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A Comparative Study of Student Engagement, Satisfaction, and Academic Success among International and American Students

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Abstract

This study examines the relationship between student engagement, student satisfaction, and the academic success of international and American students using 2008 National Survey of Student Engagement (NSSE) data. It was found that international students scored slightly higher than American students on enriching educational experiences and supportive campus environment/institutional emphases during their senior year benchmarks. Further, international and American students similarly evaluated their entire educational experience at this institution between good and excellent; however, American students evaluated it slightly higher than international students. Additionally, academic success measured by grades was between B+ and A- for both groups of students; however, international students evaluated it slightly higher than American students. Finally, it was found that the best predictors of satisfaction with the entire experience at this institution and academic success measured by grades were the five benchmarks of effective educational practice: level of academic challenge, student-faculty interaction, enriching educational experiences, supportive campus environment/quality of relationships, and supportive campus environment/institutional emphasis.

Keywords: higher education, international students, student engagement

The number of international students on U.S. campuses has increased from 723,277 in 2010-2011 to 764,495 in 2011-2012 to 819,644 in 2012-2013 (Institute of International Education, 2014). The value these students bring to US institutions and communities is undeniable: increased diversity on campuses and communities, exposing American students to the globalized workforce they are likely to face after graduation, preparing the next generation of effective leaders, and bringing in different perspectives and beliefs, among others. Furthermore, it is critical to note that international students bring a significant financial contribution to the U.S. economy, nearly \$24 billion in 2012-2013 (Institute of International Education, 2014). To provide international students the best educational experiences in the U.S., it is critical for practitioners, administrators, and faculty to learn how these students engage in various campus and classroom activities. In addition, it is important to know how international students' engagement influences their satisfaction and academic success.

The purpose of this study was to examine the relationship between student engagement, student satisfaction, and academic success of international and American students using National Survey of Student Engagement (NSSE) data. Specifically, it investigated how institutional type (classification and control) and critical mass (percentage of international students and academic major) affect student

engagement (represented by five NSSE benchmarks) and how student engagement affects student satisfaction and academic success. The following research questions guided this study:

1. Do institutional type and critical mass affect student engagement?
2. To what extent can student engagement predict student satisfaction with the entire educational experience at this institution during their senior year?
3. To what extent can student engagement predict academic success during their senior year?

Theoretical Frameworks

The theoretical frameworks for this study are threefold. First, Astin's (1999) Student Involvement Theory was utilized to frame the significance of student engagement, such as interacting with other students, interacting with faculty members, interacting with administration/staff, and participating in extracurricular activities, on student outcomes. Second, Pascarella's General Model for Assessing Change (1985) was applied to examine the intersection of student background, and precollege traits, as well as structural and organizational characteristics of institutions on student outcomes. Finally, Critical Mass Framework was used to critically examine the differences between student characteristics, structural and organizational characteristics of institutions and student engagement among international and American students on their outcomes. In this study, the researchers adopted components of critical mass used in the studies that examined student sub-groups, such as females, Latinos, international students (Etzkowitz et al., 1994; Townsend, 1999; Townsend & Twombly, 2007; Hagedorn et al., 2007; Zhao, Kuh, & Carini, 2005).

Review of the Literature

Studies have been conducted on topics such as psychological problems and mental health of international students (Mori, 2001); special issues in counseling of international students (Aubrey, 1991); influence of culture of international students on their behavior in and out of counseling situations (Dillard & Chisolm, 1983); marital status, ethnicity, and academic achievement in relation to adjustment strains (Poyrazli & Kavanaugh, 2006); and factors affecting international students' transitions to higher education institutions (Kwon, 2009).

Student Engagement

Why study student engagement? As Kuh (2003) indicated, hundreds of studies demonstrated that "college students learn more when they direct their efforts to a variety of educationally purposeful activities" (p. 25). Higher education literature offers many definitions of student engagement. One of the widely used in the literature to study student engagement in higher education institutions is the definition measured and provided by NSSE. Because of its history and national representations of participating institutions to NSSE, this study will use the definition.

Axelson and Flick (2011) suggested that level of student engagement at an institution of higher education is increasingly seen as a valid indicator of institutional excellence that is more meaningful than traditional education and has more easily measured characteristics. Student engagement of American students has been studied extensively (Astin, 1993; Chickering, 1969; Kuh et al., 2005; Pascarella & Terenzini, 2005). Kuh et al. (2005) stated that "high levels of student engagement are necessary for and contribute to collegiate success" (Kuh et al., 2005, p. 4). Pascarella and Terenzini (2005) concluded that the "impact of college is largely determined by individual effort and involvement in the academic, interpersonal, and extracurricular offerings on a campus" (p. 62), and that the best predictors of whether a student will graduate are academic preparation, motivation, and student engagement. Foot (2009) found common success strategies of international students changed as they adapted to academic climate and varied among students.

Student Engagement of International Students

In spite of ample literature on international students, little is known about their student engagement. Yebei (2001) examined international students' group differences in their co-curricular engagement, and found that College Student Experiences Questionnaire measures were uni-dimensional, and upper-level international students had higher co-curricular engagement scores than first-year international students; however, upper-level international students were less satisfied with their college experience than first-year international students. Additionally, literature described direct relationships between student engagement and academic success. Parikh (2008), for example, explored and described a paradox where international students who seem to have lower than average campus involvement had higher than average GPAs. Additionally, Kuh (2003) reported that in the first three years of NSSE findings, international students appeared to be more engaged (p. 27). Thus, this study attempted to expand research on student engagement of international students further.

Grayson (2008a) found that international students were as involved in campus activities as domestic students; however, international students lacked academic support in comparison to domestic students. Additionally, Grayson (2008b) concluded that sense of coherence should be included in attempts to explain first year achievement for international students. Both of the above studies were conducted in Canada. Song (2004) found that both domestic and international business students perceived that instruction sessions were highly effective and helpful for their research needs. Therefore, the present study deepened the comparison of international and American student engagement.

Finally, Zhao, Kuh, and Carini (2005) compared activities of international and American students in selected areas related to student learning, personal development, and satisfaction with college, including the degree to which they perceive their campus to be supportive of academic and social needs. They found that first-year international students were more engaged in educational activities than American students, and they reported more gains in desired college outcomes. By their senior year, however, the engagement patterns become more similar.

Academic Achievement/Success

There are many definitions of student academic achievement. It is commonly defined as the extent to which students are achieving their education goals, and it is often measured by assessment. Academic achievement has been extensively covered by the literature as well (Delgado, 2008; Duran, 2008). Delgado (2008) examined student demographics as they relate to academic achievement. Additionally, literature described challenges in the field of assessment of English learners' achievement as the large-scale assessments intend to hold schools accountable for what students know on the basis of their performance assessment. Duran's (2008) research suggested that an alternative foundation for assessments that provides more valid information about the learning capabilities and achievements must be developed. As Pascarella and Terenzini (2005, p. 397) stated,

[g]rade point-averages are the lingua franca of the academic instructional world, the keys to students' standing and continued enrollment, to admission to majors and enrollment caps, to program and degree completion, to admission to graduate and professional schools, and to employment opportunities.

In addition, academic achievement or grades is a convenient quantitative summary of a prospective employee's success in college (Pascarella & Terenzini, 2005).

A majority of existing literature on international students is centered on challenges they face adapting to the new host societies and the learning environment. Adapting to customs and traditions, campus life, and American society is often quite challenging for international students. Therefore, they are more likely than their American counterparts to feel lonely and isolated (Dillard & Chisolm, 1983; Mori, 2000), which at times reduces their participation in activities tied to success in college. Thus, Dozier (2001) described focusing more on academic achievement as one of the common coping mechanisms. Novera (2004) also suggested that academic success enhanced personal confidence and

status, helping students to fit in. In addition, Parikh (2008) described and explored a paradox where international students who seem to have lower than average campus involvement had higher than average GPAs. Hence, some literature suggested that to compensate for problems in social life, international students channel their efforts toward academics, which might happen at the expense of the student engagement.

Academic Success of International Students

Several studies were found on academic success of international students. Boyer and Sedlacek (1988), for example, studied the effectiveness of non-cognitive variables in predicting college grades and persistence for international students; they found that self-confidence and availability of a strong support person consistently predicted GPA. Further, Abel (2002) indicated that academic success for international students is dependent on their language proficiency, learning strategies, classroom dynamics, and social and educational assistance provided by the institutions.

Furthermore, Hagedorn and Mi-Chung (2005) found that international students in community colleges perform slightly better academically than American students. In addition, Westwood and Barker's (1990) results indicated that overall achievement rates were higher and drop-out rates were lower for international students who participated in a peer-pairing program. Additionally, Haydon (2004) found that social integration and cultural adaptation directly and positively correlated to academic success. Finally, Stoyhoff (1997) examined factors associated with the academic achievement of international freshman and proved that language proficiency and selected learning strategies correlated with students' academic performance as measured by GPA, credits earned, and number of withdrawals.

Satisfaction with Educational Experience

In this study, student satisfaction is an intermediary factor for academic success. Student satisfaction with the college environment is vital as it "covers the students' subjective experience during the college years and perceptions of the value of educational experience" (Astin, 1993, p. 273). It is a separate and significant educational outcome considering the time and energy students invest in attending college. Astin's (1993) satisfaction measures included satisfaction with the total undergraduate experience and satisfaction with relationships with faculty, curriculum and instruction, student life, individual support services, and facilities. He found that satisfaction was enhanced by frequent interaction with faculty and other students, which ties into one of the benchmarks of effective educational practice: student-faculty interaction. Astin's satisfaction measures were embedded in the NSSE instrument; thus, his definition and research on satisfaction are most relevant for this study.

Methods and Data Sources

This study utilized a stratified sample of the 2008 National Survey of Student Engagement data that comprises a 20% random sample of all first-year and senior-year international students who attended a U.S. institution and a 20% random sample of all first-year and senior students who were U.S. citizens and attended a U.S. institution. The data included the responses from the 2008 College Student Report (CSR) Survey. In 2008, 769 institutions participated in the NSSE survey with an average response rate of 37%; 67 institutions administered the paper version, 463 institutions administered the web-only version, and 233 institutions administered the web+ version. The 2008 CSR Survey contained 28 questions, including 109 items which represent good practices in undergraduate education that "reflect behaviors by students and institutions that are associated with desired outcomes of college" (National Survey of Student Engagement, 2011, *what is the survey about*). Sequential multiple regression models were employed to predict students' overall satisfaction and academic outcome (measured by GPA). Student engagement (measured by several questions) was an independent variable; student satisfaction (measured by question 13: How would you evaluate your entire educational experience at this institution?) and academic success (measured by question 25: What have most of your grades been up to now at this institution?) were the dependent variables of the study. Control/predictor

variables in the models included the following: age, gender, nationality, race/ethnicity, year in college, institutional type/Carnegie classification, institutional type/control, level of academic challenge, active and collaborative learning, student-faculty interaction, enriching educational experiences, and supportive campus environment. Further details on methods and data sources could be found in work by Korobova (2012).

Limitations

There are several limitations for this study. First, NSSE's sample included only 20% of students who have taken the survey; thus, only sample data, not the population data was explored. Second, NSSE data describes only an undergraduate student population; consequently excluding graduate international and American students. Third, not all institutions administer NSSE surveys; therefore, only data from those who chose to participate were used. Fourth, question 17 asks, "Are you an international student or foreign national?"; therefore, there is no way to distinguish international students from foreign nationals; consequently, including Legal Permanent Residents (or Permanent Resident Aliens) who are considered foreign nationals in addition to international students. Fifth, students are not asked to indicate their country of origin; thus, it was not possible to compare students by country or area of origin; hence, excluding possibility to compare to some previous studies that do examine population by country of origin. Sixth, NSSE does not measure language proficiency; hence, critical effect of language proficiency was not taken into consideration in this particular study, which has been linked to student engagement and academic success in some previous studies. Seventh, the question inquiring about the students' majors is open-ended as opposed to multiple-choice, which might lead to some discrepancies and inaccuracies as it could have potentials issues with accurate grouping and generalizing. Finally, data is self-reported, which often raises questions of validity and reliability in quantitative studies as discussed above.

Results

Selective characteristics of international and American seniors can be found in Table 1. Twenty percent random sample of all first- year and senior international students who attended a U.S. institution and 20 percent random sample of all first year and senior American students who attended a U.S. institution were utilized. Results from the descriptive statistics revealed that 66,056 respondents, international and American students represented 4.6% and 95.1%, respectively.

Benchmarks

Exploratory factor analysis was run for each one of the five NSSE benchmarks. It tested whether variables grouped for each of them hold for the sample. This sample was very specific as it included a disproportionately larger percentage of international students than the population of the 2008 NSSE respondents. Thus, there was a need to generate the constructs of the benchmarks for this specific sample.

Variables that measure benchmarks were selected based on NSSE benchmarks. Other components were extracted that measure benchmarks more accurately for this sample. Based on the results from exploratory analysis, five new benchmarks emerged and were constructed using the same technique as Indiana University Center for Postsecondary Research (research center that administers NSSE) used to construct the original benchmarks (Table 2): Benchmark 1: Level of Academic Challenge; Benchmark 2: Student-Faculty Interaction; Benchmark 3: Enriching Educational Experiences; Benchmark 4: Supportive Campus Environment: Quality of Relationships; Benchmark 5: Supportive Campus Environment: Institutional Emphasis.

Table 1
Selective Characteristics of International and American Seniors

Selective Characteristics	International		American	
	<i>n</i>	%	<i>n</i>	%
Age				
19 or younger	13	0.8	97	0.3
20-23	868	56.1	22,369	67.6
24-29	383	24.8	4,819	14.6
30-39	187	12.1	2,934	8.8
40-4565	90	5.8	2,634	8.0
Over 55	5	0.3	242	0.7
Gender				
Males	598	38.5	11,708	35.4
Females	957	61.5	21,367	64.6
Race/Ethnicity				
American Indian or Native American	6	0.4	253	0.8
Asian, Asian American or Pacific Islander	504	35.2	1,327	4.0
Black or African American	208	13.4	2,163	6.5
White (non-Hispanic)	378	24.4	24,264	73.3
Mexican or Mexican American	71	4.6	820	2.5
Puerto Rican	10	0.6	207	0.6
Other Hispanic or Latino	148	9.5	676	2.0
Multiracial	44	2.8	754	2.3
Other	115	7.4	409	1.2
Prefer not to Respond	66	4.3	2,239	6.8
Institutional Classification: Control				
Public	883	56.7	20,531	61.9
Private	675	43.3	12,639	38.1
Total	1,558	100.0	33,174	100.0

Student Engagement

The results of this study indicated that for Benchmark 1, $p = .059$ or $p > .05$, meaning there were no statistically significant differences in variables measuring this benchmark between international and American students during their senior year, international students scored slightly higher in this benchmark. For Benchmark 2, $p = .440$ or $p > .05$, meaning there were no statistically significant differences in variables measuring this benchmark between international and American students during their senior year, American students scored slightly higher in this benchmark. For Benchmark 3, $p = .009$ or $p < .05$, meaning there were statistically significant differences in variables measuring this benchmark between international and American students during their senior year, international students scored higher in this benchmark.

For Benchmark 4, $p = .470$ or $p > .05$, meaning there were no statistically significant differences in variables measuring this benchmark between international and American students during their senior year, American students scored slightly higher. For Benchmark 5, $p < .001$, meaning there were statistically significant differences in variables measuring this benchmark between international and American students during their senior year, international students scored significantly higher.

Table 2
Inter-Item Correlation Mean and Reliability Statistics for the New Benchmarks for Students during Their Senior Year

Benchmarks	Cronbach's Alpha
Benchmark 1 Level of Academic Challenge	.834
Coursework emphasized: synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships	
Coursework emphasized: making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions	
Coursework emphasized: applying theories or concepts to practical problems or in new situations	
Coursework emphasized: analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components	
Benchmark 3 Enriching Educational Experiences	.831
Had serious conversations with students of a different race or ethnicity than your own	
Had serious conversation with students who are very different from you in terms of their religious beliefs, political opinions, or personal values	
Benchmark 5 Supportive Campus Environment/Institutional Emphases	.801
Institutional emphasis: helping you cope with your non-academic responsibilities (work, family, etc.)	
Institutional emphasis: providing the support you need to thrive socially	
Benchmark 2 Student-Faculty Interaction	.768
Talked about career plans with a faculty member or advisor	
Discussed ideas from your readings or classes with faculty members outside of class	
Discussed grades or assignments with an instructor	
Worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)	
Received prompt written or oral feedback from faculty on your academic performance	
Benchmark 4 Supportive Campus Environment/Quality of Relationships	.708
Quality: your relationships with faculty members	
Quality: your relationships with administrative personnel and offices	
Quality: your relationships with other students	

Student Satisfaction

It was determined that 74 (2.3%) international students evaluated their entire experience at their current institution as poor; 353 (11.0%) as fair; 1,615 (50.2%) as good; and 1,177 (36.6%) as excellent. Alternatively, 1,234 (2.0%) American students evaluated their entire experience at their current institution as poor; 6,651 (10.6%) as fair; 30,055 (48.0%) as good; and 24,672 (39.3%) as excellent. The mean of how international students and American students evaluate their entire educational

experience at their current institution was good, with American students evaluating it slightly higher than international students.

The regression revealed that 11 predictors of satisfaction with the entire educational experience were found significant with $p < .001$. The strongest predictor of satisfaction with the entire educational experience was Benchmark 4 with standardized coefficient $\beta = .432$, meaning that it can be predicted that students enrolled in institutions with a supportive campus environment as it relates to quality of relationship had higher satisfaction with the entire experience compared to students enrolled in institutions without such a supportive campus environment. Additional predictors and details could be found in Table 3.

Table 3
Regression for Prediction of Satisfaction with Entire Educational Experience

Variables	<i>B</i>	β	<i>p</i>	CI	
				Lower	Upper
Age	.010	.012	.159	-.004	.023
Gender (female)	.044	.028	.001	.017	.070
Nationality (international)	-.045	-.011	.205	-.115	.025
Institutional Control	.049	.033	.001	.019	.079
DRU Extensive	.159	.067	<.001*	.115	.202
DRU Intensive	.026	.012	.182	-.012	.063
BA Liberal Arts	.105	.060	<.001*	.069	.140
BA General	-.086	-.030	.001	-.137	-.036
Other Institutional Type	.045	.015	.141	-.015	.104
Percentage of International Students	.014	.030	.001	.006	.023
Social Sciences	-.168	-.018	.037	-.327	-.010
Humanities	-.054	-.031	.001	-.088	-.021
Math and Sciences	-.017	-.010	.261	-.046	.012
Pre-professional	-.008	-.002	.831	-.081	.065
Benchmark 1	.005	.137	<.001*	.004	.005
Benchmark 2	.001	.035	.001	.000	.002
Benchmark 3	.000	.008	.371	.000	.001
Benchmark 4	.017	.432	<.001*	.016	.018
Benchmark 5	.004	.138	<.001*	.003	.004

* $p < .001$

Academic Success

It was determined that 33 (1.1%) international students reported most of their grades up to now at their current institution as C- or lower; 78 (2.4%) as C; 139 (4.3%) as C+; 208 (6.5%) as B-; 587 (18.3%) as B; 643 (20.0%) as B+; 662 (20.6%) as A-; and 864 (26.9%) as A. Alternatively, it was determined that 584 (0.9%) American students reported most of their grades up to now at their current institution as C- or lower; 1,628 (2.6%) as C; 2,984 (4.7%) as C+; 4,846 (7.8%) as B-; 12,609 (20.2%) as B; 12,764 (20.4%) as B+; 13,015 (20.8%) as A-; and 14,035 (22.5%) as A. The mean of the grades up to now of international and American students at their current institutions was B+ with international students' grades being slightly higher.

The regression revealed that 10 predictors of academic success were found significant with $p < .001$. The strongest predictor of academic success was Benchmark 4 with standardized coefficient $\beta = .123$, meaning that it can be predicted that students enrolled in institutions with a supportive campus environment is as it relates to quality of relationships have higher academic success compared to students enrolled in institutions without such supportive campus environments. Additional predictors and details can be found in Table 4.

Table 4
Regression for Prediction of Academic Success

Variables	<i>B</i>	β	<i>p</i>	CI	
				Lower	Upper
Age	.151	.095	<.001*	.118	.184
Gender (female)	.354	.110	<.001*	.289	.419
Nationality (international)	.009	.001	.917	-.161	.179
Institutional Control	.263	.087	<.001*	.189	.337
DRU Extensive	.164	.034	.002	.058	.271
DRU Intensive	.085	.020	.070	-.007	.177
BA Liberal Arts	-.151	-.042	.001	-.238	-.064
BA General	-.079	-.014	.210	-.202	.044
Other Institutional Type	.042	.007	.573	-.104	.188
Percentage of International Students	.035	.037	.001	.015	.056
Social Sciences	-.438	-.023	.027	-.826	-.051
Humanities	.045	.013	.279	-.037	.127
Math and Sciences	.222	.068	<.001*	.150	.293
Pre-professional	.198	.023	.030	.019	.376
Benchmark 1	.006	.089	<.001*	.005	.008
Benchmark 2	.005	.075	<.001*	.003	.007
Benchmark 3	-.002	-.036	<.001	-.003	-.001
Benchmark 4	.010	.123	<.001*	.008	.012
Benchmark 5	-.004	-.081	<.001*	-.006	-.003

* $p < .001$

Conclusion

Benchmarks

The study covered the interrelationship among the variables that measure the five NSSE benchmarks of effective educational practice for international and American students during their senior year. For the present sample for benchmark 1, international students in this sample did less of “number of written papers or reports of 20 pages or more,” “number of written papers or reports between 5 and 19 pages,” and “number of reports of fewer than 5 pages” activities compared to other activities. For benchmark 2, international students did less of “tutored or taught other students (paid or voluntarily)” and “participated in a community-based project (e.g., service learning) as part of a regular course” activities compared to other activities. For benchmark 3, international student did less of “worked with faculty members on activities other than coursework (committees, orientation, student life activities, etc.)” and “discussed ideas from your readings of classes with faculty members outside of class” compared to other activities. For benchmark 4, international students did less of “practicum, internship, field experience, co-op experience, or clinical assignment” and “community service or volunteer work” compared to other activities. Finally, for benchmark 5, international students felt that institutions provided more of these conditions “quality of your relationships with other students,” “quality of your relationships with faculty members,” and “quality of your relationships with administrative personnel and offices” that compared to other conditions.

Personal observations of international students by the researchers, as professionals in the field, support these findings above. First, during their senior year, students in the sample institutions are offered more coursework emphasizing analyzing ideas ($M = 3.27$), synthesizing ideas ($M = 3.09$), and making judgments about values and applying theories to practice ($M = 3.05$); spend more hours per week preparing for class ($M = 4.20$); and work harder than they think to meet instructors’ expectations

($M = 2.76$). Second, they work more with other students on projects in and out of class ($M = 2.78$), contribute to class discussions ($M = 3.14$), make class presentations ($M = 2.86$), and discuss ideas from class outside of class ($M = 2.87$). Third, seniors tend to work on papers and projects that require integration of ideas from various sources ($M = 3.36$), talk more about career plans with faculty ($M = 2.51$), and receive prompt feedback from faculty on their performance ($M = 2.86$). Fourth, they spent less time on co-curricular activities ($M = 2.24$); participate in learning communities ($M = 2.50$); and study abroad ($M = 2.34$). Finally, during their senior year, students are less concerned with institutional emphasis on providing support to succeed academically ($M = 3.00$), socially ($M = 2.26$), and helping cope with non-academic responsibilities ($M = 2.03$).

New benchmarks that held true for the present sample were benchmark 1, level of academic challenge; benchmark 2, student-faculty interaction; benchmark 3, enriching educational experiences; benchmark 4, supportive campus environment/quality of relationships; and benchmark 5, supportive campus environment/institutional emphases. It is important to note that the new benchmarks included different variables from the original NSSE benchmarks and NSSE's active and collaborative learning benchmark did not held true for the present sample. Examination of the new benchmarks revealed that international students scored higher compared to American students in level of academic challenge, enriching educational experiences, and supportive campus environment/quality of relationships during their senior year, while American students scored higher in student-faculty interaction and supportive campus environment/quality of relationships. This echoes Zhao, Kuh, and Carini's (2005) study that found international students were more engaged than American students in some areas and less engaged in others; thus, informing practitioners in which areas international students require more support to be successful.

As a professionals in the field (and former international students themselves), the researchers observed throughout their extensive careers in American higher education that international students tend to study in groups, often in their native language as opposed to English; study longer hours; and often study more on weekends when American students work or travel home. It may be that these study strategies proved more effective for them. Additionally, international students tend to interact and connect more with international faculty, particularly from countries or areas of the world where they are from. A previous study conducted by the researchers (Korobova, 2010) suggested that interaction with bilingual faculty has a positive correlation with academic achievement. This is partially explained by the enhanced level of student-faculty interaction that occurs when such communication takes place. The critical mass piece plays in here indirectly, meaning that representation of bilingual faculty contributes to bringing comfort or familiarity within the education environment.

Student Engagement

The researchers examined if there was a statistically significant difference between international and American students in the levels of student engagement as represented by benchmarks for this particular sample during their senior year. Independent samples t-test revealed that for the present sample there were no statistically significant differences in variables measuring level of academic challenge, student-faculty interaction, and supportive campus environment/quality of relationships, and there were statistically significant differences in variables measuring enriching educational experiences and supportive campus environment/institutional emphasis for students during their senior year. International students scored slightly higher on enriching educational experiences and supportive campus environment/institutional emphasis. This echoes Zhao, Kuh, and Carini's (2005) study that found "by their senior year, international students tend to be more adapted to the cultural milieu and generally do not differ from American seniors in their patterns of student engagement..." (p. 224). Presently, there is evidence that colleges encourage more international student engagement through various initiatives, orientations, and programs to encourage cross-cultural interaction (U.S. News & World Report, 2012).

This evidence supports the researchers' personal and professional observations. International students during their senior year tend to have more serious conversations with students of different races or ethnicity and students who are different from them in terms of their religious beliefs, political

opinions, or personal values, also confirmed by NSSE findings. In addition, they value more institutional emphasis on helping them cope with their non-academic responsibilities and providing the support they need to thrive socially.

Thus, this study found that international students scored slightly higher than American students on enriching educational experiences and supportive campus environment/institutional emphases during their senior year. Specifically, international students have more conversations with students of a different race or ethnicity than their own and with students who are very different from them in terms of their religious beliefs, political opinions, or personal values. Additionally, they feel more strongly than American students that institutions they are enrolled in emphasize helping them cope with their non-academic responsibilities (work, family, etc.) and provide the support they need to thrive socially.

Student Satisfaction

The researchers investigated the levels of satisfaction of international and American students for their entire educational experience at this institution during their senior year and examined if there was a statistically significant difference in the level of satisfaction between international and American students during their first and senior years. The level of satisfaction of the largest proportion of international and American students for the present sample was good (50.2% and 48.9%, respectively) followed by excellent (36.6% and 39.4%, respectively) during their senior year. T-tests revealed that there were statistically significant differences in levels of satisfaction between international and American students during their first year, but there were no statistically significant differences in the levels of satisfaction between international and American students during their senior year.

It is also important to note that international and American students may have different definitions of satisfaction with the entire educational experience. For American students, this might mean they ask themselves whether they are treated equally and with respect and whether they are satisfied with the level of customer service at this particular institution of higher education. The notion of customer service has been imbedded in U.S. higher education in the recent past and is now a compulsory component of it. International students, on the other hand, might come from cultures where such customer service does not exist at all or where such customer service is a norm. Thus, their interpretation and definition of satisfaction with entire educational experience could be completely different from their American counterparts. Definition of satisfaction may also depend on enrollment in public vs. private institutions. In private institutions, students may have the philosophy of "I am paying for this and I deserve it" and in public institutions have a philosophy of "I have to work to earn it." Therefore, engagement levels of these students might consequently be different as well.

The present study found that international and American students similarly evaluated their entire educational experience at this institution between good and excellent; however, American students evaluated it slightly higher than international students. Further, academic success measured by grades was between B+ and A- for both groups of students; however, international students evaluated it slightly higher than American students.

Academic Success

The present study described the academic success of international and American students during their senior year as measured by most of the grades up to now at this institution and examined if there was a statistically significant difference in the academic success between international and American students during their first and senior year. The largest proportion of the grades of international and American students in the present study were A, A-, B+, and B (in that order) (26.9%, 20.6%, 20.9%, 18.3% and 22.5%, 20.8%, 20.4%, 20.2%, respectively) during their senior year. T-tests revealed that there were statistically significant differences between grades of international and American students during their first year, and there were no statistically significant differences between grades of international and American students during their senior year. Again, an explanation for this may have to do with adaptation and assimilation.

International freshmen had higher grades than American freshmen, while the grades of international and American seniors were similar. Some of the international students who have a special connection with the researchers revealed that immediately after their arrival they spend more time studying to succeed academically and to compensate for a less vibrant social life. However, as time goes on and they get involved as much (if not more than) their American peers, they spend less time studying and their grades experience slight dips equaling the grades of American students. It is important to note that by no means should grades be the only measure of academic success. However, grades were used for this study as they were provided by NSSE.

The study also found that the best predictors of satisfaction with the entire experience at this institution and academic success measured by grades were the five benchmarks of effective educational practice: level of academic challenge, student-faculty interaction, enriching educational experiences, supportive campus environment/quality of relationships, and supportive campus environment/institutional emphasis. Thus, it can be predicted that the more a student is involved in such activities and the more these conditions increase, the higher student satisfaction and academic success is for both international and American students. Further, both institutional type and critical mass affect student satisfaction and academic success.

Significance of the Study's Findings

Results of this study provide specific recommendations for practice and policy. In terms of practice, this study more fully informs administrators, faculty, and staff about what international students do while they are in college primarily during their senior year, thus informing them about how to intervene in order to improve international students' experiences while studying in the U.S. In order for international students to remain on U.S. campuses, they must continue to express high levels of satisfaction with their educational experience. Thus, a supportive campus environment as it relates to quality of relationships, institutional emphasis, high level of academic challenge, and high level student-faculty interaction are critical for satisfaction with their educational experience, in that order. More attention should be directed to students enrolled in private institutions; students majoring in humanities; students enrolled in BA General institutions, MA I and II institutions, and other institutions; and males as they tend to experience lower satisfaction with the entire educational experience (as was demonstrated in Table 3 earlier). Specialized workshops, individualized counseling, online tools, and mentoring and pairing programs are among other strategies that should be designed, implemented, and offered for students representing these particular groups based on these findings and professional organizations' latest recommendations.

Additionally, findings could be used by international students themselves and their parents to inform them about which effective education practices could improve their student engagement and, consequently, their academic success. Specifically, once on U.S. campuses international students should seek out higher level of academic challenge and strive to arrange for meaningful interaction with their faculty. Additionally, they should pursue enriching educational experiences, such as having serious conversations with students of a different race or ethnicity than your own; having serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values; participating in practicum, internship, field experience, co-op experience, or clinical assignment; getting involved in community service or volunteer work; and participating in a learning community or some other formal program where groups of students take two or more classes together, faculty in order to have higher student satisfaction and academic success.

Furthermore, professional organizations such as NAFSA, IIE, AIEA, and others may want to create interest groups focused on international student engagement, satisfaction, and academic success. They could also offer sessions at regional and national conferences and online workshops and webinars. Due to the specialized profession of international educators and the fact that institutions often have only one or two international educators on staff, the most effective professional growth opportunity (and at times the only one) is sharing experiences with each other through professional networking. It is important, however, to note that these workshops should be based on institutional types as this research

found differences between institutional types. As a result, strategies should differ as well depending on institutional types. Specific take-aways for professionals include implementing activities focusing on international students' relationships with faculty members, administrative personnel and offices, and with other international and American students. In addition, they need to advocate within their individual institutions to ensure institutional emphasis on helping international students cope with their non-academic responsibilities (work, family, etc.) and providing the support they need to thrive socially

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