

# **International Students in Higher Education: Educational and Social Experiences**

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## **Abstract**

The number of international students is rapidly increasing and there is a growing concern on the needs and resources available for this group. This quantitative research provides a glimpse of the educational and social experiences that international students encounter at a large southern research university. The purpose of this study was to: 1) Recognize international students' trends and contributions; 2) Identify the needs and general characteristics of international students at a university; 3) Identify the relationships inside and outside of academia by gender, and the support of the institution's services and facilities.

## **Introduction**

International students have become a significant population in United States (US) academic institutions. The Institute of International Education (2010) reported that international students were not only an economic driver but also a multicultural provider. As their numbers increase so do their challenges. This study provides a unique window into the educational and social experiences of international students at a southeastern research institution. The three projects this study will explore are international students' trends in the US; a Lifetime Empowerment Workshop held at the aforementioned southeastern research institution; and a survey recently conducted at the same university. The intention is to show the basic, fundamental, and complex characteristics of international students studying in the southeastern United States.

Previous research acknowledged that international students increase diversity, add new perspectives to classroom conversations, and improve awareness and appreciation for other countries and cultures (Bevis, 2002; Harrison, 2002). Research also illustrated that international students bring

knowledge and skills in many fields, mainly in sciences, engineering, and technology (Slaughter & Rhoades, 2004). As the number of international students increases in US institutions, factors such as language, culture, and gender influence the experience of international students in higher education.

## **Literature Review**

Previous studies have examined international students' experiences on US college and university campuses including their engagement, social interactions, and academic achievement (Lee, 2010; Terkla et al., 2007). International students may encounter difficulties early as they obtain permission to pursue education in the US (Lee & Rice, 2007).

Andrade (2006, 2007) demonstrated that international students' academic success related to factors such as balance of academic responsibilities, work, social life, adjusting to new academic environments, and gaining confidence. Research also demonstrated that international students tended to experience more personal problems than American students. Some of these problems were language barriers, academic difficulties, financial difficulties, interpersonal problems with American students, racial discrimination, loss of social support, alienation, and homesickness (Lee & Rice, 2007; Mori, 2000).

### *Language*

Mori (2000) noted that language difficulties appeared to be the most challenging issue for the majority of international students. Language barriers usually hinder international students from socially interacting with their American peers (Hayes & Ling, 1994). Asians, who make up a large percentage of International students in US institutions, struggled particularly with language and proficiency in English use, causing major challenges for these students in both their academic and non-academic pursuits. (Stevens, Emil, & Yamashita, 2010). Furthermore, some international students felt ignored in class or excluded by other students; some of them also felt unwelcome or distanced from faculty because of their personal sensitivity about their limited English abilities (Lee & Rice, 2007).

### *Culture and Social Support*

Students coming from a variety of countries with various cultures experience social acceptance in different ways. In addition, cross-cultural differences in social interaction make it difficult for international students to build close relationships with American students and obtain social support (Baba & Hosoda, 2014; Mallinckrodt & Leong, 1992). International students may feel a

deep sense of loss when leaving their families and friends while establishing comparable social support systems in the United States (Sandhu, 1995).

### *Gender*

Studies have found that female and male international students have different experiences in higher education in the US. Female international students were likely to feel more stress and anxiety than their male counterparts (Fatima, 2001). Similarly, Mallinckrodt and Leong (1992) described that female international students experienced more problems socially, psychologically, and educationally than male international students, and female international students experienced homesickness more frequently than male international students (Kwon, 2009). Female international students also encountered more difficulties related to academic advising, health services, English, and social-relationship than their male counterparts (Hart, 1974).

### *Academics*

Peers, faculty, and administrators are influential factors that contribute to international students' experience in academia (Pascarella & Terenzini, 2005). Lee and Rice (2007) interviewed 24 international students and found that they had difficulties in social interactions, interactions with faculty and administration, denial of funding or job opportunities, and in off-campus interactions such as housing and shopping. Many international students have difficulty in expressing themselves to their instructors or supervisors such as in deciding how to begin their own research (Lewthwaite, 1997). Other issues such as financial challenges could be a source of stress for international students because of employment and financial aid restrictions (Chen, 1999; Mori, 2000). Therefore, it would be helpful if university administrators and faculty were aware of issues international students encounter in adjusting to the US (Guidry, 2000).

Among the previous studies, little research has been conducted to explore issues affecting international students by gender. This study helps to identify the needs, general characteristics, and current educational and social experiences international students encounter at a large southeastern research university. The study also suggested that students' class experiences differ by gender.

### **Methods**

International students at a southeastern research university represented 85 countries worldwide as of Fall 2014. There were a total of 1,427 international students including undergraduates (314), first professionals (3), and graduate students (1,110). Each year, as these numbers grow, the type and need for

services increase. This study provides a window into the general characteristics and needs for the educational and social experiences international students encountered at this institution.

This study is divided into three sections. To illustrate how unique international students are in the US, Part I provides an analysis and trends on the number of international students. The data was collected from the National Science Foundation (NSF). In this section, data was collected on the number of Bachelor's, Master's, and Ph.D. recipients categorized either as Citizen and Permanent Residents or Non-Resident /international students from 1997 to 2006. It was further broken down by type of discipline. The disciplines were Agricultural Sciences; Biological Sciences; Computer Sciences; Earth, Atmospheric, & Ocean Sciences; Mathematical Sciences; Astronomy; Chemistry; Physics; Other Physical Sciences; Psychology; Social Sciences; Chemical Engineering; Civil Engineering; Electrical Engineering; Mechanical Engineering; Other Engineering; Education; Health; Humanities; and Professional/Other.

Part II discusses a one-day Lifetime Empowerment Workshop for International Students (LEW International) specifically addressing challenges that the international students at this university expect. The workshop provided international students with the opportunity to gain job skills such as interviewing and networking. It also provided an outlet for 40 international students to voice their challenges as international students at this institution. At the end of the workshop, the data was collected based on the frequencies of the challenges the students faced as a whole group. Although it was a small representation of international students, it provided an avenue to expand the study with an online survey.

Part III expands the study to an online survey. This section of the study focuses on the social and educational experiences of international students at this institution. The survey was adopted and shaped from the New Zealand's government survey on international students. In 2013, New Zealand reported a gross output of \$2.6 billion dollars from international students' education. Thus, it was important to survey international students in order to meet their needs and to enhance their educational and social experiences in New Zealand. The Institutional Review Board (Fall 2014) approved the survey needed for this study. Data was collected anonymously through Qualtrix and analyzed using SPSS. Analysis of variance (ANOVA) was used to analyze differences between the means for factors affecting international students.

## Results

### Part I

#### *Bachelor's Degrees*

This section shows the changes in international student enrollment by type of degree (i.e. Bachelor's, Master's and PhD) from 1997 and 2006. Figure 1 shows the number of international students enrolled in Bachelor's degrees by US Citizen and Permanent Resident vs. Nonresident for 1997 and 2006 academic years. It also shows enrollment by type of field. The number of all degrees by all fields in 1997 was 1,186,589. US citizens and residents accounted for 1,147,815 degrees and international students obtained 38,774 degrees (i.e. 3.3% of all degrees). In 2006, the number of all degrees by all fields was 1,473,735. US citizens and residents accounted for 1,428,643 degrees and international students obtained 45,092 degrees (i.e. 3.1% of all degrees). Although the number of international students went up in comparison to the percentage, it decreased by 0.2%.

There was a higher number of US citizens and permanent residents than nonresidents/international students by type of field in both 1997 and 2006. Degrees awarded to Humanities (144,073), Education (113,506) and Social Sciences (107,093) had the highest representation in 1997 for US citizens and permanent residents, while in 2006 Humanities (198,408), Social Sciences (143,073) and Education (124,262) had the highest representation. International students had the highest representation by degrees awarded in Humanities (4,021), Social Sciences (3,957) and Computer Sciences (2015) in comparison to 2006 Humanities (4,120), Social Sciences (4,825), and Computer Sciences (2,944).

#### *Master's Degrees*

Figure 2 shows the number of international students enrolled in Master's degrees by US Citizen and Permanent Resident vs. Nonresident for 1997 and 2006 academic years. It also shows enrollment by type of field. The number of all degrees by all fields in 1997 was 420,954. US citizens and residents accounted for 371,477 degrees and international students obtained 49,477 degrees (i.e. 11.8% of all degrees). Compared to 2006, the number of all degrees by all fields was 586,029. US citizens and residents accounted for 515,425 degrees and international students obtained 70,604 degrees (i.e. 12.1% of all degrees). The number of international students increased. There was a 0.3% increase between 1997 and 2006.

# Bachelor's Degrees

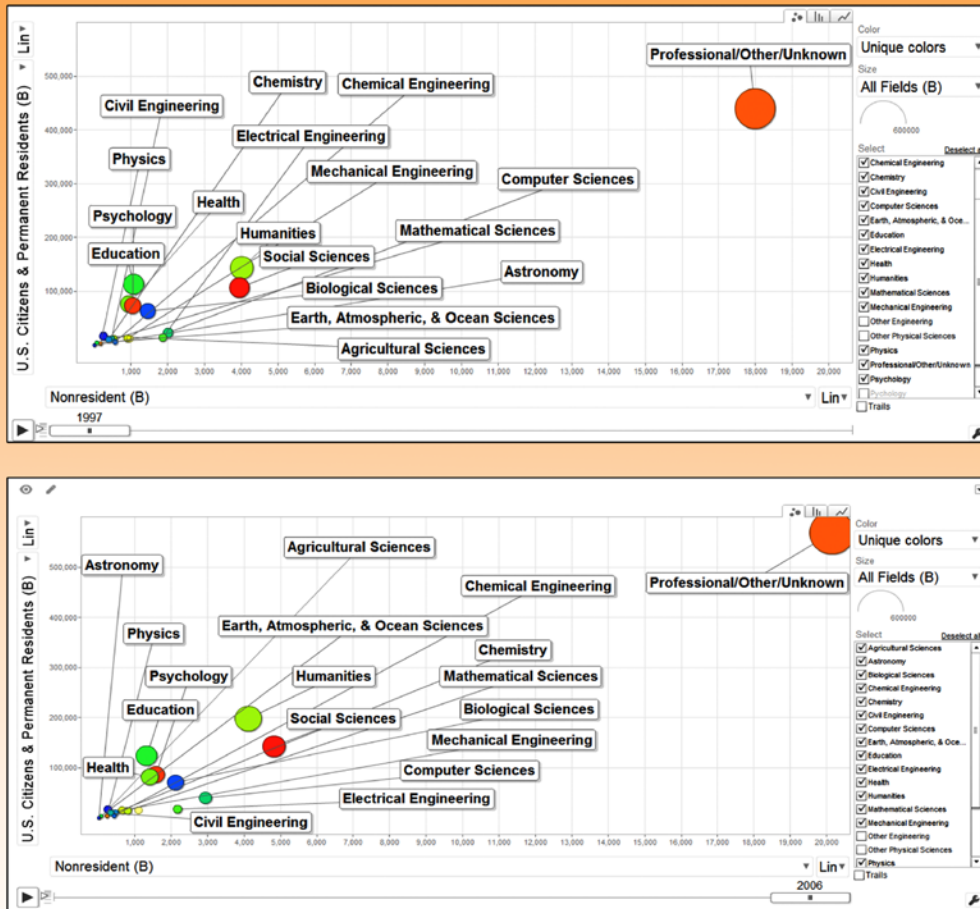


Figure 1. International students enrolled in bachelor's degree programs

The year 1997 saw a higher number of US citizens and permanent residents in comparison to nonresidents/international students by type of field. Degrees awarded in Education (109,223), Health (31,740), and Humanities (24,532) had the highest representation in 1997 for US citizens and permanent residents, while in 2006 Education (173,758), Health (39,636) and Humanities (29,338) had the highest representation. International students had the highest representation by degrees awarded in Social Sciences (4,036), Computer Sciences (3,973) and Education (3,222) in comparison to 2006 numbers in Computer Sciences (6,616), Electrical Engineering (5,505), and Education (5,452). In 2006, international students were awarded Electrical Engineering (5,505) degrees more than US citizens and permanent residents (5,078). This signals the increase of

international students in a specific type of field belonging to STEM (Science, Technology, Engineering and Mathematics).

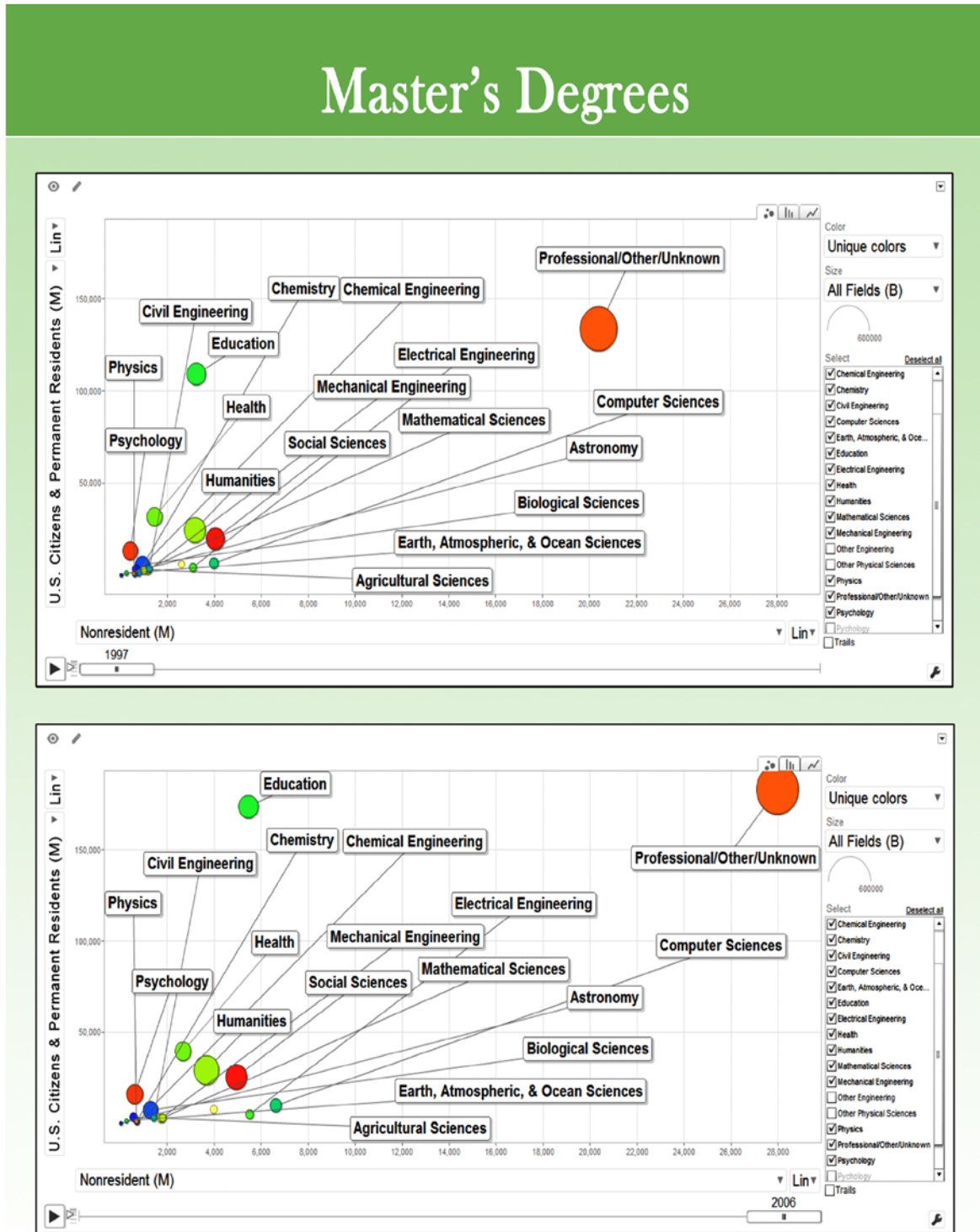


Figure 2. International students enrolled in Master's degrees

## *Doctoral Degrees*

Figure 3 shows the number of international students enrolled in PhD's degrees by US Citizen and Permanent Resident vs. Nonresident for 1997 and 2006 academic years. It also shows enrollment by type of field. The number of all degrees by all fields in 1997 was 42,539. US citizens and residents accounted for 31,086 degrees and international students obtained 9,191 degrees (i.e. 21.6% of all degrees). Compared to 2006, the number of all degrees by all fields was 45,596. US citizens and residents accounted for 28,746 degrees and international students obtained 14,118 degrees (i.e. 31% of all degrees). The number of international students increased. There was 9.4% increase between 1997 and 2006. Nearly 1 out of 3 doctoral degrees were awarded to international students.

The year 1997 saw a higher number of US citizens and permanent residents in comparison to nonresidents/international students by type of field. Degrees awarded to Education (5,748), Biological Sciences (4,256), and Humanities (4,238) had the highest representation in 1997 for US citizens and permanent residents, while in 2006 Education (5,109), Biological Sciences (4,467) and Humanities (4,027) had the highest representation. International students had the highest representation by degrees awarded in Biological Sciences (1,321), Social Sciences (1,017), and Other Engineering (741) in comparison to numbers in 2006 for Biological Sciences (1,846), Electrical Sciences (1,469), and Social Sciences (1,337). International students were awarded a higher number of degrees in Electrical Engineering (1,469 vs. 553), Other Engineering (1,110 vs. 929), Computer Sciences (795 vs. 579), Mechanical Sciences (715 vs. 383), Physics (707 vs. 604), Mathematical Sciences (668 vs. 615), Civil Engineering (511, 243), and Chemical Engineering (467 vs. 377). International students outnumber US citizens and permanent residents in 8 STEM fields. Teaching and learning styles can significantly affect both international and local students due to the shift in international student ratio.



# Ph.D. Degrees

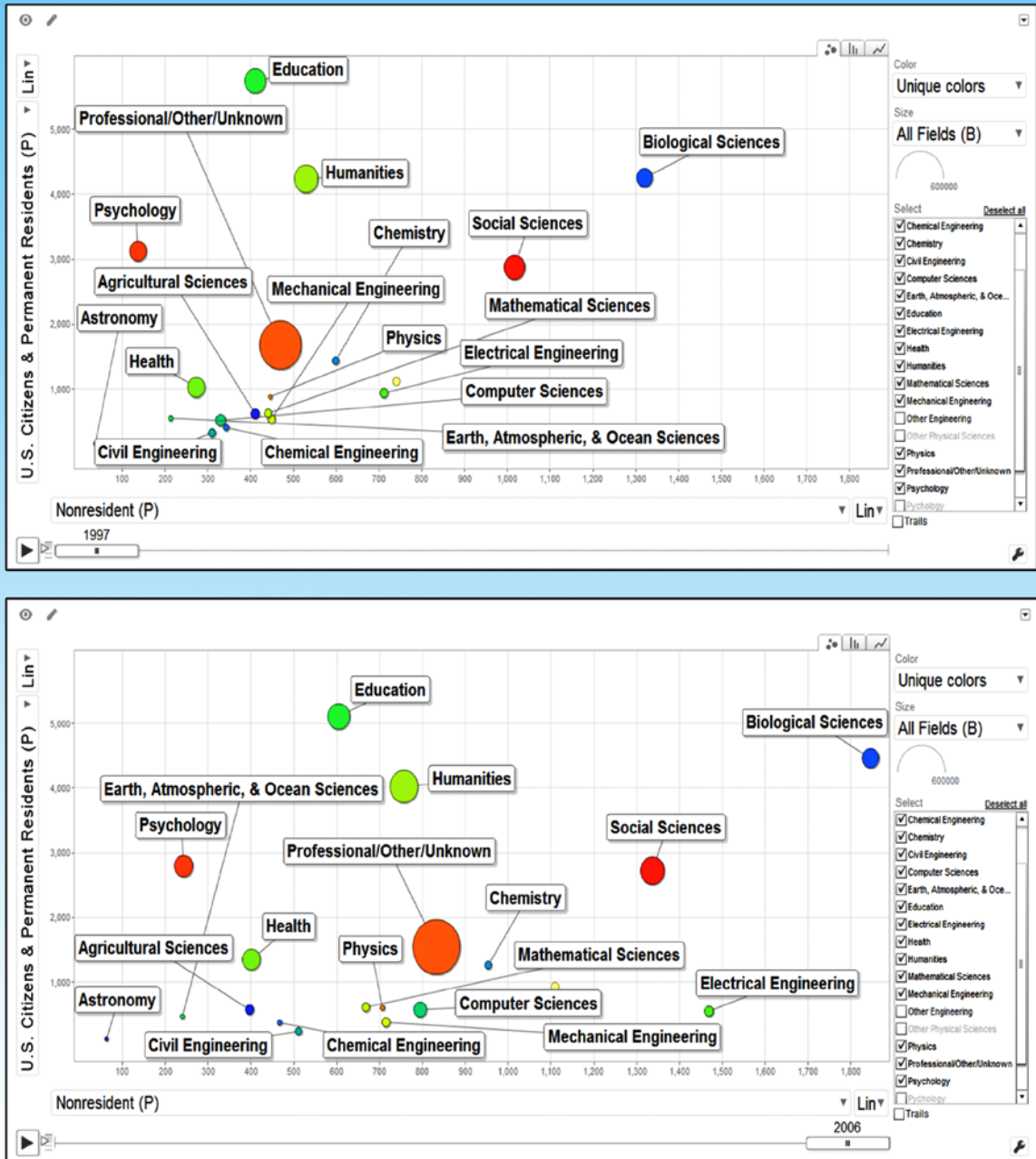


Figure 3. International students enrolled in doctoral degrees

The number of international students in the US is increasing particularly at the higher levels in postsecondary education and field of study. As these numbers increase, so do the issues affecting international students. Therefore, the second part of this study shows the challenges international students face.

## **Part II**

The second section of this study encompasses the results of a Lifetime Empowerment Workshop (LEW) for International students at this research southeastern university in Spring 2014. There were a total of 40 international students attending the workshop, which also provided the students with a platform to discuss challenges they face as international students.

Their results are shown in Figure 4, which shows their cumulative challenges. Along with their challenges, international students provided recommendations concerning the issues affecting them. The challenges from highest to lowest in frequencies were transportation/parking followed by language, residency, culture, lack of seminars, fees, financial support, and health insurance.

Many international students came to this institution without personal transportation and therefore relied mostly on the institution's transportation system. During the holidays, many of these students stayed at the institution and thus desperately needed transportation to commute on and off campus. In terms of transportation, they recommended "Longer operation time for Buses"; "Increase more night/weekend shuttles"; "provide transit routes during holidays"; and "Establish more parking areas." Since these students typically cannot travel home for the holidays and weekends, their transportation needs are different than that of their US counterparts.

International students come from diverse backgrounds. Many have English as their second language, thus support in learning that language is one of the main challenges in this group. Some of their recommendation with respect to language are "Communication across institutional boundaries"; "Provide free English courses for students and their dependents," and "Make local friends and enhance the influence of visibility of programs." In terms of their challenges to residency and culture, they provided recommendations such as "Availability of campus dorm and temporary accommodations"; "Increase support from student Organizations," and "Provide tips or information on how to adapt to US life." With respect to the other challenges, some of their recommendations were in terms of increasing health coverage, lowering health insurance payments, and providing more institutional scholarships and job opportunities as well as online seminars.



Figure 4. Challenges faced by international students

### Part III

#### Demographics

Building on the previous sections with a wider representation of participants, Part III shows the results of an online survey geared towards international students' educational and social experiences at this southeastern research institution. A total of 111 international students responded to the survey in Fall 2014. There were 6 student responses that were omitted in this study because the responses were incomplete. The survey accounted for 51 (48.6%)

male participants and 54 (51.4%) female participants. Students from China and India had the highest representation (56.2%) in the survey. The rest of the participants came from Bangladesh, Brazil, Australia, Spain, Canada, Ghana, Jordan, Nepal, Turkey, Venezuela, England, France, Iran, Japan, Kingdom of Saudi Arabia, Kuwait, Mexico, Sri Lanka, United Kingdom, and Vietnam.

With such diverse representation from other countries, international students brought a wealth of languages to this southeastern university. Students reported their native languages as: Arabic, Australian, Bangla, Bengali, Chinese, English, French, Ghanaian, Greek, Gujarati, Hindi, Japanese, Kannada, Kurdish, Malayalam, Mandarin, Marathi, Nepali, Farsi, Portuguese, Sinhala, Spanish, Tamil, Telugu, Turkish, AKAN and Vietnamese. Eighty percent of the respondents stated that it was their first time studying overseas. About 85.7% responded that their education is paid by the university's assistantship or scholarship, or by their parents. A majority of the students who responded to this survey stated that their field of study fell under STEM (Science, Technology, Engineering, and Mathematics). Seventy-six percent of the students were under the age of thirty.

### *Educational Experiences*

On average a majority of the students who were interviewed rated their English language ability in the areas of writing (2.99), Listening (3.13), Speaking (2.93), and Overall (3.12) as good on a scale of 1 to 4. Similarly, when choosing this particular institution, most said that it was not possible to study in their home country. At the high end of this question (important), were quality of the US education and international recognition of US's qualifications. Other important facts were cost, safety, English speaking country, your own performance, and scholarships from the US.

As for their performance in their studies, international students in this survey on average expressed that they were doing well in their studies. As for satisfaction level, they were moderately satisfied with the progress in their studies, and it was very important for their families to know they were doing well in their studies. Respondents rated educational activities (understanding professors/lecturers, writing assignments, taking notes during class, completing assignments on time, working on group projects, taking tests or exams, managing study workloads, asking questions in class, thinking critically, expressing in English, expressing opinions to your professor, studying in a different educational system) between slightly difficult to moderate difficult.

Culture and classroom experience are important for students' academic development. The respondents on average mildly agreed that their course content is useful for their future study or employment. International students held neutral opinions when asked if faculty encouraged contact between international and local students, and if faculty provided special efforts to help international students. In addition, international students were neutral or mildly agreed when asked whether "cultural differences are respected in my institution," "feeling included in my class," and "acceptance of cultural differences by fellow classmates."

Student services and facilities are fundamental and indispensable components of a student's life in higher education. In this survey, the following services were rated good to excellent: international students office, student orientation services, financial advice services, vocational or educational guidance, counseling services, computing services, library services, learning support services, buddy or mentoring services, sports and recreational facilities, clubs and societies, student association, and language laboratories. The lowest score on average was health services, which scored between average and good. In addition, international students reported that professors, administrative and support staff, US students, and people in the community never to seldom treated them unfairly or negatively because of their nationality, cultural or racial background.

### *Social Experiences*

Social experiences provide an opportunity for international students to integrate in the US higher education mainstream culture. International students mildly agreed that they have more US friends, and they mildly agreed that US students are friendly towards them. Moreover, international students rated neutral on questions "finding it difficult to make US friends," "US student interested in having international friends," and "trying their best to make US friends." The lowest score on this category came from "my language ability stops me from making US friends," in which students mildly disagreed with such a statement.

On average, participants responded that they had few US friends and other international friends from other countries. This result gives credence to students from the same country gathering together for friendship and academic support. Likewise, international students spent more time with people from their own country than with US and/or students from other countries.

Life as an international student at this southeastern research university comes with difficulties. Similarly to the Lifetime Empowerment Workshop, the

survey showed that many of the international students noted that transportation/parking, language, culture, residency, health insurance are the main factors posing difficulties to international students. Others challenges were differences in humor, discrimination, missing family, homesickness, making friends, and tuition and fees.

### *Differences by Gender*

This study also focuses on issues affecting international students by gender.

Table 1

*Questions/factors that are significantly different by gender at  $\alpha = 0.05$*

<b>Variable</b>	<b>Scale</b>	<b>Average</b>	<b>Average Female</b>	<b>Average Male</b>	<b>Significance at 0.05</b>
How important were the following factors in choosing this institution as a place to study?-Family's Preference	1 to 5	3.07	3.38	2.73	0.006
How important were the following factors in choosing this institution as a place to study?-Was not possible to study in home country	1 to 5	2.85	3.09	2.48	0.024
How difficult are the following educational activities for you? - Writing assignments	1 to 7	3.89	4.31	3.45	0.018
How difficult are the following educational activities for you? - Expressing yourself (communicating) in English	1 to 7	3.87	4.16	3.45	0.04
How difficult are the following educational activities for you? - Expressing (giving) your opinions to your professor	1 to 7	3.92	4.22	3.61	0.047
How much do you agree or disagree with the following statements?-My professors make special efforts to help international students	1 to 5	3.92	3.62	2.61	0.007
Please rate the quality of the services or facilities that are available in your institution.-Computing services	1 to 5	3.47	3.7	3.24	0.023

How often do you spend social time with the following groups of people? - US	1 to 5	3.01	3.24	2.8	0.047
How often do you study with the following groups of people?-US	1 to 5	2.63	2.96	2.3	0.022
How often do the following people treat you unfairly or negatively because of your national, cultural or racial background? Please indicate the answer that best applies to you. - People in the community (e.g., neighbors, shop assistants, landlords, etc.)	1 to 4	1.84	2	1.64	0.049

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Ten factors in this study showed significant differences by gender. Women and men viewed family preference and inability to study in home country differently as important factors when choosing this institution. Likewise, women and men viewed the level of difficulty for writing assignments, expressing themselves in English, and expressing themselves to their professors differently. In addition, there was a significant difference by gender on computing services. International women and men significantly spent different amounts of time on socializing and studying with US students. Both viewed people treating them unfairly or negatively based on their nationality, culture and racial background differently.

### **Implications and Conclusion**

This study provides a window to the challenges international students face during their stay at a research southeastern institution. The number of international students in the US is at the highest levels in higher education. According to this study, in 2007, approximately one in three doctoral students is an international student, and STEM disciplines have higher representation of international students.

As their number increases so do the challenges they face with their educational and social experiences. Common challenges reported from the Lifetime Empowerment Workshop and the online survey suggested that transportation, language, residency, culture, lack of seminars, fees, etc. are key difficulties for international students. As with previous research, language and proficiency in English were major challenges for international students in both their academic and non-academic pursuits in the US (Stevens, Emil, & Yamashita, 2010).

Hart (1974) showed that female international students encountered more difficulties related to academic advising, health services, language, and social-relationships than their male counterparts. Likewise, this study found that women international students faced more challenges pertaining to family and interpersonal relationships. This study presented ten factors relating to issues affecting international students by gender, such as choosing this institution, and difficulties during their educational and social experiences at this institution.

This study focused particularly on the educational and social factors affecting international students at this university. This study will further be extended to include at least two to three other research institutions and explore if such factors similarly affect other international students. In this study, the majority of the international students in the survey reported that their field of study was in STEM (Science, Technology, Engineering, and Mathematics). Differences by the type of discipline (STEM vs. Non-STEM) were not applicable. Therefore, future research will focus on their educational and social experiences by gender and discipline.

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