2015

The relevance of academic hospitality: an investigation of international higher education students' evaluation of quality of life in the U.S.

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The relevance of academic hospitality: An investigation of international higher education students’ evaluation of quality of life in the U.S.

by

Yi Luo

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Major: Hospitality Management

Program of Study Committee:
Liang Tang, Major Professor
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Iowa State University

Ames, Iowa

2015

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ACKNOWLEDGEMENTS

There are several people to whom I wish to express my deep appreciation for their support throughout my graduate studies. First of all, I want to express my appreciation to my parents who have continually provided their time, advice, love, and emotional support throughout my life and especially throughout this process. Without their constant encouragement this would not have been possible. I also want to thank all of the graduate students in our department for their great help in my courses and with their advice on my research. Finally, I express my most sincere thanks to all of my committee members for their valuable advising and guidance in both my research and self development. Without your great help, my life and research would be very different.
ABSTRACT

This study was conducted to investigate the quality of life among international students in higher education institutes in the United States and the factors that influence their lives. Four aspects were employed to explore non-academic life, including housing; food and beverage; transportation; and social activities. An online survey sent to Iowa State University international students was used in data collection. Linear regression analysis was used to test the relationships between each of the four factors and international students’ quality of life. The results indicated that housing, transportation, and social activities have significant impact on international students’ quality of life, whereas food and beverage did not. This research is the first attempt to utilize quality of life to investigate the non-academic life aspects of international students. Suggestions were provided to improve the quality of life of international students in colleges and universities in the United States.
International students are a compelling and critical source of revenue for many higher education institutions in the United States and are also integral to the global reputation of such institutions. International students benefit from study abroad by gaining new perspectives on academic subjects as well as cultural issues. Bakalis and Joiner (2004) identified that study abroad contributes to students’ achieving a global perspective, world-mindedness, and cross-cultural awareness. Moreover, some previous studies have indicated that international study makes students conscious of their own national identities and affects how they think about the outside world and people from other countries and cultures (Dolby, 2004; Drews & Meyer, 1996).

Recent United Nations Educational, Scientific and Cultural Organization (UNESCO) statistics cited the countries that attract the most international students. The results revealed that a significant number of international students travel to the United States, the United Kingdom, and France to pursue higher education (UNESCO, 2014). Nearly 820,000 international students pursued degrees in U.S. colleges and universities during the 2012-2013 academic year (United States Department of the Treasury, 2012). The countries of origin of the largest number of international students in the U.S. are India, China, and South Korea (Projects Atlas, 2015). In the past five years, students from these three countries have together comprised nearly 70% of the number of international students from Asia, and almost 40% of all overseas students studying in U.S. higher education institutions each year (Institute of International Education, 2013).
International students contributed approximately $27 billion to the U.S. economy in 2013, an increase of $3 billion from the prior year (Institute of International Education, 2013).

The U.S. is indisputably among the top leaders in the international student market, not only because it annually records the highest number of foreign students but also because it strategically targets students in potentially high-yield countries (Verbik & Lasanowski, 2007). With the awareness of the contribution that foreign students make to host nations both culturally and financially, the U.S. is cognizant of the advantages that higher education institutes can offer as an export service in the market of international students (Guruz, 2011). Taking steps towards the internationalization of higher education systems, especially in recent years, has resulted in measures in the U.S. to facilitate the arrival and integration of international students, including a large number of amendments that are in process to the requirements and procedures for immigrants (Verbik & Lasanowski, 2000). For these reasons, the U.S. is likely to remain one of the top host nations in an increasingly competitive market for the foreseeable future (Bhandari & Blumenthal, 2013).

Problem Statement

The concept of academic hospitality was first and solely introduced by Phipps and Barnett (2007), and is described as encompassing all aspects of hosting and guest services to students, including both living accommodations and academic study (Phipps and Barnett, 2007). In their study, Phipps and Barnett primarily discussed four forms of academic hospitality: material, epistemological, linguistic, and touristic. They also introduced three factors of academic hospitality: celebration, communication, and criticism, representing an extension of previous research by Williams (2000).
Many scholars have investigated the domain of the teaching and scholarship of international students (Zhao et al., 2005). Bennett (2000) divided academic labor into the three domains of teaching, scholarship, and service, and extended the metaphor of hospitality to each domain. However, few scholars have focused on the service perspective of hosting international students. Against this background of academic hospitality, more in-depth research is critically needed. The present study aimed to explore academic hospitality from the perspective of hosting and guest services to investigate the lives of international students.

In order to appeal to a greater number of international students and maintain their educational reputations in the global economy, colleges and universities in the U.S. require a comprehension of international students’ quality of life issues beyond the merely academic perspective. Quality of life measures an individual’s overall satisfaction with his or her living experience. In other words, a high quality of life indicates that the living experience of an individual meets or exceeds his or her expectations. In contrast, a poor quality of life occurs when actual life experiences do not meet with an individual’s expectations. Despite the influence of quality of life on multi-faceted aspects of the international student’s experience while studying abroad, to the knowledge of the author no previous studies have applied quality of life to investigate academic hospitality.

Purpose of Study

This study aimed to investigate the experience of academic hospitality among international students in American higher education institutes. Specifically, the objectives of the study were to:

- Re-propose the definition of academic hospitality from angle of the service;
• Evaluate academic hospitality using four perspectives;
• Examine international students’ quality of life;
• Establish the relationship between the four elements of academic hospitality and quality of life among international students.

Research Questions

The following questions were used to guide this study:

1. What is the definition of academic hospitality from the angle of service?
2. What are the four elements of academic hospitality?
3. How do international students describe and achieve quality of life during their period of study in the U.S.?
4. What is the relationship between the four elements of academic hospitality and quality of life for international students?

Significance of Study

With ever greater numbers of higher education students coming to the U.S. to study, it is critical for colleges and universities to identify the preferences of international students in various areas of their lives during study abroad. However, few studies have been conducted regarding international students and academic hospitality. To fill this knowledge gap, this study made the first attempt to define academic hospitality through a classification of four elements. Moreover, the author also investigated quality of life as a consequence of academic hospitality. In order to effectively host increasing numbers of international students, it is important to consider the connections between academic hospitality and international students’ quality of life.
Identifying the specific aspects of academic hospitality can help colleges and universities understand the preferences of international students and determine effective services improvement solutions. Moreover, evaluating quality of life enriches both the theoretical understanding of the quality of life issues of concern to international students and provides effective marketing strategies to administrators in higher education institutions that host such students.
International Students

**Cross-border education**

Cross-border education in higher education first appeared when the University of Paris accepted students and scholars from other countries in the 13th century. Altbach (1998) confirmed the importance of the University of Paris’ practice as a cornerstone of international education. Subsequently, the academic world recognized the importance of the building of cultural and political ties inherent in accepting international students, heralding the opening of a new arena in higher education institutions across the world (Habu, 2000; Rhee, 2004; Slaughter & Rhoades, 2004). Higher education administrators and policy makers have also realized the economic advantages of promoting to and accepting international students, who pay higher tuition fees as compared to in-country resident students. These advantages benefit not only universities but local and national economies as well. With the fact of the 886,052 international students studied in the United States, approximately 340,000 services jobs opportunities were offered to United States citizens and contributed $26.8 billion to the U.S. economy during the 2013-2014 academic year (NAFSA, 2013). With the arrival of increasing numbers of international student in the U.S., there has been a corresponding increase in building student housing, opening restaurants, and making improvements in public transportation. After realizing the benefits of serving this growing market, Australia and the United Kingdom now also actively compete for international students and their economic power. The emergence of the global
market is the primary reason motivating international students seeking higher education in other countries (Pimpa, 2003).

In spite of the economic advantages of accepting international students and employing them as comparably inexpensive skilled workers, particularly in the fields of science and engineering, some also view international students and employees as posing a threat to the economic self-sufficiency of their host countries (Rhoades & Smart, 1996). Nonetheless, many colleges and universities stress the significant value of campus internationalization. However, the definition of internationalization can be viewed from different perspectives. For example, Knight (2007) described internationalization as an international exchange state involving globalization, transnational education, or international education. Knight (2003) combined internationalization with global or specific forms of international intercultural communication, and emphasized higher education as a process of purposeful education which is international and cross-cultural. He indicated that cross-cultural exchange contributes to connection among peoples. This definition varies from globalization, which focuses upon the economic benefits of wooing international students. In contrast, internationalization highlights the benefits of accepting students who serve as agents of intercultural exchange and relations between different countries and cultures.

**Destination choice for international student**

Mazzarol et al. (1996) stated that six factors influence international students’ choice of destination country when applying to higher education institutions. The first factor, general knowledge and awareness about a country, is influenced by the availability of information about the potential destination country. A student's home country’s knowledge and perceived
reputation of a potential destination country are also important aspects of this decision-making factor.

Second, prior to making destination choices, prospective international students prefer to get suggestions from parents, family members, friends, and the Internet. Third, expenses related to housing, food, entertainment, and other factors play a significant role in choosing an international college or university. A fourth factor is the environment, including the learning environment, the physical climate, and the cultural lifestyle. The fifth factor involved in students’ decision-making processes is the geographic and time proximity of the potential destination country. The sixth and final factor is social links, which pertains to whether students have family members or friends living in the destination country and whether families or friends have studied there previously.

However, although these factors are the most dominant in international study destination choices for higher education students, additional criteria have emerged as greater numbers of international students now study abroad. Currently, international students also factor into their decision-making the ratio of students from their own countries, because students from the same country often seek one another out to live and socialize with (Ryan, & Zhang, 2007). However, some scholars have critiqued this choice, stating that the goal of studying abroad is to experience a different culture, which is compromised if international students spend the majority of their time with compatriots.
International students in the U.S.

More than 886,000 international students studied in the U.S. in the 2013-14 academic year. China, India, South Korea, Saudi Arabia, and Canada were the top countries of origin for these students, accounting for almost 60 percent of the international students studying in the U.S. (NAFSA, 2013). The U.S. has thousands of superlative colleges and universities that are renowned for their educational quality, extensive research programs, and the flexibility to change fields of study, attributes which are appealing to international students. American society is now more diverse today than that at any previous time (Keller, 2001), and knowledgeable observers also recognize the benefits of accepting international students and employees, and that an important goal of higher education is to foster the ability of people from different backgrounds to work together effectively and enhance individuals’ cultural competency (Carnevale, 1999; Mori, 2000; Sandhu, 1995; Smith & Schonfeld, 2000).

A number of previous studies have investigated the adjustment of international students in their host countries from both academic and cultural perspectives. Yan and Berliner (2011) discovered that the life of Chinese students in the United States is often difficult and that they face multifaceted life stresses while studying abroad. Andrade (2006) found that the main challenges of international students’ adaptation to attending U.S. higher education institutions are using the English language and cultural influences. These studies reveal the need for a variety of educational services as well as assistance from relevant government agencies to provide more effective support (Yeoh et al., 2013). Bachner, Mcleod and Lin (1977) identified four main challenges that international student face, the first of which is culture shock, which is defined as the disorientation that individuals experience during the process of adapting to a new environment (Macionis& Gerber, 2010). The second challenge is the ambassador role, which
indicates that students are viewed by resident students as embodying the cultural characteristics of their country. The third challenge is adolescent emancipation, which involves the desire of college-age individuals to build an identity as independent, self-supporting, and responsible members of society. The last but not least important source of challenge for international students is academic stressors, specifically those involved with studying.

Similarly, Church (1982) suggested that international students tend to experience a variety of adjustment issues when beginning study at U.S. colleges and universities. These concerns include academic problems (e.g., adjusting to non-native languages and new educational systems), personal issues (e.g., homesickness and geographic distance from familiar others), and cross-cultural problems (e.g., understanding and adjusting to new social norms). A number of scholars initiated inquiry in the early 1990s into the issues of international students and the academic stress and culture shock that they face. For example, Selvadurai (1991) examined the academic needs of international students’ and their attitudes toward campus services and suggested areas for change, including facilitating students’ English language proficiency; offering course of study counseling; academic advising tailored for the international student; improving relationships and rapport with faculty; increasing tutoring service offerings for this population; and providing assistance in getting orientated to the academic setting. Gomez (1987) studied the needs of international students in California’s community colleges by investigating the demographic characteristics of international students and their corresponding academic, social, and recreational needs. The study results indicated a significant need for providing increased administrative support to departments of international student affairs, which were shown to receive only moderate support in terms of appropriate levels of staffing. Furthermore, less than half of the colleges were found to provide sufficient community support to international
students in the form of offerings such as family housing, student clubs, and social functions specifically for international students.

In the early 2000s, various scholars focused their attention on the ambassador role as it pertains to the academia-related needs and achievements of international higher education students. For example, Clarke and Flaherty (2002) indicated that faculty interactions, instructional methods, and instructional tools can be more effective when they are specifically adapted to the needs of international students. Obong (1984) compared the non-academic needs (including counseling services; athletics; transportation; health services; recreational activities; special interest groups or clubs sponsored by public agencies; referrals to agencies that provide assistance to individuals with disabilities; and student employment, including both employment by a public agency and assistance in making outside employment available) of 100 domestic and 100 international college students in an effort to determine potential differences in non-academic social service between these two populations; to identify the average level of non-academic needs; and to determine the correlation between the non-academic needs of students and the provision of student services. The results showed that both groups were satisfied with programmatic opportunities afforded by the university. However, the researcher failed to measure student satisfaction by each category of non-academic needs, providing results only about general satisfaction.

Academic Hospitality

Initial definition of academic hospitality

Phipps and Barnett (2007) first proposed the definition of academic hospitality, while Bennett (2000) first indicated that academic life as hospitality is “the extension of self in order to
welcome the other by sharing and receiving intellectual resources and insights”. Bennett noted a distinction between two levels of hospitable conversation in the academy. The first level provides an opportunity to teach and to accept knowledge, while the second level provides feedback through communication and analysis. There are three fields of academic labor categorized by Barnett (2000): teaching, scholarship, and service, to each of which he extends the metaphor of hospitality. Bendix (2002) stated that tourism is shaped by layers of intersecting narratives and that the academic tourist narrative forms a part of academic hospitality.

Phipps and Barnett (2007) stated that academic hospitality has many forms. The material form of academic hospitality is the ‘give and gain’ that occurs when academics travel (to conferences, on field trips, etc.). The epistemological form of academic hospitality describes the practice in academic scholarship of being open to new ideas. The linguistic form encompasses physical and practical challenges. The touristic form is composed of both the tangible and metaphorical features of academic travel. When academics travel, they are typically involved in conference programs or itineraries provided by their hosts which may include tourist sites, often themed for relevance. Touristic forms are comprised of the material factors that strongly affect academic hospitality, such as travel arrangements and lodging accommodations.

The present author argued that Phipps and Barnett (2007)’s study defined the term ‘academic hospitality’ but did not incorporate the meaning of hospitality to understand academic life. As such, the present study combined several relevant frameworks and components of the fields of hospitality and tourism to redefine academic hospitality from four perspectives, including lodging; food and beverage; transportation; and recreation activities.
Lodging options

Higher education institutes and their surrounding areas offer a variety of housing options for international students. For example, students can choose to live in on-campus housing, to rent apartments off campus, or to live with local hosts. Some students select campus residence halls because they can be particularly welcoming to international students and of diversity, thus offering important opportunities for peer and staff socialization and support (Hughes, 1994). Pascarella and Terenzini (1991) found that living on campus, as opposed to commuting from off-campus housing, helps students to increase their tolerance of and openness to diversity. Hughes (1994) also found that the greatest gains in openness to diversity occurred when residence hall environments were designed to encourage positive interactions among students on multicultural issues.

Both the physical and social environments in student housing have an important effect on students’ evaluation of their higher education experience (Foubert, Tepper, & Morrison, 1998). Housing satisfaction can also be conceptualized as a dimensional structure. For example, Canter and Rees (1982) described the attributes of housing as the referent of interaction, while Francescato (1979) explained them as the domain of the environment. In general, the existing literature classifies the attributes of housing in terms of social/psychological, management/organizational and physical attributes. Social/psychological attributes encompass privacy, neighbors, security/safety, social densities, freedom of choice, social relations, and personalization (Francescato, 1979; Rent & Rent, 1978; Spencer & Barneji, 1985). Management/organizational attributes of housing include rules and regulations; maintenance; management staff and policies; participation; and rents (Paris & Kangari, 2005). The physical attributes of housing have been much less discussed in the existing literature and describe factors
such as the presence or lack of certain facilities; spatial density; location and size of bedrooms (Galster, 1987; Kahana et al., 2003; Turkoglu, 1997); and the appearance of the building and the floor level (Kaya & Erkip, 2001).

International students may be able to choose from a wide variety of housing types such as traditional apartments, single family homes, and duplexes, the differences in these housing types being primarily functional instead of morphological (Popadiuk & Arthur, 2004). Some studies have found that site layout and the type of housing have less relationship to residence satisfaction than do other factors such as location and security (Day, 2000; Francescato, 1979). Robinson and Robinson (1997) pointed out that students prefer factors other than the functional aspects of housing when making decisions about where to live. Specifically, architectural characteristics such as floor plan and design characteristics including the layout of furnishings are taken into consideration when choosing housing, and scholars have indicated that the morphological configuration of a residence can significantly affect level of satisfaction (e.g., Davis & Roizen, 1970; Hourihan, 1984).

Food and beverage

Another important aspect of academic hospitality is the food and beverage offerings that international students have access to when studying abroad. A study by Jamal (1998) investigated the attitudes of British-Pakistanis residing in the United Kingdom toward their national cuisine and British cuisine. The results showed that first-generation immigrants favored their traditional cuisine over English dishes, which they described as “‘foreign’, bland, and unhealthy” (p. 221). On the other hand, young British-Pakistanis continued to consume their traditional cuisine while also incorporating English foods into their diets. Verbeke and Lopez
(2005) conducted a similar study in Belgium, comparing the attitudes of Belgians and Hispanics toward ethnic and native cuisines. They noted that Belgians’ preferred ethnic foods based on the attributes of appearance and taste, while Hispanics preferred the tastes of their native cuisine. They further noted that Hispanics’ ability to maintain Latin American food habits were hindered by the factors of lack of availability and time. Based on these studies, it can be concluded that a variety of food-related factors such as taste, appearance, and traditions can predict the diet habits of immigrants from varied countries of origin. Lusk and Briggeman (2009) proposed and Lusk (2011) validated these food values factors in two studies that also found the significance of sojourner collectives in the groups studied. Mansoor and Quillin (2007), Pérez-Cueto and Verbeke (2009) found that students enrolled in international exchange programs showed a strong capacity to adapt to the host culture, which was revealed in their dietary habits.

Beginning college or university studies typically marks an important transition in a person’s life, which might include living away from the family home for the first time and taking on new responsibilities (e.g., food choices) (Colic Baric, Satalic, & Lukesic, 2003). Young people, especially college students, often have little or no experience in shopping for and preparing meals (Bull, 1988). Thus, unhealthy and irregular eating habits are very common in the United States among students (Al-Rethaiaa, Fahmy & Al-Shwaiyat, 2010). Pan et al. (1999) suggested that Asian students residing in the United States often significantly increase their intake of fats; salty and sweet snacks; and dairy products during their time abroad. However, other studies have suggested more positive outcomes. For example, Rosenthal, Russell, and Thomson (2006) examined the health habits and well-being of international students (the majority from Asian countries) at the University of Melbourne and discovered that many students successfully maintained positive perceptions about the nutritional balance of their eating habits. The results
indicate that some food values, including taste, convenience, and nutrition (Lusk, 2011; Lusk & Briggeman, 2009), may strongly influence the food shopping and food selection choices of international university students.

Previous studies offering practical implications provided many useful suggestions to university catering managers. (CUDS) (McIntosh, Gaalswyk, Keniry, & Eagan, 2008; Sustainability Endowment Institute, 2009). According to the American Dietetic Association (2007), the future food supply needs to incorporate sustainability to ensure human and environmental health. In particular, a sustainable food system entails (1) affordable, safe, and nutritious food that is accessible and will not contribute to food-related chronic illness; (2) food that is produced in an environmentally sustainable manner; and (3) a food system that offers economic and social value to both rural and urban communities (W.K. Kellogg Foundation, n.d.). Knutson (2000) investigated college students’ perceptions of specific fast food restaurants using qualitative focus groups and quantitative telephone surveys. The author defined the factors influencing college students’ choice of a fast food restaurant and found that cleanliness, employee friendliness, price, speed, and consistency were the most influential factors in students’ food decisions. In contrast, factors such as drive-through availability, atmosphere, promotional menu items, and two-for-one add-on coupons had minimum influence on the respondents’ choices.

International students typically have three dining options: the purchase of on-campus meals, the purchase of off-campus meals, and preparing meals themselves at home. Universities and colleges usually offer or are surrounded by a variety of food purchase options including residential dining centers, cafes, convenience stores, food courts, restaurants, bakeries, and food stores. For students living either on or off campus, universities and colleges generally provide
meal plans which can be used in many locations. With regard to purchasing meals off campus, Pan et al. (1999) suggested a significant decrease in the number of times per week that international students eat out off campus, primarily due to limited food budget, lack of time to go out, and lack of convenient transportation (McArthur et al., 1990).

The third option is to cook at home. Many international students, particularly Asian students, prefer to cook their own traditional foods at home, especially on their cultural holidays (Ryan & Zhang, 2007). A small number of international students eat out and try American-style meals on traditional American holidays, which provide contact with their new culture (Ward & Kennedy, 1993). Consumption of traditional foods on American holidays (such as Thanksgiving) has played a role in the dietary changes seen in the international student population (McArthur et al., 1990).

Transportation services

Since many of the colleges and universities attended by international students are located in urban areas, campus transportation cannot necessarily be separated from the city transportation system as a whole. Vuchic (2002) defined urban public transportation as including both transit and paratransit options (such as shuttles), since both are available for public use. Public transportation is typically identified using transit only; thus, paratransit is usually included when specifically identified. One of the most important issues for students is the amount of campus parking (Tseng et al., 2004)). Balsas (2003) indicated that riding bike has been perceived as the ‘poor step-child’ of alternative transportation modes. However, bicycling and walking have now evolved to being emblems of a high quality of life (Latimer-Cheung et al., 2013). In recent years,
there have been more bicycles than automobiles on some university campuses (Hu & Schneider, 2014).

Many colleges and universities across the country work with transit agencies to provide innovative transit pass programs (Eluru, Chakour, & El-Geneidy, 2012). Most universities offer shuttle services to provide students, faculty, staff, and guests with a convenient means of traveling across campus (Moriarty, et al., 1991). For the convenience of students and faculty, buses run on schedules and bus stop maps are offered in the bus and in bus stations, as well as on the internet. Most of the buses are free to students, with free transit passes sometimes funded by student fees or partnerships with local municipalities. While colleges and universities also offer parking lots for students and faculty (Shang et al., 2007), bus transportation not only reduces the demand for parking space, it also increases student access to housing and employment; is an important student recruitment and retention tool; lowers tuition costs; and increases ‘transportation equity’ (Balsas, 2003). Finally buses represent the most economical transit mode for lightly traveled lines (LaVetter & Kim, 2010). However, while the flexibility of bus routes is an advantage for any necessary changes, it is a disadvantage for major bus lines, which subsequently lack permanence as well as efficiency in carrying heavy passenger volumes. Campus passengers also face the lack of permanent, physically fixed routes (Pattnaik et al., 1998).

**Social activities**

Nearly all American universities and colleges offer a variety of organizations and clubs for a variety of interests, such as language clubs, sports clubs, religion clubs, and more. In these activities, students can share their opinions, ideas, and comments with others with similar
interests (Foubert & Urbanski, 2006). Many universities and colleges have offices that serve as a resource for hundreds of special interest, multicultural, community, or social clubs and activities (Bryant, 2007). Furthermore, students can enjoy nearby off-campus social activities such as shopping centers, theme parks, and cinemas. However, many Asian international students prefer to have parties at home on weekends or holidays, often preparing the traditional foods of their countries to celebrate their cultures’ holidays (Gu & Maley, 2008). Nonetheless, based on data from the Office of International Education at the University Of Georgia (2014) indicated that two-thirds of international students travel during their study period of pursuing higher education in the U.S., a phenomenon that is common for international students in other American universities as well. It has been noted that international students enjoy visiting natural attractions such as national parks as well as large cities with plentiful shopping options (Field, 1999). At Harvard University in Massachusetts, student organizations plan domestic or international travel as part of their organizational activities (Bachman et al., 2014).

Ryan and Xie (2003) found that Chinese international students’ vacation plans were typically spurred by the desire to relax and have fun; to go sightseeing; and to learn about the host country. Of particular interest to visit are famous and popular sites. Chinese international students and visitors traveling in a host country are also significantly interested in assessing future career and residence options. Ryan and Xie (2003) observed that Chinese students tend to collect travel recommendations from friends, family members, and the Internet. Chinese international students were shown to be most interested in tourist activities that are considered passive outdoor activities, such as shopping, fishing, whale watching, visiting farms, and other similar activities.
Quality of Life

Definition of 'Quality of Life'

Unlike the concept of standard of living, which is mainly subject to income limitations (Mendlowicz & Stein, 2014), quality of life (QOL) can be described from many dimensions, such as present lifestyle, past experiences, hopes for the future, dreams, and ambitions. Quality of life also involves a wide range of factors, including the fields of international development, health care, politics, and employment. For example, the attainment of a good QOL indicates that dreams can become reality through effort. Conversely, a poor QOL occurs when an individual’s hopes do not match with his or her reality. Therefore, as concluded by Diener, Oishi and Lucas (2003, p. 404), “QOL is the general well-being of individuals and societies.”

Quality of life can change over time and due to circumstances. Lee and Rice (2007) showed that, in order to obtain satisfactory QOL, people’s goals need to be realistic, to be changed with time, and to be modified by age and experiences. The goal of QOL is to help people to reach the goals they have set. On the other hand, a good QOL also relates to personal growth and is usually expressed in terms of satisfaction, contentment, happiness, fulfillment, and problem-solving ability (Moons et al., 2006).

The effects of various life factors on college students’ QOL of college students has been significantly investigated in previous research (e.g., Smith et al., 2004; Vaez et al., 2004; Chow, 2005; Ng, 2005). Vaez et al. (2004) found a positive relationship between college students’ perceived QOL and their self-rated health. Cha (2003) noted the relationship between subjective well-being and personality constructs such as self-esteem, collective self-esteem, and optimism. The results of the study by Pilcher (1998) revealed the ways in which daily events predict life satisfaction among college students. Another study genre has focused on the development of
well-being measures specifically adapted for research on college students (e.g., Cohen et al., 2001; Maggino & Schifini D’Andrea, 2003).

Quality of life measurement

Quality of life has been evaluated in many previous studies from cognitive and affective dimensions. In the first dimension, the cognitive component of QOL refers to the global assessment of one’s life according to one’s chosen criteria (Diener & Emmons, 1984), reflecting the conceptualization of QOL in terms of the satisfaction of human needs (Sirgy, 1986) which include health and safety needs; economic and family needs; social needs; esteem needs; self-actualization needs; knowledge needs; and aesthetics needs (Sirgy et al., 2007). These need dimensions are based on Maslow’s hierarchy of needs model (1943). In the second dimension, the affective component of QOL reflects the difference between positive affect and negative affect occurring in an individual’s experiences over a period of several months (Bradburn, 1969; Diener et al., 1995). Suh et al. (1996) asked college students to rate their overall affective experiences during the most recent three to six months prior to the study, since experiences during this period have been shown to exert considerable influence on perceived well being. The results indicated that positive affect encompasses emotions including enthusiastic, interested, determined, excited, inspired, alert, active, strong, proud, and attentive. Negative affect was shown to include emotions including scared, afraid, upset, distressed, jittery, nervous, ashamed, guilty, irritable, and hostile (Brandburn, 1969; Diener et al., 1995; Plutchick, 2003). The affective component of QOL was calculated as the difference between positive and negative affect (Diener et al., 1995).
A number of studies have shown that negative affect, positive affect, and life satisfaction are conceptually distinct and empirically separable (Lucas et al., 1996). As such, QOL has been conceptualized as a composite of cognitive and affective components. Specifically, QOL was measured as the degree to which students have needs for satisfaction in their college life domain and the degree to which students experience positive and negative affect in their college life (Lee, 2008). With regard to the affective component, Watson et al. (1988) employed the affect balance, which is comprised of the difference between the frequency of positive affect experiences and the frequency of negative affect experiences. It was found that the frequency of emotional experiences is more important than the intensity of emotional experiences in forming overall subjective wellbeing (e.g., Diener et al., 1991).

A variety of approaches to measure the QOL of higher education students have been previously employed in prior studies. Cohen et al. (2001) employed Bloom’s taxonomy (Bloom et al., 1956, 1971) and developed a ‘cognitive domain’ measure of student QOL. Bloom’s taxonomy features six dimensions: knowledge, comprehension, application, analysis, synthesis, and evaluation (cf. Clifton et al., 1996). Roberts and Clifton (1992) also constructed and validated a measure to study the affective QOL of college students (cf. Benjamin, 1994). The Wellness Evaluation of Lifestyle (WEL) measure (Witmer & Sweeney, 1992); the Student Quality of Life and Satisfaction (SQOLAS) measure (Disch et al., 2000); and the Maggino and Schifini D’Andrea Measure (Maggino & Schifini D’Andrea, 2003) are additional QOL measures specifically for use in studying higher education students.
CHAPTER 3

METHODOLOGY

Overview

This chapter describes how a quantitative approach was utilized to investigate four factors of academic hospitality including housing; food and beverage; transportation; and social activities in determining international students’ quality of life in colleges and universities in the United States. The software Statistical Package for the Social Sciences (formerly known as SPSS; now referred to as PASW) was utilized to analyze the collected data to achieve a reliable outcome.

Use of Human Subjects

An Application for Approval of Research Involving Humans was submitted to the Institutional Review Board of Iowa State University (ISU). The research was deemed exempt from the requirements of human subject protections regulations. However, this determination was contingent upon approval from the participating university. Subsequently, letters of approval were obtained from ISU and are shown in Appendix A.

Participants

All of the participants in the study were international students enrolled at Iowa State University in Ames, Iowa, U.S.A. in the Spring 2015 semester. The participants included both undergraduate and graduate students who were at least 18 years of age. The total sample population consisted of 415 international students. Iowa State University is a comprehensive university with approximately 3,400 international students from more than 100 countries. The most significant reason why this particular university was selected to investigate
international students’ experiences of academic hospitality was because ISU has experienced meteoric growth in international student attendees in recent years, which means that the university and area businesses and organizations are facing the increasing challenge of offering hospitality services for international students from all over the world. As such, ISU can serve as a representative example of American universities facing similar challenges.

Survey Instrument

The survey was comprised of six sections, including housing; food and beverage; transportation; and social activities questions; quality of life questions; and demographic questions. In the first section, six housing factor questions were employed to investigate international students’ lodging options and service quality with a 7-point Likert-type scale ranging from 1 = strongly disagree to 7 = strongly agree. These questions were adapted from Sirgy, Grzeskowiak and Rahtz, 2007. Questions related to housing were designed to obtain information regarding the quality of different services offered by ISU or the city of Ames including maintenance, activities, and application processes. Location, convenience, and security were also employed as factors in evaluating housing quality.

In the second section, 17 food and beverage items were utilized to investigate the quality of dining options at ISU and in the city of Ames using a 7-point Likert-type scale ranging from 1 = strongly disagree to 7 = strongly agree. These questions were adopted from Andaleeb and Caskey (2007). Questions in this section covered three domains of dining options quality: service, food quality, and facilities.

In the third section, 15 transportation items were utilized to investigate the quality of transportation services offered by ISU and the city of Ames. These questions were borrowed
from Eboli and Mazzulla (2007). Participants were asked to rate transportation services using a 7-point Likert-type scale ranging from 1 = strongly disagree to 7 = strongly agree. The transportation section included questions asking whether students were satisfied with bus routes, bus schedules, bus safety, and other factors related to the ISU and Ames transportation systems.

In the fourth section, seven social activities items were utilized to investigate the quality of social activities offered by ISU and the city of Ames using a 7-point Likert-type scale ranging from 1 = strongly disagree to 7 = strongly agree. These questions were adapted from Sirgy, Grzeskowiak and Rahtz (2007). This section of the questionnaire was dedicated to obtaining information regarding the types of social activities that international students had available to them and their interest in the social activities offered.

In the fifth section, three items were utilized to investigate the students’ overall quality of life in Ames using a 7-point Likert-type scale ranging from 1 = strongly disagree to 7 = strongly agree. These questions were adapted from Sirgy, Grzeskowiak and Rahtz (2007).

The demographic information of the participants was collected in the last section of the questionnaire. Respondents were asked to provide personal information regarding gender, age, classification as an undergraduate or graduate student, and country of origin.

Data Collection

Data were collected through the use of an online survey via an invitation e-mail sent to all international students enrolled at ISU between February 25 and March 13, 2015 by the International Students and Scholars Office (ISSO) of ISU with the assistance of the Information Technology Service (ITS). A total of 295 surveys were returned, for a total response rate of 8.47%.
The content and purpose of the study were explained in the invitation e-mail. A drawing for Wal-Mart gift cards was offered as an incentive to promote participation. Prior to completing the survey, participants were informed that they could skip any questions without penalty if they felt uncomfortable answering particular questions. The questionnaires were distributed to invitees who were at least 18 years of age. The survey consisted of seven pages, the first consisting of a cover letter with an introduction to the researcher, a brief explanation of the purpose of the survey, and informed consent information for the study. The second to fifth pages contained questions specific to housing, food/beverage, transportation, social activities, and quality of life, while the sixth and seventh pages were dedicated to the collection of demographic data.

Data Analysis

Statistical Package for the Social Sciences (now known as PASW) Version 18 software was used for all analyses. Due to the internet survey mode of questionnaire delivery, the majority of data entry was completed by the respondents. Once the survey period was over, all of the responses were compiled in an Excel file which was imported into PASW for analysis. Prior to analysis, all data from respondents who were not in the study population and who were under the age of 18 were removed from the data set.

Descriptive statistics were gathered from the demographic data of respondents in order to provide a summary of the sample. Regression analysis was employed to identify whether each of the four academic hospitality aspects had a significant relationship with international students’ quality of life. Tobin (1958) stated that regression analysis should be used when analyzing several variables in which the relationship includes a dependent variable and one or more independent variables. Cronbach’s alpha was calculated to ensure the reliability of the
measurement scales. Nunnaly (1978) indicated that a Cronbach’s alpha of 0.70 is an acceptable reliability coefficient to represent internal consistency among factors. In addition, analysis of variance (ANOVA) was utilized to determine whether significant differences existed between five factors based on the demographic variables “grade classification” and “country of origin”.

CHAPTER 4
RESULTS
Overview

This chapter provides an overview of the results of the data analysis. The overview consists of four sections: descriptive analysis, internal consistency reliability testing, linear regression analysis, and the ANOVA test. The first section provides a summary of the demographic characteristics of the participants. The second section tested the internal consistency reliability of the four academic factors and quality of life. The third section summarizes the results of the linear regression analysis. The fourth section describes whether significant differences existed between the constructs in the conceptual model and demographic factors using ANOVA.

Descriptive Analysis

The demographics of the international students participating in the study were descriptively analyzed based on four categories including “gender”, “age”, “education level”, “region of origin”. A summary of the descriptive variables is shown in Table 4.1.

The most prevalent ages of the respondents were 20-22 (23.9%) and 23-25 (35.5%). More than three in five respondents (64.5%, n=162) were graduate students, while 32 respondents (12.7%) reported that they were juniors, 9.2% (n=23) indicated that they were sophomores, and 10 (4.0%) stated that they were freshmen. The sample was heavily dominated by Asian respondents (70.1%, n=176), whereas 15.1% (n=38) indicated that they were from Europe, 7.2% (n=18) were African, 2.8% (n=7) came from Central America, eight respondents
were from North America, two respondents were from South America, and two respondents were from other areas.

Table 1.
Demographic Descriptive Analysis (N=251)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region of origin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asia</td>
<td>176</td>
<td>70.1</td>
</tr>
<tr>
<td>Other</td>
<td>75</td>
<td>29.9</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>156</td>
<td>62.2</td>
</tr>
<tr>
<td>Female</td>
<td>95</td>
<td>37.8</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-22</td>
<td>76</td>
<td>30.3</td>
</tr>
<tr>
<td>23-28</td>
<td>133</td>
<td>53.0</td>
</tr>
<tr>
<td>29 plus</td>
<td>42</td>
<td>16.7</td>
</tr>
<tr>
<td>Current grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>10</td>
<td>4.0</td>
</tr>
<tr>
<td>Sophomore</td>
<td>23</td>
<td>9.2</td>
</tr>
<tr>
<td>Junior</td>
<td>32</td>
<td>12.7</td>
</tr>
<tr>
<td>Senior</td>
<td>20</td>
<td>8.0</td>
</tr>
<tr>
<td>Graduate student</td>
<td>162</td>
<td>64.5</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Internal Consistency Reliability

Internal consistency reliability, mean ratings, and standard deviations of the five factors involved the present study were calculated to investigate the internal consistency of each factor. For the housing factor presented in Table 4.2, the mean ratings for “location and convenience” at 5.62 (SD=1.553) and “security” at 5.66 (SD=1.395) were higher than the other four ratings. “Activities in the community” had the lowest rating at 4.58 (SD=1.611).
Table 2.
Internal Consistency Reliability Estimates, Mean Ratings and Standard Deviations for Lodging Options (N = 251)

<table>
<thead>
<tr>
<th>Lodging options</th>
<th>Cronbach's alpha</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>0.827</td>
<td>5.25</td>
<td>1.412</td>
</tr>
<tr>
<td>Maintenance</td>
<td></td>
<td>5.30</td>
<td>1.438</td>
</tr>
<tr>
<td>Location and convenience</td>
<td></td>
<td>5.62</td>
<td>1.553</td>
</tr>
<tr>
<td>Application process</td>
<td></td>
<td>5.14</td>
<td>1.583</td>
</tr>
<tr>
<td>Security</td>
<td></td>
<td>5.66</td>
<td>1.395</td>
</tr>
<tr>
<td>Activities in the community</td>
<td></td>
<td>4.58</td>
<td>1.611</td>
</tr>
</tbody>
</table>

For the factor of food and beverages presented in Table 4.3, “staff” had the highest mean rating both from “ISU dining” and “restaurants in Ames” at 5.65 (SD=1.187) and 5.54 (SD=1.264), respectively, followed by “checkout process at ISU dining” at 5.54 (SD=1.222) and “checkout process at restaurants in Ames” at 5.47 (SD=1.112). “Trash cans in ISU Dining” and “restaurants in Ames” had ratings of 5.57 (SD=1.25) and 5.36 (SD=1.209), respectively.
Table 3. Internal Consistency Reliability Estimates, Mean Ratings and Standard Deviations for Food and Beverage (N = 251)

<table>
<thead>
<tr>
<th>Food and beverage</th>
<th>Cronbach’s alpha</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food options in Ames</td>
<td>0.91</td>
<td>4.31</td>
<td>1.654</td>
</tr>
<tr>
<td>Staff at ISU Dining</td>
<td>5.54</td>
<td>5.54</td>
<td>1.264</td>
</tr>
<tr>
<td>Staff in restaurants in Ames</td>
<td>5.65</td>
<td>5.65</td>
<td>1.187</td>
</tr>
<tr>
<td>Prices at ISU Dining</td>
<td>4.11</td>
<td>4.11</td>
<td>1.715</td>
</tr>
<tr>
<td>Prices at restaurants in Ames</td>
<td>4.78</td>
<td>4.78</td>
<td>1.411</td>
</tr>
<tr>
<td>Atmosphere in ISU Dining</td>
<td>5.00</td>
<td>5.00</td>
<td>1.349</td>
</tr>
<tr>
<td>Atmosphere in restaurants in Ames</td>
<td>5.30</td>
<td>5.30</td>
<td>1.173</td>
</tr>
<tr>
<td>Checkout process in ISU Dining</td>
<td>5.54</td>
<td>5.54</td>
<td>1.222</td>
</tr>
<tr>
<td>Checkout process is quick in restaurants in Ames</td>
<td>5.47</td>
<td>5.47</td>
<td>1.112</td>
</tr>
<tr>
<td>Trash cans in ISU Dining</td>
<td>5.57</td>
<td>5.57</td>
<td>1.250</td>
</tr>
<tr>
<td>Trash cans in restaurants in Ames</td>
<td>5.36</td>
<td>5.36</td>
<td>1.209</td>
</tr>
<tr>
<td>Tables and chairs in ISU Dining</td>
<td>4.64</td>
<td>4.64</td>
<td>1.550</td>
</tr>
<tr>
<td>Tables and chairs in restaurants in Ames</td>
<td>5.27</td>
<td>5.27</td>
<td>1.279</td>
</tr>
<tr>
<td>Weekday hours at ISU Dining</td>
<td>5.09</td>
<td>5.09</td>
<td>1.366</td>
</tr>
<tr>
<td>Weekday hours at restaurants in Ames</td>
<td>5.30</td>
<td>5.30</td>
<td>1.420</td>
</tr>
<tr>
<td>Overall feeling about ISU Dining</td>
<td>5.08</td>
<td>5.08</td>
<td>1.395</td>
</tr>
<tr>
<td>Overall feeling about restaurants in Ames</td>
<td>5.33</td>
<td>5.33</td>
<td>1.198</td>
</tr>
</tbody>
</table>

For the housing factors presented in Table 4.4, the mean rating for “helpfulness of personnel” was 6.11 (SD=1.096), “availability of service information by phone, mail, and Internet” was 6.05 (SD=1.137), and “vehicle reliability and competence” was 6.05 (SD=1.125). These were among the highest variables, followed by “availability of schedule/maps” at 5.99 (SD=1.238), “reliability of buses running on schedule” at 5.96 (SD=1.105), “availability of bus stops” at 5.89 (SD=1.348), and “cleanliness” at 5.89 (SD=1.105). “Availability of shelter and benches at bus stops” and “bus overcrowding” were among the lowest at 4.67 (SD=1.609) and 4.87 (SD=1.565), respectively.
Table 4. Internal Consistency Reliability Estimates, Mean Ratings and Standard Deviations for Transportation (N = 251)

<table>
<thead>
<tr>
<th>Transportation</th>
<th>Cronbach's alpha</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of bus stops</td>
<td>0.919</td>
<td>5.89</td>
<td>1.348</td>
</tr>
<tr>
<td>Route characteristics of public transportation</td>
<td></td>
<td>5.68</td>
<td>1.348</td>
</tr>
<tr>
<td>Service frequency of public transportation</td>
<td></td>
<td>5.50</td>
<td>1.380</td>
</tr>
<tr>
<td>Reliability of buses running on schedule</td>
<td></td>
<td>5.96</td>
<td>1.198</td>
</tr>
<tr>
<td>Availability of shelter and benches at bus stops</td>
<td></td>
<td>4.67</td>
<td>1.609</td>
</tr>
<tr>
<td>Bus overcrowding</td>
<td></td>
<td>4.87</td>
<td>1.565</td>
</tr>
<tr>
<td>Cleanliness</td>
<td></td>
<td>5.89</td>
<td>1.105</td>
</tr>
<tr>
<td>Cost affordability</td>
<td></td>
<td>5.87</td>
<td>1.230</td>
</tr>
<tr>
<td>Availability of schedule/maps</td>
<td></td>
<td>5.99</td>
<td>1.238</td>
</tr>
<tr>
<td>Availability of service information by phone, mail, Internet, etc.</td>
<td></td>
<td>6.05</td>
<td>1.137</td>
</tr>
<tr>
<td>Vehicle reliability and competence</td>
<td></td>
<td>6.05</td>
<td>1.125</td>
</tr>
<tr>
<td>Safety against crimes</td>
<td></td>
<td>5.95</td>
<td>1.144</td>
</tr>
<tr>
<td>Helpfulness of personnel</td>
<td></td>
<td>6.11</td>
<td>1.096</td>
</tr>
<tr>
<td>Administration of complaints</td>
<td></td>
<td>5.62</td>
<td>1.300</td>
</tr>
<tr>
<td>Use of ecological practices</td>
<td></td>
<td>5.82</td>
<td>1.182</td>
</tr>
</tbody>
</table>

For the factor of activities presented in Table 4.5, “overall feeling about community” had the highest mean rating at 5.33 (SD=1.260), followed by “on-campus activities” at 4.98 (SD=1.290), and “ISU athletic games” at 4.86 (SD=1.302). “Malls and shopping” had the lowest mean, which was 4.07 (SD=1.771).
Table 5. Internal Consistency Reliability Estimates, Mean Ratings and Standard Deviations for Activities (N = 251)

<table>
<thead>
<tr>
<th>Social activities</th>
<th>Cronbach's alpha</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clubs in Ames</td>
<td>0.824</td>
<td>4.45</td>
<td>1.489</td>
</tr>
<tr>
<td>Recreational activities in Ames</td>
<td></td>
<td>4.81</td>
<td>1.562</td>
</tr>
<tr>
<td>Malls and shopping</td>
<td></td>
<td>4.07</td>
<td>1.771</td>
</tr>
<tr>
<td>Church-sponsored activities</td>
<td></td>
<td>4.72</td>
<td>1.192</td>
</tr>
<tr>
<td>ISU athletic games</td>
<td></td>
<td>4.86</td>
<td>1.302</td>
</tr>
<tr>
<td>On-campus activities (e.g, VEISHEA)</td>
<td></td>
<td>4.98</td>
<td>1.290</td>
</tr>
<tr>
<td>Overall feeling about community</td>
<td></td>
<td>5.33</td>
<td>1.260</td>
</tr>
</tbody>
</table>

For the factor of quality of life shown in Table 4.6, the mean rating for “quality of life on campus” at 5.59 (SD=1.234) had the highest mean, followed by “quality of life both on-campus and off–campus” at 5.49 (SD= 1.266). “Quality of life off campus” had the lowest score at 5.34 (SD=1.164).

Table 6. Internal Consistency Reliability Estimates, Mean Ratings and Standard Deviations for Quality of Life

<table>
<thead>
<tr>
<th>Quality of life</th>
<th>Cronbach's Alpha</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of life both on campus and off campus</td>
<td>0.913</td>
<td>5.49</td>
<td>1.266</td>
</tr>
<tr>
<td>Quality of life on campus</td>
<td></td>
<td>5.59</td>
<td>1.234</td>
</tr>
<tr>
<td>Quality of life off campus</td>
<td></td>
<td>5.34</td>
<td>1.164</td>
</tr>
</tbody>
</table>

A commonly accepted rule for describing internal consistency using Cronbach's alpha is to require a reliability of 0.70 or higher (Nunnally et al., 1967). However, a large number of items in a test can artificially inflate the Cronbach’s alpha value and a sample with a small number of items can deflate it; therefore, this rule should be used judiciously (Darren & Mallery, 1999; Kline, 2013; Cortina, 1993). Six items of lodging operations (0.827) were closely related
as a group, as were 0.926 of the food and beverage items, 0.913 of the transportation services items, 0.824 of the social activities items, and 0.913 of quality of life items. The reliability of all of the five factors was deemed acceptable.

**Linear Regression Analysis**

The R square of the model equaled 0.540, which indicated that the four factors (lodging options; food and beverage; transportation services; and social activities) fit the regression equation, which explains 54.0% of the variance in international students’ quality of life factors.

**Table 7. Model Summary**

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>R Square Adjusted</th>
<th>Standard Error of Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.735</td>
<td>0.540</td>
<td>0.532</td>
<td>0.77168</td>
</tr>
</tbody>
</table>

A low p-value (< 0.05) indicates that a null hypothesis can be rejected. In other words, a predictor with a low p-value is likely to be a meaningful addition to a model because changes in the predictor's value are related to changes in the response variables. In Table 4.8, the predictor variables of transportation services and social activities are strongly significant because both of their p-values are 0.000. The p-value of lodging options (0.002) significantly affected international students’ quality of life. However, the p-value for food and beverage (0.454) was greater than the common alpha level of 0.05, which indicates that it is not statistically significant.
Table 8. Regression Analysis for Variables Predicting Purchase Intent (N=251)

<table>
<thead>
<tr>
<th>Factors</th>
<th>B</th>
<th>SE B</th>
<th>T</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lodging options</td>
<td>.171</td>
<td>.054</td>
<td>.166</td>
<td>3.170</td>
</tr>
<tr>
<td>Food and beverage</td>
<td>.062</td>
<td>.083</td>
<td>.050</td>
<td>.749</td>
</tr>
<tr>
<td>Transportation services</td>
<td>.440</td>
<td>.080</td>
<td>.340</td>
<td>5.516</td>
</tr>
<tr>
<td>Social activities</td>
<td>.395</td>
<td>.063</td>
<td>.347</td>
<td>6.268</td>
</tr>
</tbody>
</table>

* Relationship significant at p = 0.05

Comparison of Factors for Different Relationship Groups

The first ANOVA analysis was conducted to examine the differences between the five factors in the conceptual model and the six age groups (Group 1: 18-22; Group 2: 23-28; Group 3: 29 and older). The results of this analysis are shown in Table 4.9. Based on the results, no significant differences were observed for the relationship groups with regard to age group factors (p < .05).

Table 9. ANOVA for Comparison of Factors by Different Age Groups

<table>
<thead>
<tr>
<th>Factors</th>
<th>Group 1 (N=76)</th>
<th>Group 2 (N=133)</th>
<th>Group 3 (N=42)</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lodging options</td>
<td>5.160</td>
<td>5.470</td>
<td>5.240</td>
<td>.507</td>
<td>.771</td>
</tr>
<tr>
<td>Food and beverage</td>
<td>5.000</td>
<td>5.140</td>
<td>5.222</td>
<td>1.25</td>
<td>.288</td>
</tr>
<tr>
<td>Transportation services</td>
<td>5.760</td>
<td>5.780</td>
<td>5.860</td>
<td>.149</td>
<td>.861</td>
</tr>
<tr>
<td>Social activities</td>
<td>4.711</td>
<td>4.732</td>
<td>5.021</td>
<td>1.495</td>
<td>.226</td>
</tr>
<tr>
<td>Quality of life</td>
<td>5.391</td>
<td>5.442</td>
<td>5.500</td>
<td>.138</td>
<td>.872</td>
</tr>
</tbody>
</table>

*Note: Variables scored on a 7-point Likert-type scale: 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = Agree, 7 = Strongly agree. Group 1: 18-22; Group 2: 23-28; Group 3: 29 and older.

Comparison of Factors for Areas of Origin

The second ANOVA analysis involved an examination of the five factors across the seven regions of origin of the students surveyed, including Group 1: Asia; Group 2: other areas. The results of this analysis are provided in Table 4.10, which shows that there was no significant difference observed among these five factors, since all p-values of each factor were greater than .050.
Comparison of Five Factors for Different Student Grade Groups

The final ANOVA procedure revealed no significant effect based on the examination of the six factors in the conceptual model and student grade status including Group 1: Freshman; Group 2: Sophomore; Group 3: Junior; Group 4: Senior; Group 5: Graduate Student; and Group 6: Other. The results of the analysis conducted to explore this effect are shown in Table 4.11. The results show that there was no significant difference observed among these five factors, since all \( p \)-values of each factor were greater than .050.

Table 11.
ANOVA for Comparison of Factors by Students Grade Groups

<table>
<thead>
<tr>
<th>Factors</th>
<th>Group 1 (N=10)</th>
<th>Group 2 (N=23)</th>
<th>Group 3 (N=32)</th>
<th>Group 4 (N=20)</th>
<th>Group 5 (N=162)</th>
<th>Group 6 (N=4)</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lodging options</td>
<td>4.8776</td>
<td>5.3406</td>
<td>5.2812</td>
<td>5.1500</td>
<td>5.2605</td>
<td>5.9583</td>
<td>.627</td>
<td>.679</td>
</tr>
<tr>
<td>Food and beverage</td>
<td>4.9000</td>
<td>5.1863</td>
<td>5.1654</td>
<td>4.9834</td>
<td>5.1552</td>
<td>5.2353</td>
<td>.285</td>
<td>.921</td>
</tr>
<tr>
<td>Transportation services</td>
<td>5.1533</td>
<td>5.5478</td>
<td>5.7709</td>
<td>5.5929</td>
<td>5.7916</td>
<td>6.0000</td>
<td>1.437</td>
<td>.212</td>
</tr>
<tr>
<td>Social activities</td>
<td>4.3571</td>
<td>4.8571</td>
<td>4.8833</td>
<td>4.4776</td>
<td>4.7541</td>
<td>5.0357</td>
<td>.849</td>
<td>.516</td>
</tr>
<tr>
<td>Quality of Life</td>
<td>5.1000</td>
<td>5.3478</td>
<td>5.6458</td>
<td>5.3333</td>
<td>5.4927</td>
<td>5.6667</td>
<td>.515</td>
<td>.765</td>
</tr>
</tbody>
</table>

Note: Variables scored on a 7-point Likert-type scale: 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = Agree, 7 = Strongly agree. Group 1: Freshman; Group 2: Sophomore; Group 3: Junior; Group 4: Senior; Group 5: Graduate Student; Group 6: Other.
CHAPTER 5
FINDINGS, CONCLUSIONS AND IMPLICATIONS

Overview

This chapter concludes the results of the analyses conducted using the data that were obtained in a survey of international students at Iowa State University. It then provides implications, limitations, and recommendations for future study.

Conclusion

The linear regression analysis results indicated that lodging options, transportation, and social activities influence international college students’ quality of life. The researcher failed to find a significant relationship between food and beverage and quality of life among international students. The present study makes substantial contributions to the theoretical development and examination of QOL. To the knowledge of the author, it is the first research to apply QOL to investigate academic hospitality as it pertains to international higher education students. This application in a new context contributes to the body of knowledge on academic hospitality and further verifies the effectiveness of the theoretical framework. The present study provides a theoretical foundation for future research on international higher education students’ lives in host countries.

Implications

The United States has one of the world’s finest college/university systems, with outstanding programs in nearly all fields (Tyack, 1974). The number of international students in the U.S. continues to rise as more and more students choose the country as a place to broaden their experiences and further their education. Although the main purpose of study abroad is to obtain a
degree, experiencing a different culture is also an important factor. As a result, it is critical to gain an understanding of the services that are needed to adequately support international students in the host country. The findings of this study offer a number of practical suggestions from four different perspectives.

Four main elements of international students’ quality of life have been tested in this research to re-proposed academic hospitality from the service perspective, it can be defined as “all services that host university or host local area can bring to international students to have better quality of life besides education”. Among all the services that international students can get form host ears, lodging, social activities and transportation play more than half influence on their evaluation of quality of life.

Students can choose to live in a house, a rented room in a private home, a boarding house, a dormitory, an on-campus apartment, a fraternity/sorority, a co-op, or an off-campus apartment (Alfert, 1966). The results of the study show that location and convenience play an important role in international students’ housing decisions. From the perspective of location and community, it may be of advantage to expand living facilities at colleges and universities, a proposal that is supported by Alfert (1966).

The results indicated that housing application processes and security have less influence on students’ housing choices. Living community activities had the least influence, because international students devote considerable time to studying and have little time available to enjoy community activities. Therefore, the present author suggests that local businesses offering housing rentals should seek to develop more offerings close to campus or on bus routes convenient for commuting to campus.
It was found that food and beverage options have no significance influence on international students’ quality of life. There are several reasons that can explain this phenomenon. First of all, students from Asian countries constitute the majority of international students in the U.S., and nearly all college towns have Asian restaurants as well as Asian grocery stores that provide the necessary supplies to cook traditional Asian cuisines at home. Furthermore, Asian students show a marked tendency to prefer to cook at home instead of dining out. While people who are recently immersed in a new culture are often willing to try foods they haven’t experienced before and many international students like to try American cuisine early in their studies, they tend to then revert to home cooking habits. Therefore, it can be assumed that on- and off-campus dining options are not particularly important to the majority of international students.

Many urban college and university campuses require significant transportation services to accommodate students, resulting in the multimodal and complex nature of university campus transportation planning and operations (Bustillos, Shelton & Chiu, 2011). The results of this study indicated that transportation, especially public transportation, has a significant effect on international students’ quality of life. The majority of large universities are located in transit-rich, bikeable, and walkable cities that are well served by a number of transportation modes, and most of them offer a variety of bus and shuttle routes. For example, the Georgetown University Transportation Shuttle (GUTS) in Washington, D.C. operates five shuttle routes, connecting the campus to the surrounding Georgetown community. Arizona State University offers four shuttle routes and Ohio State University operates seven routes for students. In addition to transportation schedules, how frequently shuttles and buses run is a significant factor for international students. As a result, higher education institutes and local public transportation services should work
together to provide more stops for students and improve the frequency of runs during busy hours, such as mornings between 8:00 and 10:00 AM and late afternoons between 4:00 and 6:00 PM.

International students’ take into account the activities offered by colleges and universities when they measure their quality of life in their host countries. These social activities offer international students opportunities to engage with others and receive social stimulation and support. Toyokawa and Toyokawa (2002) found that engagement in extracurricular activities was positively related to students’ general life satisfaction, benefits drawn from academics and extracurricular activities, and levels of academic involvement. Their study and the findings of the present study offer implications for extracurricular programming development for international students, including the importance of providing opportunities to gain better English language proficiency, experience varied facets of American culture, and broaden their social communities. These activities provide international students opportunities to enhance their language and socio-cultural interaction skills to better serve them in their studies and in their future careers.

Limitations and Future Research
The present study has several primary limitations. First, the population of this study consisted of international students at only one U.S. University. This narrow study population limits the generalizability of the findings. Second, bias may exist in this study due to the prodigious percentage of Asian respondents (70.6%), although Asian international students currently comprise the vast majority of international students at nearly all American colleges and universities. Third, while respondents were offered incentives for their sincere participation, some participants nonetheless may not have reported entirely accurate information on the surveys because of privacy concerns. Fourth, it should be noted that only four constructs were
tested as the antecedents of quality of life. These constructs may not be sufficient to examine all factors that influence international students’ quality of life in the U.S. Although this paper failed to find out the significant relationship between food and beverage and international students’ quality of life, there should be some impact at lower level. Future studies also need into consider other factors, e.g., weather, safety, number of international students and so on. Finally, it is advised that further research be conducted utilizing alternative theories to investigate this topic. Little research has focused on academic hospitality and this study made the first attempt to use facets of academic hospitality to analyze international students’ life quality in host countries. Other theories may be also be useful in gaining an understanding of selection attributes in assessing quality of life for international higher education students.
REFERENCES


APPENDIX A
HUMAN SUBJECTS FORMS

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
1131 Pearson Hall
Ames, Iowa 50011-2327
515-294-1273
FAX 515-294-2072

Date: 2/11/2015
To: Yi Luo
7E MacKay

From: Office for Responsible Research

Title: Does Academic Hospitality Matter? The Investigation of International Students’ Evaluation of Quality of Life at the Universities in the U.S.

IRB ID: 15-036
Study Review Date: 2/11/2015

The project referenced above has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b) because it meets the following federal requirements for exemption:

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey or interview procedures with adults or observation of public behavior where
  - Information obtained is recorded in such a manner that human subjects cannot be identified directly or through identifiers linked to the subjects; or
  - Any disclosure of the human subjects’ responses outside the research could not reasonably place the subject at risk of criminal or civil liability or be damaging to their financial standing, employability, or reputation.

The determination of exemption means that:

- You do not need to submit an application for annual continuing review.
- You must carry out the research as described in the IRB application. Review by IRB staff is required prior to implementing modifications that may change the exempt status of the research. In general, review is required for any modifications to the research procedures (e.g., method of data collection, nature or scope of information to be collected, changes in confidentiality measures, etc.), modifications that result in the inclusion of participants from vulnerable populations, and/or any change that may increase the risk or discomfort to participants. Changes to key personnel must also be approved. The purpose of review is to determine if the project still meets the federal criteria for exemption.
- Non-exempt research is subject to many regulatory requirements that must be addressed prior to implementation of the study. Conducting non-exempt research without IRB review and approval may constitute non-compliance with federal regulations and/or academic misconduct according to ISU policy.

Detailed information about requirements for submission of modifications can be found on the Exempt Study Modification Form. A Personnel Change Form may be submitted when the only modification involves changes in study staff. If it is determined that exemption is no longer warranted, then an Application for Approval of Research Involving Humans Form will need to be submitted and approved before proceeding with data collection.

Please note that you must submit all research involving human participants for review. Only the IRB or designees may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.

Please be aware that approval from other entities may also be needed. For example, access to data from private records (e.g., student, medical, or employment records, etc.) that are protected by FERPA, HIPAA, or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. An IRB determination of exemption in no way implies or guarantees that permission from these other entities will be granted.

Please don’t hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu.
APPENDIX B

QUESTIONNAIRE

Dear Participants:

I am a Master student in the hospitality management program at Iowa State University. I am conducting a survey for my thesis, which is to investigate international students’ satisfaction of university life in the U.S. from hospitality perspective. It would be greatly appreciated, if you would take the time to fill out this short survey. You may skip any question you do not feel comfortable answering. However, having a complete survey is very helpful for the study. It will take no more than ten minutes.

Your participation in this study is voluntary, but you must be 18 years or older to participate in this study. Your responses are kept anonymous and will be used for research purposes only. This project has been approved by Iowa State University’s “Committee for the Protection of Human Subjects”.

As an incentive for your participation, you will have a chance to win a $50 Walmart gift card. To be entered in the drawing, please provide me your email address at the end of the survey.

Thank you for your time and consideration.

Yi Luo, Master student.
Department of Apparel, Events, & Hospitality Management
College of Human Sciences
Iowa State University
Email: yluo@iastate.edu

Section 1. The purpose of this study is to investigate international students’ satisfaction of university life in the U.S. from hospitality perspective. Therefore, if you are not an international student of Iowa State University (ISU), please stop here.

☐ Yes, I am an international student of ISU.
☐ No, I am not an international student of ISU.
If your answer is yes, please refresh your experience in living in Ames And answer the questions in the following sections.

**Section II:** We are interested in the quality of the housing you currently live in Ames. *This section asks questions which use the rating scale: 1=extremely disagree to 7=extremely agree.* Please select the appropriate number for your rating.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Neither Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am satisfied with the quality of housing</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied with the maintenance of my housing in Ames.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied with the location and convenience of my housing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied with the application process of the housing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied with the security of my housing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am satisfied with the activities in the living community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Section III:** We are interested in your satisfaction of catering offered by ISU dining and local restaurants in Ames. *This section asks questions which use the rating scale: 1=extremely disagree to 7=extremely agree.* Please select the appropriate number for your rating.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Neither Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can find the food I like in Ames.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statement</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>The staff at ISU Dining are friendly.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall the staff in the restaurants that I have been to in Ames are friendly.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The prices at ISU Dining are reasonable.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall the prices of the restaurants that I have been to in Ames are reasonable.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The atmosphere in ISU Dining is inviting.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The atmosphere in the restaurants that I have been to in Ames is inviting.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The checkout process is quick in ISU Dining.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The checkout process is quick in the restaurants that I have been to in Ames.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The trash cans are emptied frequently in ISU Dining.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The trash cans are emptied frequently in the restaurants that I have been to in Ames.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are enough tables and chairs in ISU Dining.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are enough tables and chairs in the restaurants that I have been to in Ames.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The weekday hours of operation at ISU Dining are convenient.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The weekday hours of operation in the restaurants that I have been to in Ames are convenient.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall I am satisfied with ISU Dining.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall I am satisfied with the restaurants in Ames.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Section IV:** Please describe your satisfaction with the public transportation in Ames. Please indicate how you agree with each of the following statements by using a 7-point scale with 1 being “Strongly disagree” and 7 being “Strongly agree.”
I am satisfied with the availability of bus stops near home.  
1 2 3 4 5 6 7

I am satisfied with the route characteristics of public transportation (bus stops, distance between bus stop, etc).  
1 2 3 4 5 6 7

I am satisfied with the service frequency of public transportation.  
1 2 3 4 5 6 7

I am satisfied with the reliability of buses that come on schedule.  
1 2 3 4 5 6 7

I am satisfied with the availability of shelter and benches at bus stops.  
1 2 3 4 5 6 7

I am satisfied with the bus overcrowding.  
1 2 3 4 5 6 7

I am satisfied with the cleanliness of interior, seats and windows of public transportation  
1 2 3 4 5 6 7

I am satisfied with cost affordability of public transportation.  
1 2 3 4 5 6 7

I am satisfied with availability of schedule/maps at bus stops.  
1 2 3 4 5 6 7

I am satisfied with availability of service information by phone, mail, and Internet, etc.  
1 2 3 4 5 6 7

I am satisfied with vehicle reliability and competence of drivers.  
1 2 3 4 5 6 7

I am satisfied with the safety against crimes on buses.  
1 2 3 4 5 6 7

I am satisfied with the helpfulness of personnel.  
1 2 3 4 5 6 7

I am satisfied with the administration of complains for public transportation  
1 2 3 4 5 6 7

I am satisfied with the use of ecological vehicles.  
1 2 3 4 5 6 7

**Section V:** Please describe your satisfaction with the social activities in Ames. Please indicate how you agree with each of the following statements by using a 7-point scale with 1 being “Strongly disagree” and 7 being “Strongly agree”:  

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neither</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can find the clubs that I am interested in in Ames.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>I am satisfied with recreational activities in Ames.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I can find the malls and shopping areas that I want to visit.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I am satisfied with the church-sponsored activities.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I like ISU’s athletic games.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I like the on-campus activities (e.g., VEISHEA).</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Overall I like life in the local community.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Section VI:** Please describe your overall quality of life in Ames. Please indicate how you agree with each of the following statements by using a 7-point scale with 1 being “Strongly disagree” and 7 being “Strongly agree”.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neither</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In general, I am satisfied with the overall quality of life at the University; that is, my academic and social life on campus.</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>I am satisfied with the overall quality of life for you personally at the University.</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
I would say most of my friends and other classmates are with the overall quality of life at the University.

Section VII: Please answer a few more questions on your demographics. Please mark the box before the answer you prefer.

1. How would you classify yourself?
   - Asian
   - Europe
   - Africa
   - Central America
   - South America
   - North America
   - Other (Please specify: __________________________

2. What is your gender?
   - Male
   - Female

3. Please check your appropriate age group/category?
   - 18-19
   - 20-22
   - 23-25
   - 26-28
   - 29-35
   - 36 and more

4. Please check your appropriate college classification.
   - Freshman
   - Sophomore
   - Junior
   - Senior
     - Graduate student
     - Others

Please provide your email address if you want to be considered for the drawing: ________________

**Your email information will not be connected with your responses.

Thank you again.