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The Impact of Social Network Sites on International Student Adjustment on a US College Campus

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THE IMPACT OF SOCIAL NETWORK SITES ON INTERNATIONAL STUDENT
ADJUSTMENT ON A US COLLEGE CAMPUS

BY

R. BOWEN GILLIE

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

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OF

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ABSTRACT

International students are a welcome addition to universities and colleges in the United States looking to diversify their student population and increase tuition revenue. Unfortunately, these students often experience great difficulty adjusting to their new environment. It is essential for faculty and administrators to understand the reasons why international student experience such difficulties and explore different ways of facilitating intercultural adjustment. The purpose of this study was to examine how the use of social network sites by international students affects their adjustment in several different sectors of campus life, including making social relationships, communication with university administration, and academic learning with instructors. An online questionnaire survey of 37 questions was distributed to the international student population at the University of Rhode Island. Results show that social network sites can aid in intercultural adjustment particularly in younger students and students who have lived in the United States for shorter periods of time.

ACKNOWLEDGMENTS

I began my career in admission at the University of Rhode Island in 2008 as an impressionable college graduate with only a vague understanding of the discipline of communication studies. As I advanced in my career, I came to learn how essential it is for students at colleges and universities to be able to communicate cross-culturally. It is my sincere hope that this work will contribute to our understanding of how social network sites can assist international students to adjust successfully to life institutions of higher learning in the United States.

My deepest thanks go out to my major professor, Dr. Guo-Ming Chen who gave of his time expertise, and patience to help me to see this work through to fruition. My thanks also go out to Nancy Stricklin who has been my mentor in the world of international admission and to Drs. Geoffrey Leatham, Shaw Chen, and Jenny Audette all of whom so generously volunteered their time and skills to critique and edit this work.

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Introduction

In recent years, the number of students pursuing higher educational opportunities at institutions abroad has increased dramatically. The Institute of International Education (IIE) releases the *Open Doors Report on International Educational Exchange* every year which reports the number of students studying abroad, their nationality, and the country to which they travel for educational purposes. The most recent *Open Doors Report* shows that in the 2014-2015 academic year, the number of international students studying in the United States increased by 10%. This brings the population of international students studying in the United States to 974,926 - the highest number to date (2015). Furnham (1988) referred to these students as “sojourners” as they exhibit both temporality and motive/purpose. More specifically, international students spend between six months and five years at a college campus for the purpose (or motive) of completing post-secondary education.

While the floodgates are open for international students studying in the United States, these students bring with them a host of challenges. Sam (2001) examined satisfaction with life among international students and found depression and anxiety to be common and profound health concerns across this student population. At the same time, socio-cultural problems including language comprehension issues, discrimination, and racism drive many international students into social isolation.

Understanding the reasons why international students experience difficulty when arriving at a college campus in the United States for the first time is essential

to ensuring that they remain enrolled for the entirety of their degree. The purpose of this study is to examine how the use of social network sites by international students affects their adjustment in several different sectors of campus life, including making social relationships, communication with university administration, and academic learning with instructors.

Review of Literature

Social network sites

In February of 2004, thousands of college students studying in the greater Boston area joined the new social network site called Facebook. At the time, access to Facebook was limited to a select number of pre-approved colleges and universities and membership predicated upon ownership of a college/university email address (Boyd & Ellison, 2008). In just eleven years, the number of active Facebook users has surpassed 1.5 billion (Number of monthly active Facebook users, 2015).

Boyd and Ellison (2008) defined the social network site as “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (p. 211). The site chooses to display these options is variable, and different social network sites propose alternate means of controlling the viewing of information. However, the success of social network sites, including Facebook, Twitter, YouTube, and Instagram, etc., are built upon these basic principles.

Facebook has emerged as the preeminent social network outlet in the United States followed by YouTube, Reddit, and Twitter (Leading social media website in the US, 2016). However, SixDegrees.com (launched in 1997) is credited as the progenitor of today’s social network site (Kasavana, Nusair, & Teodosic, 2010). SixDegrees was the first web-based platform to allow members to create a representation of “self” in the form of an online profile. Members were able to

search for and add friends and communicate through virtual messaging. While revolutionary, SixDegrees shut down in the year 2000 as a result of limited functionality and lack of confidence amongst users to connect with strangers online (Ezumah, 2014). However, the legacy of SixDegrees is profound in that it demonstrates that the internet is a powerful forum whereby individuals with a variety of interests can connect from any location around the world (Boyd & Ellison, 2008).

Brandtzaeg and Heim (2009) explored the reasons why social network sites are so popular. In a survey of over 5,000 social network site users in Norway, Brandtzaeg and Heim found that users demonstrated twelve different reasons for using social network sites. Among them, forging new social relationships was the most important reason for utilizing social network sites, followed by reinforcing pre-established relationships, and finally as a tool for basic socializing. Lin and Lu (2011) applied the theories of network externalities and motivation to explain social network site joinership in Taiwan. They found that pleasure is the important motivating factor to continued social network site use, and individuals use social network sites with greater frequency when the number of friends on the same site is perceived to increase. The greater the number of users with whom an individual connects, the more pleasurable the experience.

Ellison, Steinfield, and Lampe (2007) investigated the importance of social network sites in establishing relationships within a user's offline community. In a study of college students in the early days of Facebook, they found that students used Facebook to increase their knowledge of those individuals whom they had

already encountered in their community. Choi, Kim, Sung, and Sohn (2011) indicated that social networking site usage is largely influenced by the user's cultural background. For example, the authors found that American students used social networking sites like Facebook to create large social networks of weak relational ties, while Korean students tended to create smaller social networks with as many strong relational ties.

While connecting with others is an important utilitarian function of social network sites, many studies have also examined the intrapersonal effects and benefits perceived by social network site users. Gangadharbatla (2008) and Pempek, Yermolayeva, and Calvert (2009) pointed out that social network sites are popular because they allow students to create a sense of identity, self-esteem, and group membership. Users create an online profile identity in which they detail their likes and dislikes, hence experiencing enjoyment by presenting a distilled version of only their best characteristics. Cheung, Chiu, and Lee (2011) further indicated that the attraction of using social network sites can be traced to the uses and gratifications paradigm, which posits that the choice to use certain social network sites is a result of a psychological need for self-gratification.

In recent years, researchers have examined how social network sites can help international students adjust to a new academic environment. The following section reviews selected literature surrounding intercultural adjustment/adaptation.

Intercultural adjustment

Intercultural adjustment/adaptation is a multilayered concept. Ramsay, Jones, and Barker (2007) identified cultural adjustment as “the dynamic processes

that can ultimately lead to achievement of appropriate fit between the person and the environment” (p. 248). International students encounter a variety of challenges when arriving in the US and this process of adapting to cultural differences can be extremely stressful. The stress that occurs as a result of a prolonged stay in a new culture can be both psychological and sociocultural. Ward and Rana-Deuba (1999) differentiated these two forms of stress and argued that “psychological” is related to mental/emotional stress, whereas “sociocultural” is related to the sojourners ability to “fit in” and navigate the precepts of the new culture (p. 424). Ward and Rana-Deuba pointed out that the most profound psychological and sociocultural adjustment difficulties happen when the sojourner first enters a new culture. However, while sociocultural problems tend to decrease over time, a schedule for psychological adjustment is more difficult to predict.

Cultural distance is another important concept to consider when discussing the process of intercultural adjustment. To put it simply, the greater the gap between cultures, the more challenging the process of adaptation (Demes & Geeraert, 2014). Individuals subjected to cultural distance undergo a process of acculturation when entering a culturally different environment. Recognizing this phenomenon, Berry (1974, 1984, 1994) proposed an acculturation model with two conceptual dimensions of maintaining cultural identity and interacting with members from other groups. From these two conceptual dimensions, four sub conceptual dimensions were developed, including integration, separation, assimilation, and marginalization. Integration refers to those individuals who maintain an appreciation for their home culture and at the same time effectively

integrate with members of a culturally different host culture. Separation refers to those individuals who strongly maintain their home culture and avoid interacting with members of the host culture. Assimilation refers to those individuals who divest themselves of their home culture in favor of the host culture. Finally, marginalization refers to individuals who are not concerned with maintaining home country culture nor with interacting with members of the host culture (Berry, Kim, Power, Young, & Bujaki, 1989). Identifying a sojourner's engagement with acculturative strategies regarding home and host culture is an important method of examining how easily the process of adjustment will occur.

It is not an easy task for most international students to find a balance between maintaining their own cultural identity and interacting with members of other cultural groups. The manifestation of psychological and sociocultural stress is often referred to as acculturative stress (Ye, 2005). This form of stress often presents somatically and students exhibit extreme fatigue, poor appetite, and depression. As a result of acculturative stress, sojourners often eschew host culture by turning to native language forms of internet media for solace. However, Goldlust and Richmond (1974) and Melkote and Liu (2000) argued that non-native English speaking immigrants or sojourners who habitually reviewed ethnic language media showed poor acculturation in the process of intercultural adjustment.

From a sociological perspective, international students emerge as the consummate members of the college out-group. This out-group status can be particularly profound at institutions with low levels of diversity. As sojourners in

the US, international students by definition do not hold American citizenship. Many speak English as a second language, or speak English as a first language with an accent, and hold different customs and beliefs. International students exist in stark contrast to their American peers. This is particularly difficult when one considers that college campuses have sanctioned in-groups and out-groups which take the form of peer-lead clubs and organizations.

Student Involvement Theory (Astin, 1984) takes an integrative approach to intercultural adjustment and predicts that one of the most profound influencers on a student's social and mental development in college is the connections formed with peer groups (Foubert & Urbanski, 2006). Foubert and Urbanski (2006) originally postulated that leadership in clubs and organizations on a college campus would result in the most significant examples of development. However, they found that students who participated in clubs - at any level - experienced more positive development than those students who did not participate in clubs. In fact, by the end of senior year, students involved in clubs and organizations who actively participated in activities with friends/peers demonstrated higher development levels in areas pertaining to lifestyle, academic commitment, and career aspirations.

When considering the relationship between in-groups and out-groups as they pertain to international students, Hofstede's (1980) model of cultural dimensions is worth mentioning. The willingness that an out-group international student has to attempt to join a university "in-group" can depend on the type of cultural dimensions exhibited in the student's home country. A student from a highly individualistic culture may be more inclined to adapt to a new environment

by striking out alone in an attempt to make friends and join a campus club or organization because their frame of reference is one based on self-reliance. In contrast, a student from a highly collectivist culture may find difficulty with the face-threatening act of seeking friendship/membership with a group that is outside his/her established cohort (Dainton & Zelle, 2015).

The difficulties with intercultural adjustment faced by students originating from collectivist cultures were examined by Toyokawa and Toyokawa (2002). In the study, Japanese student adjustment to a college campus in the western United States revealed that participation in extracurricular activities had a positive impact on international student adjustment. Data collected by the researchers indicated that membership in clubs/organizations on campus caused international students to enroll in classes related to the theme of that club/organization. This increased academic fulfillment and in turn general satisfaction with life on campus.

Though supportive of Astin's (1984) theory of student involvement, Toyokawa and Toyokawa (2002) argued that the highly collectivist nature of Japanese society can impact the in-group out-group dynamic in non-traditional ways. Fear of losing face by applying for membership in an established in-group is a common difficulty encountered by students from collectivist cultures. However, Toyokawa and Toyokawa observed that, in the case of their Japanese student subjects, fear of losing group membership within the Japanese cohort may have caused group members to join clubs/organizations together without universal interest in the club/organization's theme. This lack of interest in the

club/organization but fear of straying from their established cohort may have made some members of the cohort unhappy, and thus negatively affecting adjustment.

Social network sites and intercultural adjustment

Given the power that social network sites have to inspire both virtual and in-person integration, such sites have great potential to profoundly impact intercultural adjustment and shorten the period of acculturative stress. It is important for international students to engage with their university community to successfully adjust to a new environment (Al-Sharideh & Goe 1998; Astin, 1984). At the same time, it is important for international students to maintain connections with friends and family in their home country in order to ease this environmental transition (Demes & Geeraert, 2014). Social networking sites offer international students the ability to fulfill both needs. They can engage online with individuals whom they encounter in their offline host community, while maintaining supportive virtual relationships with individuals in their home community (Brandtzaeg & Heim, 2009; Ellison, Steinfield, & Lampe, 2007).

Studies have explored how social network sites assist students in the college adjustment process. For example, Sawyer and Chen (2012) found that social media use allowed students to build relationships with others when they arrived on campus, while also allowing them to maintain connections at home. The authors posited that social media allows international students to exist in the home sphere and the host sphere simultaneously. Furthermore, the frequency with which international students communicated with friends and family in the home sphere decreased as time spent in the US increased. This supports Ye's (2006) finding that

as students become more comfortable in their host environment, they rely less on communication with the home sphere for support.

Academic systems vary dramatically from country to country as do international student-instructor relationships. Communication of needs and expectations of both students and instructors can be particularly challenging. As Trice (2003) argued, an instructor's competence to relate to international students is an essential component to fostering international students' satisfaction. Those instructors who had some previous experience living abroad were found to be more likely to understand the difficulties faced by international students and adjusted their lessons accordingly (Trice, 2003). Biesenbach-Lucas and Weasenforth (2000) found that one of the most basic obstacles to mutual understanding in the international student-instructor relationship is, when both parties speak different native languages. In addition, Ladd and Rudy (1999) and Tomkovich and Al-Khatib (1996) asserted that while many international students desire a friendly relationship with their instructors, the perceived power relationship in which students from high power distance societies view the instructor as a figure of authority can prevent open communication and intercultural understanding.

McCarthy (2009) examined how Facebook helped Generation-Y students adjust to their first year on a college campus in Australia. Facebook was selected as the most valuable social network to study based on its popularity and its "engaging and interactive qualities..." which allowed students "to engage with their peers and develop a sense of belonging within the learning community" (McCarthy, 2009, p. 46). That Facebook allows international students to integrate

with peers should inspire greater intercultural adaptation according to Al-Sharideh and Goe (1998) and Wand and Rana-Deuba (1999). The ease with which Facebook facilitates communication allows non-English speakers to feel comfortable communicating cross-culturally. McCarthy's (2009) study showed that when Facebook was applied in a classroom setting, the social network site's virtual nature allowed international students to provide thoughtful and insightful responses to questions. McCarthy also found that the nature of these responses contrasted greatly with the more rushed and pressured responses observed of an international student cohort while in the classroom during the first year abroad. It revealed that social network sites have the ability to greatly reduce feelings of stress and discomfort experienced by international students during their first year and can help to promote intercultural adaptation.

Cobb (2009) also explored the use of social network sites in the context of academic learning and the student-instructor relationship. In an online learning environment, Cobb discovered that students who exhibited a stronger social presence were more engaged in online learning. Brady, Holcomb, and Smith (2010) found that social networking sites can be harnessed to improve the experience for students engaged in online distance learning. By studying how students responded to the use of *Ning in Education*, a social network site, the authors concluded that incorporating social network sites into online learning resulted in deeper levels of student interaction and communication.

Lin, Kim, Kim, and LaRose (2011) found that the use of social networking media can assist international students to create "social capital" or the supportive

resources that derive from creating relationships with others. Social networking sites help to reduce uncertainty (DeAndrea, Ellison, LaRose, Steinfield, & Fiore, 2012), and in doing so allow international students to better adapt to a new environment. Ellison, Steinfield, and Lampe (2007) studied how domestic students use Facebook to create new relationships or maintain connections with preexisting relationships. While their results show that Facebook was more commonly used to maintain existing relationships, the data supported the use of Facebook as a means for new students to create new social relationships. Hence, Facebook exists as a vehicle for bridging social capital on college campus helps to cement new relationships.

Zhao, Kuh, and Carini (2005) also examined the adjustment of international students to campus life. They compared American and international students in effective educational practices based on the students' perception of satisfaction with college life and academic success. The results showed that international students used computer-based technology more frequently during their first year at college than their American peers. The authors explained that this may be caused by one of two reasons. First, international students have control over technology and can use this medium with immediate success, and second, they use the technology as a means to communicate with their peers and instructors without subjecting themselves to the embarrassment that is derived from language barriers and the lack of intercultural understanding. While this may develop a sense of social isolation for international students, the researchers found that the frequency with which international students used technology decreased over time. This

suggests that as students become more comfortable with their environment, they are able to interact freely with their peers and instructors. This low-risk interaction thus makes communication via technology less essential to their success as students.

Though there is little literature discussing social network sites use and engagement with “administration” as a catch-all term for non-instructor related student services, some studies have examined how international students use counseling/health services, academic advising, and the function of offices of international student services. As Russell, Thomson, and Rosenthal (2008) argued, while international students could benefit from psycho-social counseling services during the adjustment period, there is a gap between need and action. The main reasons for not using counseling services include: (1) lack of knowledge that such services existed, (2) where services were located, and (3) lack of knowledge about how to make an appointment. Interestingly, the use of the Cultural Stress scale revealed that those students who sought out counseling scored lower, which indicates that those who utilized counseling services were more acculturated. The authors advocated that institutions make strong efforts to inform students of counseling services throughout the year, not just during first-year orientation programs.

It is equally important for international students to receive targeted information campaigns, so that they know that academic advising services are available to assist them with intercultural adjustment to campus. Charles and Stewart (1991) argued that the two most important functions of the academic

advisor when dealing with international students, are to assist with the process of adjusting to the rigor of their program, and to assist them in enjoying academic success. To fulfill these functions, college advisers must keep in close touch with international students in order to observe their progress.

Moreover, perceived helpfulness of the “administration” at a university in the United States can affect international students’ choice in utilizing those services. International students are required by the Student and Exchange Visitor Program (SEVIS), a division of the United States Immigration and Customs Enforcement service, to check in with a designated SEVIS officer (DSO) at the beginning of every year. The DSO is often housed in a university’s office of international student services. International students must provide financial documentation testifying as to their ability to pay for an entire year’s worth of tuition and fees minus any scholarships or grants. Because immigration regulations are notoriously complex (and at times intimidating) it is understandable why offices of international students and scholars can be viewed by international students with more than a little trepidation.

Johnson (1993) examined how members of international student populations in the United States can perceive an office of international students and scholars. The results showed that international students experience mixed feelings regarding the services provided by the office of international student services. Johnson found that international students exhibited three trends in their responses. First, *dissatisfied nonusers* of the office of international student services avoided contact with that office for two reasons: (1) because they felt that the staff in that

office was impersonal and uncaring about their problems, and (2) because they preferred to solve their own problems. Second, *selective users* of the office of international student services tended to request assistance with academic and immigration issues, but consulted friends and family when they had financial questions. Finally, the *satisfied* group of students considered the services provided to have met their needs.

Another administrative function where the use of social networking might ease potential problems is in situations of advising, counseling, or the provision of health services where gender related cultural norms might clash. For example, social network sites have the potential to assist male academic advisers and representatives of Health Services in the course of their duties with female students, who come from cultural backgrounds where it is considered rude or inappropriate to look men in the eye (Charles & Stewart, 1991). Social network sites may provide a venue for advisors and representatives of Health Services to monitor the progress of female students by interacting with them in a less threatening way. Similarly, the interactive nature of social network sites can engage international students to make their experience with the office more personal.

Problem Statement

Given the great versatility of the social network and the ability to transcend the barriers of intercultural communication, it is important for scholars to continue to explore the relationship between the use of social network sites and international students' adjustment in a host culture. It is the purpose of this study to extend this line of research by focusing on the impact of the use of social network sites on

international students' campus life. The research question to be explored in this study is as follows:

RQ: How do social network sites affect international students' adjustment to campus life?

In this study "campus life" refers to making social relations, communication with university administration, and dealing with academic learning with instructors at college in the United States. The study aims to investigate how international student use social network sites to engage with campus life, the satisfaction in using social network sites to engage in "campus life," and the influence of social networks use on campus adjustment. Other questions, such as the impact of gender, age, and grade levels on the use of social network sites, are also explored.

Method

Participants

This study was conducted at the University of Rhode Island (URI) in Kingston, Rhode Island, USA. The researcher requested and obtained a list of all international graduate and undergraduate students enrolled at URI in the spring semester of 2016 from the Office of the Vice Provost at the University of Rhode Island. It was requested that this list exclude short-term study abroad students and those students who had not provided the University with a Family Educational Rights and Privacy Act (FERPA) waiver. The first email was disseminated to 473 international students on February 10, 2016. Of this population, 25 emails were returned as undeliverable, leaving a total population of 448 international students.

A total of 104 international students completed the survey reflecting a 23% response rate. The responses of one participant were excluded due to the incomplete answer (N = 103). Participants in this study ranged from 18 years old to 40 years old with a mean age of 24.86 years. In terms of gender, 47.6% of participants identified as male while the remaining 52.4% identified as female. The majority of participants (53%) were postgraduates followed by freshmen (22.3%), and juniors (10.7%). Sophomores and seniors each comprised 6.8% of participants in this study. In response to how long participants had been in the US, 19.4% had lived in the US for less than 1 year 40.8% of participants had lived in the US for 1-3 years, 4.9% for 3 years, 20.4% for 4 years, 6.8 for 5 years, and finally 7.8% for 5+ years. The mean score for length of stay in the US was found to be 2.78 years.

Participants were from 32 different countries with the top three largest populations from China, India, and Indonesia.

Procedure

A researcher-developed, web-based questionnaire with 37 questions was created using the survey SurveyMonkey® platform. Before the questionnaire was disseminated, in order to assess overall face validity and clarity, two graduate students and two undergraduate students were asked to review the survey and offer suggestions for improvement. After receiving approval from the University of Rhode Island's Institutional Review Board, the questionnaire was emailed to the potential participants. After opening the email and reading a brief explanation of the study (including eligibility information), participants were redirected to the questionnaire website where they were asked read consent form and privacy statement. Consent was assumed when the participant clicked the "next" button at the bottom of the page. No identifying information was collected and as such, participation was completely anonymous.

The survey remained active for 29 days and four email reminders were sent during this time. Given that both undergraduate and graduate students must submit the results of an approved English language examination in order to gain admission to the URI, the risk that a participant would misunderstand the meaning of the survey questions due to lack of English language proficiency was low.

Instruments

The SurveyMonkey® questionnaire created for this study was divided into five sections. Items for SNS usage and campus adjustment in the questionnaire

were originated from previous literature on the two concepts. Section one (items 1-15) asked participants to rate the frequency of their commonly used social network site use (SNS) on campus. The responses in this section were recorded on a 5-point Likert scale with response options ranging from “never” to “very often”. The second section (items 16-19) asked participants to rate their satisfaction regarding the use of social network sites on campus. The responses in this section were recorded on a 5-point Likert scale with response options ranging from “very unsatisfied to “very satisfied”.

Section three asked participants to rate the extent to which social network sites affect their adjustment to campus life. The responses in this section were recorded on a 5-point Likert scale with response options ranging from “strongly disagree” to “strongly agree”. Section four asked participants to report demographic information including, age, college, nationality, gender, length of stay in the United States, and grade level. In the final section, participants were asked to provide responses to two open ended questions; (1) list the two types of social network sites that you use most often, and (2) list three suggestions about how URI could better use SNS to assist with international student adjustment.

Analyses

In order to determine reliability for both SNS usage and campus adjustment, a Cronbach’s alpha score was calculated for each scale. The Cronbach’s alpha score for social network site usage scale was .90, and .94 for campus adjustment. Pearson product-moment correlations were calculated to examine the relationship between social network site usage and international student satisfaction. T-test was employed to analyze the

relationship between gender and usage of social network sites, and gender and campus adjustment. Finally, ANOVA was used to compare SNS usage and SNS satisfaction with the students' year at the University (i.e. freshman, sophomore, junior, senior, and postgraduate).

Results

Table 1 illustrates the mean scores of key variables in this study. It was found that the use of SNS to interact with University administration scored the lowest ($M = 1.89$), while using SNS to adapt to campus life scored the highest ($M = 3.24$). In terms of SNS and satisfaction, participants were found to be least satisfied with SNS and dealing with administration ($M = 3.19$) while participants were most satisfied with SNS as a means of assisting with overall campus adjustment ($M = 3.48$).

Table 1. Mean scores of key variables.

Variables	Mean	Std. Deviation
Overall network site use	2.42	.83
Overall campus adjustment	3.23	.84
Use for social relations	2.78	.80
Use for communication with administration	1.89	.93
Use for academic learning	2.59	1.20
Satisfaction with social relations	3.35	.91
Satisfaction with academic learning	3.34	.82
Satisfaction with communication with administration	3.19	.83
Satisfaction with overall adjustment	3.48	.81
Age	24.86	5.75
Length of stay in US (in years)	2.78	1.53

The results of the Pearson correlations are summarized in Table 2 and Table 3.

Table 2. Pearson Correlation Coefficients for SNS usage, adjustment, and age.

Variables	2	3	4	5	6
1. Overall network sites use	.57**	.77**	.86**	.90**	-.34**
2. Overall campus adjustment		.61**	.39**	.48**	-.25**
3. Use for social relations			.52**	.54**	-.34**
4. Use for communication with Administration				.68**	-.16
5. Use for academic learning					-.34**
6. Age					--

** p <.01, *p <.05; N=103

The results show a positive correlation between SNS usage and overall adjustment ($r = .57, p < .01$). Positive correlations were also found between SNS and social relationships on campus ($r = .77, p < .01$), interaction with administration ($r = .90, p < .01$), and academic learning with instructors ($r = .90, p < .01$). Age was negatively related to SNS usage indicating that older participants use social network sites less frequently to interact with the specified campus variables.

The results of the Pearson correlation coefficients for SNS and satisfaction show that positive relationships exist between SNS satisfaction and dealing with social relationships on campus ($r = .44, p < .01$), dealing with academic learning with instructors ($r = .41, p < .01$) and dealing with University administration ($r = .70, p < .01$), negative correlations exist between satisfaction and age and satisfaction and length of stay in the United States (see Table 3.)

Table 3. Pearson Correlation Coefficients for satisfaction and other variables.

Variables	2	3	4	5	6
1. Satisfaction with social relations	.44**	.41**	.70**	-.25*	-.25*
2. Satisfaction with academic learning		.71**	.50**	-.22*	-.14
3. Satisfaction with administration			.52**	-.05	-.16
4. Satisfaction with overall adjustment				-.21*	-.15
5. Age					-.19
6. Length of stay					--

** $p < .01$, * $p < .05$; N=103

Table 4 shows the results of the *t*-test between gender and SNS usage/SNS satisfaction. No significant correlation between gender and usage and satisfaction variables was found.

Table 4. T-Test of Gender, usage, and satisfaction variables.

Variables	Gender	Mean	Sig.
Overall network site use	Male	2.42	.18
	Female	2.42	
Overall campus adjustment	Male	3.22	.23
	Female	3.25	
Use for social relations	Male	2.76	.06
	Female	2.80	
Use for communicating with administration	Male	1.99	.62
	Female	1.80	
Use for academic learning	Male	2.53	.08
	Female	2.64	
Satisfaction with social relations	Male	3.21	.71
	Female	3.48	
Satisfaction with academic learning	Male	3.33	.71
	Female	3.48	
Satisfaction with administration	Male	3.16	.65
	Female	3.22	
Satisfaction with overall adjustment	Male	3.35	.95
	Female	3.59	

** $p < .01$, * $p < .05$; N=103

One-way analysis of variance (ANOVA) was administered to calculate the mean scores of SNS usage and SNS satisfaction as they relate to the participant's grade level (see Table 5). The results show that the lower the score, the less often SNS were used to communicate with the specified variables. Significant differences were found in grade level and usage, relationships on campus, learning with instructors, and adjustment to campus. SNS usage with administration consistently scored the lowest of all variables across all grades. Mean scores of

SNS satisfaction were found to differ significantly only in the area of overall adjustment on campus.

Table 5. One-way ANOVA for SNS use, adjustment, and satisfaction by grade level

Variables	Grade level	N	Mean	SD	F
1. Overall network site use	Freshman	23	2.78	.84	3.01*
	Sophomore	7	2.70	.88	
	Junior	11	2.64	.78	
	Senior	7	2.59	.37	
	Postgraduate	55	2.17	.83	
2. Overall adjustment	Freshman	23	3.57	.71	4.12**
	Sophomore	7	2.90	.81	
	Junior	11	3.89	.82	
	Senior	7	3.13	.85	
	Postgraduate	55	3.03	.81	
3. Use for social relations	Freshman	23	2.99	.75	3.45*
	Sophomore	7	3.03	.94	
	Junior	11	3.05	.35	
	Senior	7	3.37	.60	
	Postgraduate	55	2.53	.83	
4. Use for communication with administration	Freshman	23	2.17	1.05	1.04
	Sophomore	7	1.80	.89	
	Junior	11	2.07	1.05	
	Senior	7	1.51	.75	
	Postgraduate	55	1.80	.87	
5. Use for academic learning	Freshman	23	3.18	1.16	4.37**
	Sophomore	7	3.29	1.15	
	Junior	11	2.80	1.18	
	Senior	7	2.89	.76	
	Postgraduate	55	2.17	1.14	
6. Satisfaction with social relations	Freshman	23	3.43	.99	2.31
	Sophomore	7	3.29	.76	
	Junior	11	4.00	.67	
	Senior	7	3.71	.49	
	Postgraduate	55	3.16	.92	
7. Satisfaction with academic learning	Freshman	23	3.52	.79	1.85
	Sophomore	7	3.71	.49	
	Junior	11	3.63	1.29	
	Senior	7	3.43	.53	
	Postgraduate	55	3.15	.76	
8. Satisfaction with administration	Freshman	23	3.26	.81	.56
	Sophomore	7	3.29	.49	
	Junior	11	3.45	1.21	
	Senior	7	3.29	.49	
	Postgraduate	55	3.09	.82	

9. Satisfaction with overall adjustment	Freshman	23	3.43	.90	2.87*
	Sophomore	7	3.29	.78	
	Junior	11	4.18	.60	
	Senior	7	3.71	.49	
	Postgraduate	55	3.35	.80	

** $p < .01$, * $p < .05$; N=103

In the second to last section of the questionnaire, participants were asked to identify the SNS that they used most on campus. Facebook emerged as the most popular followed by Instagram, YouTube, and Twitter. Several other SNS were mentioned including Snapchat, WhatsApp, Gmail, Yik Yak, and LinkedIn.

Finally, participants were asked to list up to three ways that the University of Rhode Island could harness SNS to improve international student adjustment.

Five reoccurring themes were identified by order from the data as follows:

1. Promote activities on campus.
2. Promote US student and international student interaction.
3. Promote international student and international student interaction.
4. Promote international student and University interaction.
5. Promote the use of a wider variety of SNS on campus.

Among the five thematic categories, participants indicted that promoting international student and University interaction was the area where SNS could be useful. In this category, all suggestions that pertained to programs, activities, or communications formally sponsored by a URI employee or URI funded office were considered to be “University interaction”. Using social media to promote activities on campus was identified as the next area in need of improvement. Promoting US student and international student interaction and promoting international student

and international student interaction received equal mention as an area of improvement and finally promoting use of a wider variety of SNS had the fewest coded responses.

Discussion

This study investigates the impact of social network site usage on international student adjustment on a US college campus. Campus life was defined as making social relations, communication with administration, and academic learning with instructors. The results of this study have the potential to inform University faculty and administrators' efforts to improve the period of intercultural adjustment of international students at URI. The success of social network sites predicated on the fact that users are able to connect with a larger community (Brandtzaeg & Heim, 2009). Moreover, research has shown that it is important for international students to engage with their campus community in order to successfully adjust to their new environment (Al-Sharideh & Goe, 1998). The findings of this study show that while social network sites on campus do improve the process of international student adjustment at URI, there is still room for improvement.

The results indicate a significant correlation between the usage of social media and social relationships. A significant relationship also exists between satisfaction and social relationships. These results support previous research on the subject (e.g. Boyd & Ellison, 2009; Brandtzaeg & Heim, 2009; Ellison, Steinfield & Lampe, 2006; Lin & Lu, 2011). A correlation was also observed between SNS usage and interaction with University administration, and SNS satisfaction and interaction University administration. While previous studies have examined the relationship between international students and various institutional support services such as counseling (e.g. Russell, Thompson, & Rosenthal, 2008),

academic advising (e.g. Charles & Stewart, 1991), and with offices of international students and scholars (e.g. Johnson, 1993), few studies have presented “administration” as a catch-all term for non-instructor related services on campus.

This suggests that students at the University of Rhode Island perceive the University’s administration as a distinct entity, and as a force which impacts their process of intercultural adjustment. It is possible that these finding may enrich the existing literature on the subject of social network sites and international student adjustment. Future research should distinguish between different types of administrators (e.g. direct contact administrators such as student support professional staff and indirect contact administrators such as presidents, provosts, and academic deans).

The results also show a significant correlation between both SNS usage and SNS satisfaction and academic learning with instructors. International students at URI use social network sites to communicate with professors and are satisfied while doing so. This suggests that social network sites have the potential to overcome perceived power relationships between students and instructors. While the wide variety of countries represented in this survey and low response rate did not allow for detailed analysis between SNS use and SNS satisfaction and country of origin, such findings are significant given that the highest percentage of participants identified as Chinese, Indian, and Indonesian. These are traditionally high power distance societies. Whereas in face-to-face situations, students from high power distance societies may be intimidated by an instructor as an authority figure (Ladd & Rudy, 1999; Tomkovich & Al-Khatib, 1996), this study shows that

social network sites can transcend such cultural obstacles. This also supports studies from Zhao, Kuh, and Carini (2005), Brady, Holcomb, and Smith (2010), and Cobb (2009), which examined international students and benefits of online learning practices.

Negative correlations were found between SNS usage and SNS satisfaction, and both age and length of stay in the United States. Older participants were found to use SNS with less frequency than their younger peers and less satisfaction with social network sites as an effective means of interaction with the specified variables. That SNS usage and SNS satisfaction decrease given the number of years that they have lived in the United State is consistent with the observations of Zhao, Kuh, and Carini (2005). The findings suggest that the University of Rhode Island should reexamine how it interacts with both older students, and those students who have lived in the United States for longer than 2.78 years.

Similar to Ellison, Steinfield, and Lampe's (2007) study, no significant correlation was found between both SNS usage and SNS satisfaction and gender. It is interesting to note that participants who identified as juniors scored the highest on both SNS usage and adjustment ($M = 3.89$), and SNS satisfaction and overall adjustment on campus ($M = 4.18$). However, junior participants scored the lowest when in relation to usage of SNS and academic learning with instructors ($M = 2.80$). While the data support no conclusions as to why international juniors engage less frequently in academic learning with instructors, these results could inform future research in this area.

The open-ended questions in the study provided useful information about the types of social network sites that are most popular with participants. Predictably, Facebook, Instagram, and YouTube were found to be the sites that participants used most regularly in on-campus activities. Considering that both SNS usage and SNS satisfaction in relation to administration have the lowest means ($M = 1.89$; $M = 3.19$ respectively), the University can reevaluate the manner in which it utilizes Facebook, Instagram, and YouTube to interact with international students. It is important to note that URI does administer official Facebook, YouTube, Instagram, Twitter, and Google+ sites. Given the data collected in this study, the University should direct its resources to the latter four social network sites to engage with the international student community as these are used (by that population) with the greatest frequency. Google+ does not seem to have appeared on the radar of the international student population but this could be due to the fact that the University only transitioned to “Google Apps for Education” as the main email platform on January 6, 2015 (K. Cronin, personal communication, December 9, 2014). It is possible that as students become more familiar with Google+ services, they will utilize this social network site to help with the process of intercultural adjustment.

The final series of open-ended questions allowed participants to offer suggestions as to how social network sites could be better utilized on campus to assist with international student adjustment. One key area for improvement seems to be redesigning the manner in which SNS are used by the University to disseminate information about events and activities on campus. As it is typically

the University's administration that controls the dissemination of event announcements, it is understandable that analysis of the data reveals that scores of both participant SNS interaction with administration and SNS satisfaction with administration are lower than all other variables.

A second area for improvement reported by participants was to improve the manner in which URI uses SNS to inspire greater in-person interaction between students. While increased dissemination of information may benefit younger users and users who have been in the United States for a shorter period, the data show that it may not benefit older students and those who have been in the United States for a longer period as SNS usage decreased with both variables. Graduate students present as a cohort of particular concern as the data shows low mean usage scores for all variables and low mean satisfaction scores in all variables but for overall adjustment.

Limitations

A few limitations to this study need to be addressed. It must be noted that the survey had a relatively low response rate of 23%. Future studies can strive for a higher response to see if the findings are consistent. Additionally, while this study focused on international student adjustment, it should be noted that American students also undergo a period of adjustment on campus. A few studies have examined this subject (e.g. Kalpidou, Costin, & Morris, 2011; Pritchard, Wilson & Yamnitz, 2007; Yang & Brown, 2013). It will be interesting for future research to compare the findings from the two different student groups.

It is also possible that the data were influenced by a self-selection bias. Participants who were predisposed to use SNS (and who are satisfied by SNS use) may have been more inclined to complete the survey favorably. Similarly, it is possible that the data was impacted by the fact that the survey was only distributed to current students. If the survey had been sent to students who had decided to transfer from URI to another college or university, the findings of this study might be different.

In addition, because the survey was conducted online, it is possible that the original subject cohort forwarded the email and questionnaire link to international students who are currently attending URI as exchange students. Future studies should consider the impact of social network sites on international students attending URI on an exchange program.

Finally, this study may have achieved more varied results had it been conducted via traditional sampling methods (e.g. Duffy, Smith, & Terhanian, 2005; Szolnoki & Dieter, 2013). A face-to-face and/or telephone survey, for example, may have engaged international students who are not inclined to participate in web-based surveys, or who come from cultural backgrounds that appreciate traditional methods of data collection over web-based methods.

Implications

An evaluative study of this type concerning international student adjustment has wide ranging implications for the University which should lead to reform in identified areas of weakness. Senior members of the faculty and administration can use the results of this study to improve the SNS culture on campus and, in turn,

improve the services that international students need in order to successfully adjust to URI.

Given the responses collected in the final section of the survey, it is fair to conclude that URI must improve the way it disseminates information and encourages interpersonal interaction via SNS. One suggestion is that the University should hire an individual to liaise with the international student population on a regular basis to coordinate social network site communication. The person who fills this position could represent all branches of the University's administration. This would create a more copacetic entity with which the international student population could address their concerns and increase adjustment. Senior members of the administration can also consider charging an international student liaison to conduct in-depth interviews with international students in each grade and compare the results with the data collected in this study. A mixed method approach of this type can result in a well-rounded evaluation of international student needs and inform future strategies of the University's global steering committee.

Lastly, it would be shortsighted to believe that the challenges faced by international graduate and undergraduate students at URI are unique in the world of higher education. Certainly, colleges around the country use social network sites to communicate with their students. However, serving the needs of an international student population is challenging. While institutions of higher learning vary significantly in many ways including location, size, cost, and demographics, the results of this study may be applicable at other colleges and universities around the

US. Understanding the ways in which international students use social networking site technology and their satisfaction with that technology will help senior faculty and administration understand how best to serve the needs of this special student population.

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