilizing NSSE data, Zhao, Kuh, and Carini (2005) examined the differences between American students and international students in many different academic areas. One area was "active & collaborative learning", which includes questions concerning classroom participation. Results stated that international students scored significantly higher in classroom participation than their American counterparts as first-year students but the relationship reverses when examining senior students. The fact that international students may actually participate more as first-year students seems contradictive of the usual stereotype of Asian students. Therefore, further comparisons between Asian and American students, both as first years and seniors, may be instructive as to how class participation affects students in the American university.

Stereotypically, Asian students are viewed as performing better academically (Stevenson, 1987; Zhao, 2005). A basic question then is: Do Asian students participate less in American university settings, and if they do, does that reduce their academic performance as measured by GPA, etc.? It has been found that active learning, or increased participation, increases understanding in higher learning classrooms not only in America but also in Vietnam (Fowler, 2005; Rubin & Hebert, 1998). This literature suggests that if students took a more active role in their education, their performance would increase above their current level. Additional questions would be: if Asian participation is lower in the classroom, do they compensate through active engagement outside of the classroom? Also, does the level of Asian student participation change over the four years spent at a American university?

Though this study focuses on Asian students in the United States, concern regarding Asian student participation has been expressed in other countries. For example, Wilkinson and Olliver-Gray (2006) performed an exploratory study based on the current concern in many New Zealand institutions that Asian students do not participate enough in the classroom. As class participation is often viewed as being an integral part of the western classroom experience, the current study should be beneficial to those institutions that desire to evaluate the effects participation as a part of the classroom experience.

Method

Participants

The participants in this study were first-year and senior students attending a western university which is, by percentage, the most diverse in the United States (Institute of International Education, 2005). Over 50% of the students are from countries outside of the USA.

In this study the students were categorized twice, by the country they were from (home-country) as well as self-declared ethnicity. By ethnicity, there were 632 Asian/Oriental students surveyed and 699 Caucasian (White/Non-Hispanic) students. By home-country, 340 students were from Asian countries and 1105 from the USA. The Asian countries represented in our sample were: China, Hong Kong, Japan, Malaysia, South Korea, Taiwan, and Thailand.

Apparatus

The data for this study comes from the National Survey of Student Engagement (NSSE), an annual survey of first-year and senior students that measures students' participation in various educational experiences. The instrument was designed by The National Center for Higher Education Management Systems under the direction of the Indiana University Center for Postsecondary Research and the Indiana University Center for Survey Research. The NSSE is meant to "obtain, on an annual basis, information...about student participation in programs and activities that institutions provide for their learning and personal development" (Kuh, 2006). Prior research has connected this survey to valued outcomes (Kuh, Laird, & Umbach, 2004; Liu & Liu, 2004; Zhao, Kuh, & Carini, 2005).

Procedure

For this study, we utilized the NSSE data from 2002 to 2005 that was systematically collected by the University's Department of Institutional Research. All NSSE information gathered for this study was self-reported. A member of the Institutional Research Department then linked additional student information to their individual responses. This extra information was supplied by university records. This information included GPA, student's first attended term, gender, home-country, ethnicity, major, grades and class sizes for English 201 and Biology 100 (both general education classes). For this study the only extra variables utilized were GPA,

home-country, ethnicity, and grades from English 201 and Biology 100. In distinguishing between home-country and ethnicity throughout this article, U.S. refers to home-country analyses, and Caucasian refers to ethnicity analyses.

After the initial analyses a focus group was conducted among students involved in the English as an International Language or EIL program. “The purpose of the English as an International Language (EIL) program is to help non-native speakers of English increase their academic English proficiency” (Brigham Young University – Hawaii, 2005). EIL is available to all students but the majority of participants are new Asian students strengthening their English skills in order to better participate and learn from their regular academic classes. The focus group concentrated on the students’ view of their participation in the classroom. An email invitation was sent to various Asian students who were then part of the EIL program. The invitation explained the research briefly, asked for an hour of their time to participate, and included the time and place of the focus group. Pizza was offered as an incentive for the invited students to attend and was also stated in the invitation. During the hour long focus group the participants were asked how often they participated or asked questions during class, if their teachers required participation, and if they ever feel a need to communicate with others during class.

Results

Initial analyses were conducted to answer the first research question: Do Asian students participate less in American university settings?

Questions 1a and 1e from the NSSE, which pertain directly to class participation, were utilized in this survey. Question 1 reads:

In your experience at your institution during the current school year, about how often have you done each of the following?

1a- Asked questions in class or contributed to class discussions,

1e- Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments.

Scale: 1=Never, 2=Sometimes, 3=Often, 4=Very Often

Two t-tests were utilized to compare Asian and Caucasian students (by ethnicity) for question 1a and 1e. The two questions revealed Asian students participated significantly less than Caucasian students (1a: $t(1329)=12.01$, $p<.01$). The means for NSSE question 1a were as follows: Caucasian=3.19, Asian=2.65. The means for NSSE question 1e were as follows: Caucasian=3.28, Asian=3.04. Although both questions examined showed significant differences between Asians and Caucasians, the first question (NSSE 1a), which deals more specifically with voluntary class participation, actually has a larger effect size (1a- $r_{pb}=.098$, 1e- $r_{pb}=.019$). As a result other analyses were conducted utilizing NSSE 1a.

This question (1a from the NSSE) was used to compare class participation by home-country. A one-way ANOVA with home-country as the grouping variable was utilized to compare U.S. students to students from various Asian countries ($F(7, 1469)=17.166$, $p<.01$). A Tukey post-hoc revealed students from Hong Kong, Japan, Taiwan, and Malaysia participated in class significantly less ($p<.05$) than students from the U.S. (Table 1).

Once it was established that Asians did indeed participate less than their American peers, the second research question was examined: Does less participation reduce their academic performance as measured by cumulative grade point average (GPA), etc.?

To determine if their academic performance differed, GPAs of the NSSE participants, as gathered from the university database, were analyzed. When students' GPAs were compared by ethnicity, using a t-test, Asian students' GPAs were slightly (but significantly) lower than

Caucasians ($t(1329)=6.02, p<.01$) ($r_{pb}=.027$). The average Asian GPA was 3.21 and the average for Caucasians was 3.36. However, when GPAs were compared by home-country, utilizing a one way ANOVA with home-country as the grouping variable, there was no significant difference ($F(7,1469)=1.67, p>.05$) (Table 1).

The relationship between class participation and academic performance was further investigated by comparing Asian and U.S. (by home-country) students' performance in a participation intensive course (English 201) and in a lecture based course (Biology 100). We examined the students' grades by home-country utilizing a one way ANOVA. There was a significant difference concerning BIO 100 ($F(7,579)=2.39, p<.05$). Yet, when examining ENG 201, there was no significant difference between the grades ($F(7,579)=.581, p>.05$). Though Asian and U.S. students (by home-country) did differ concerning BIO 100 grades, the effect size was very small ($\eta_p^2=.028$). Also, when further investigating the difference through a Tukey post hoc test it was found that only students from China differed from students from Taiwan. There was no significant difference between U.S. students and Asian students (by home-country). (See Table 2 for average grades per country for ENG 201 and BIO 100.)

To better understand the relationship between GPA and class participation, students' responses from the NSSE concerning class participation (NSSE 1a) were correlated with their GPA's. When examined by home-country, class participation was significantly correlated with GPA for U.S. students ($r=.17, p<.01$), and for Asian students ($r=.14, p<.05$). It is important to note that the relationship is greater concerning U.S. students.

Next we examined the third research question: Since Asian participation is lower in the classroom, do these students compensate through active engagement outside of the classroom?

The initial correlation analysis revealed that, by ethnicity, Asian class participation is not correlated with GPA. Yet, it is slightly correlated with other factors such as preparing for class ($r = .13, p < .01$) and relationships with faculty ($r = .12, p < .01$) (questions 9a and 8b from the NSSE respectively). When exploring the same relationship by home-country the same trend was entirely not true. By home-country, Asian class participation is significantly correlated with GPA ($r = .18, p < .01$). Again looking at the same relationships, it was found that GPA is also significantly correlated with preparing for class ($r = .11, p < .05$) and relationships with faculty ($r = .13, p < .05$). This would seem to suggest that while Asians are actively engaged outside of the classroom, participation may still affect GPA.

To further answer the research question we investigated the difference in how students spend their time. We compared how students from Asian countries and the U.S. spend their time utilizing questions 1 and 9 from the NSSE:

1-In your experience at your institution during the current school year, about how often have you done each of the following?

1t-Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

Scale: 1=Never, 2=Sometimes, 3=Often, 4=Very Often

9-About how many hours do you spend in a typical 7-day week doing each of the following?

9a-Preparing for class (studying, reading, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)

9d-Participating in co-curricular activities (organization, campus publications, student government, social fraternity or sorority, intercollegiate or intramural sports, etc.)

9e-Relaxing and socializing (watching TV, partying, etc.)

Scale: 1=0 hours, 2=1-5 hours, 3=6-10 hours, 4=11-15 hours, 5=16-20 hours, 6=21-25 hours, 7=26-30 hours, 8=More than 30 hours

Four separate one-way ANOVAs were utilized with each of the above NSSE question as the dependent variable and home-country as the independent variable. Significance was found for questions 1t and 9a (1t: $F(7, 1462)=7.48, p<.01$, 9a: $F(7, 1430)=6.23, p<.01$). Students from Japan, and China spent significantly ($p<.05$) more time preparing for class (NSSE 9a) than U.S. students. Yet, students from the U.S. did not spend significantly more time relaxing, socializing (NSSE 9e) or engaging in co-curricular activities (NSSE 9d) than students from Asian countries. Also, U.S. students scored significantly higher ($p<.05$) for question 1t than students from Japan and China. This supports the theory that Asians tend towards solitary learning while U.S. students are more likely to seek interaction in their learning (Table3).

In investigating the third research question further we last examined the student-faculty interaction outside of the classroom. The following five individual questions from Question 1 of the NSSE were utilized in this portion of the study:

In your experience at your institution during the current school year, about how often have you done each of the following?

1n-Discussed grades or assignments with an instructor

1o-Talked about career plans with a faculty member or advisor

1p-Discussed ideas from your readings or classes with faculty members outside of class

1s-Worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)

Scale: 1=Never, 2=Sometimes, 3=Often, 4=Very Often

Utilizing four separate one-way ANOVAs, each with one of the above NSSE questions as the dependent variable and home-country as the independent variable, significance was found for questions 1n and 1o (1n: $F(7, 1463)=6.34, p<.01$, 1o: $F(7, 1463)=8.96, p<.01$). Further post-hoc tests (Tukey) on questions 1n and 1o found that students from the U.S. rated themselves significantly higher ($p<.05$) than students from Japan (and for question 1o only, Hong Kong as well). Yet there was no difference between the students concerning questions 1p and 1s (Table 4). This also seems to support the theory that students from the U.S. are more likely to seek interaction for their learning, in this case with faculty, than their Asian peers.

Finally, we examined the last research question: Do student participation levels change over the four years spent at a western American university?

The Asian countries were grouped together as a single variable and compared to the U.S. (by home-country) by first-year and senior students utilizing question 1a from the NSSE. The following were the means found: First-Year Asian=2.60, Senior Asian=2.51, First-Year US=2.80, Senior U.S.=3.18. This analysis revealed significant changes in levels of participation from first-year students to senior students, as well as between Asian and U.S. students ($F(1, 1473)=22.34, p<.01$). Among U.S. students, there was a significant increase ($p<.01$) in reported participation, between first-year to senior students. However, Asian students' level of participation did not increase; Asian first-year and senior students participate similarly.

Discussion

Results indicate that Asian students participate less than U.S. students. This is true whether "Asian" is defined by home-country or ethnicity. Our findings seem to contradict those of Zhao, Kuh, and Carini (2005) who found that international students, more than half of whom were Asian, participate more than their American counterparts. The contradictions may be

attributed to the non-Asian international students in Zhao, et al.'s article who may have boosted the overall international participation scores.

Since Asian students participated significantly less than U.S. students, previous research predicts that Asian performance would likewise be significantly lower than U.S. performance (Kuh, Laird, & Umbach, 2004). The widely accepted stereotype of Asian performance does not support this hypothesis however, as Asian students are generally believed to perform better in academics than their U.S. counterparts (Stevenson, 1987; Zhao, 2005).

GPA was used as a measure of performance and was compared between Asian and Caucasian students separated by ethnicity and then by home-country. When separated by ethnicity, Caucasians have significantly higher GPA's, however when comparing groups separated by home-country there was no difference. The difference found by ethnicity does not suggest that international student's GPAs are lower, because factors traditionally believed to affect GPA (e.g., work ethic) are not affected by ethnicity, but rather are taught by culture. Results found by ethnicity are confounded in this analysis as one cannot know to what extent the individual is influenced by the cultural mediums we are attempting to examine. Comparing by countries assures much more accurate results. That being said, in this study students from Asian countries did not differ in performance (as measured by GPA and grades for specific courses) from their U.S. counterparts, as examined by home-country. Whether the course was participation intensive or not, Asians (as defined by home-country) fared just as well as their U.S. peers, though students from China fared better than students from Taiwan concerning BIO 100. Furthermore, a correlation analysis of performance (GPA) and participation found that although there is a significant relationship for both U.S. and Asian students (by home-country) the relationship is stronger for U.S. students.

These results suggest that Asian students may compensate for their lack of in-class participation, possibly through personal study outside the classroom (research question 3). A simple correlation revealed that Asian (by home-country) GPA is related to classroom participation as well as other engagement activities such as spending time preparing for class (NSSE questions 9a). To better understand “preparing for class” (as utilized in NSSE question 9a) we investigated student faculty interaction. The above trends held true as the results illustrated that students from the U.S. (by home-country) interact significantly more with the faculty than their Asian counterparts.

Lack of in-class participation does not seem to keep Asian students from achieving their academic goals. Through a frequency table it was found that the most popular major for Asian students (by home-country) was Psychology, which is stereotypically a very interactive major. This suggests that Asians do not exclude themselves from majors that require excessive amounts of participation, yet still show high performance in these areas.

Our conclusion is that Asian students do indeed participate less, in and outside of the classroom than their U.S. peers. This trend holds true throughout their college careers; whether first-years or seniors, U.S. students consistently participate more than their Asian peers. However, Asian students are able to perform just as well by compensating through other more solitary active engagement.

In order to better understand international students and their English abilities Andrade and Evans (2006) conducted a survey among both part and full time professors. Nearly half all the faculty, including many professors who teach only EIL courses, responded. The survey addressed issues found among non-native English speakers (ESL) such as, perceived student confidence, practical English language skills, and classroom participation levels. Though the

survey addressed issues among all the ESL students at the institution, it is important to note that the majority of these ESL students come from Asian countries.

Of the faculty that responded to this survey 44% felt that “many or almost all” ESL students have adequate skills to participate meaningfully in class. Only 14% felt that “very few to almost none” have adequate English skills to participate. Likewise, only 21% felt that “many or almost all” of the ESL students in their classes have difficulty expressing themselves clearly in class discussions. It can be concluded then that lack of classroom participation does not stem from lack of ability, rather the choice to not participate is motivated from some other source. In the focus group conducted by the research team one Asian student commented, “In class, I may not say something, but I am participating in my mind.” Another student stated, “Teachers back home ask for the correct answers to questions, whereas teachers here ask for students’ opinions.” In the faculty survey many professors noted that ESL students choose not to participate. As one professor commented, “The ESL students will not ask questions in class. Most feel that it is not their place to ask” (Andrade & Evans, 2006).

Lack of participation in Asian students in U.S. classrooms, rather than being viewed as a negative quality, appears to be a quality they may exhibit based on their former schooling. This training possibly explains why they are able to compensate for the lack of participation through other means, while U.S. students seem to need participation to enhance performance. It is important for all who instruct Asian students to understand the different values they have and how these values may be affecting the ways they choose to participate. Being sensitive and knowledgeable on this subject will become increasingly beneficial as American classrooms continue to become more diverse.

References

- Ahlfeldt, S., Mehta, S., & Sellnow, T. (2005) Measurement and analysis of student engagement in university classes where varying levels of PBL methods of instruction are in use. *Higher Education Research & Development, 24*, 5–20.
- Andrade, M., & Evans, N. (2006, April). *University instructors' view of ESL students: Implications for training*. Paper presented at the RELC Annual Seminar, Singapore..
- Bean, J.C. & Peterson, D., (1998). Grading classroom participation. *New Directions for Teaching and Learning, 74*, 33-40.
- Brigham Young University – Hawaii (2005). *English as an international language: About the EIL program*. Retrieved January 22, 2007, from <http://w2.byuh.edu/academics/lang/departments/program.htm>.
- Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin, 39*(7), 3–7.
- Finn, J. D. & Rock, D.A. (1997). Academic success among student at risk for school failure. *Journal of Applied Psychology, 82*(2), 221-234.
- Fowler, M. R. (2005). Transplanting active learning abroad: Creating a stimulating negotiation pedagogy across cultural divides. *International Studies Perspectives, 6*, 155-173.
- Hake, R.R. (1998). Interactive-engagement versus traditional methods: A six-thousand-student survey of mechanics test data for introductory physics courses. *American Journal of Physics, 66*, 64-75.
- Institute of International Education (Nov. 2005). *International students: Leading institutions by institutional type in the Open doors report 2005: Report on international educational exchange*. Retrieved Oct. 4, 2006, from <http://opendoors.iienetwork.org/?p=69698>.

- Keller, G. (2001). The new demographics of higher education. *Review of Higher Education*, 24(3), 219–235.
- Kuh, G. (Oct. 5, 2006). *About NSSE: Quick facts*. Retrieved Oct. 5, 2006, From http://nsse.iub.edu/html/quick_facts.cfm
- Kuh, G. D. (2000). *The National Survey of Student Engagement: Conceptual Framework and Overview of Psychometric Properties*. Indiana Postsecondary Research and Planning [On-line]. Available: <http://nsse.iub.edu/>
- Kuh, G.D., Laird, T.F.N., & Umbach, P.D. (2004). Aligning faculty activities & student behavior. *Liberal Education*, 90(4), 24-31.
- Laws, P. (1991). Workshop physics: learning introductory physics by doing it. *Change*, 23, 20-27.
- Liu, R. & Liu, R. (2004). *Satisfaction and performance: A reciprocal model*. Paper presented at the Annual Forum of the Association for Institutional Research (AIR). (ERIC Document Reproduction Service No ED490994)
- National Survey of Student Engagement. (2006). 2005 Annual Report. Retrieved September 5, 2006, from http://nsse.iub.edu/NSSE_2005_Annual_Report/studentresponses_seniors_activeandcollaborativelearning.cfm
- Redish, E.F., & Steinberg, R.N. (1999). Teaching physics: figuring out what works. *Physics Today*, 52, 24.
- Rubin, L. & Hebert, C. (1998). Model for active learning. *College Teaching* 46(1), 26-30.
- Stevenson, H.W. (1987). America's math problems. *Educational Leadership*, 45(2), 4-10.
- Triandis, H.C., Bontempo, R., Villareal, M.J., Asai, M., Lucca, N. (1988). Individualism and collectivism: cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology*, 54, 323-338.

- Wilkinson, L. & Olliver-Gray, Y. (2006). The significance of silence: Differences in meaning, learning styles, and teaching strategies in cross-cultural settings. *Psychologia*, 49(2), 74-88.
- Wong, J.K.K. (2004). Are the learning styles of Asian international students culturally or contextually based? *International Education Journal*, 4(4), 154-166.
- Zhao, C.M., Kuh, G.D., & Carini, R.M. (2005). A comparison of international student and American student engagement in effective educational practices. *The Journal of Higher Education*, 76(2), 209-231.
- Zhao, Y. (2005). Increasing math and science achievement: The best and worst of the east and west. *Phi Delta Kappan*, 87(3), 219-222.

Table 1

Questions in Class and GPA by Home Country

Home Country	NSSE-	
	1a	GPA
Hong Kong	2.60**	3.42
Japan	2.39**	3.19
Malaysia	2.47*	3.19
China	2.74	3.31
South Korea	2.77	3.28
Taiwan	2.34**	3.24
Thailand	2.56	3.25
USA	3.06	3.24

*p<.05 against USA, **p<.01 against USA

Table 2

Course grades by Home Country

Home		
Country	Course	
	Biology 100	English 101
Hong Kong	3.5	3.4
Japan	3.2	3.2
Malaysia	3.4	3.1
China	3.7	3.3
South Korea	3.1	3.4
Taiwan	3.0	3.2
Thailand	3.2	3.4
USA	3.3	3.3

Table 3

Time spent by Home Country

Home-Country	NSSE 1t	NSSE 9a	NSSE 9d	NSSE 9e
Hong Kong	2.67	4.32	2.35	2.88
Japan	2.65**	4.71**	1.88	3.32
Malaysia	2.58	4.95	2.16	2.63
China	2.27**	5.29**	2.00	2.90
South Korea	2.76	4.40	1.98	2.92
Taiwan	2.69	5.00	2.03	3.13
Thailand	2.80	4.44	2.20	2.92
USA	2.96	4.07	2.12	3.19

*p<.05 against USA, **p<.01 against USA

Table 4

Student-Faculty Interaction by Home Country

Home-Country	NSSE 1n	NSSE 1o	NSSE 1p	NSSE 1s
USA	2.75	2.37	2.11	1.91
South Korea	2.54	2.10	2.14	2.06
Japan	2.23**	1.73**	2.02	1.76
Hong Kong	2.49	1.97*	2.06	1.89
Taiwan	2.47	2.28	2.09	2.00
Thailand	2.88	2.04	2.36	1.92
Malaysia	2.37	2.42	1.95	1.89
China	2.43	2.17	2.17	1.96

*p<.05 against USA, **p<.01 against USA