

Investigating International Student Perceptions of Adjustment through Q Methodology

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This study examines similarities and differences among international students in terms of their perceptions of cross-cultural adjustment. Specifically, Q method and interviews were utilized to examine factors that helped and hindered international students during their first year in the United States. Thirty international students from 22 countries participated in this study. Q factor analysis identified three types of adjustment patterns among participants. The first type of international students identified their social and communication skills as the most helpful factors, and was more likely to report homesickness. The second group of participants preferred to seek help from their own countrymen when experiencing difficulty, and considered insufficient English skills their biggest barrier. International students in the third type thought that their commitment to study and their immediate family played the most helpful roles, and they reported more financial difficulties. Besides these differences, the three types of international students also encountered similar problems or barriers, such as cultural differences, financial difficulty, discrimination, and unrealistic expectations. This study looks at cross-cultural adjustment from a holistic perspective and explores differences among international students based on individual perceptions rather than demographic variables.

Diversity is a watchword in today's higher education. One way to enhance diversity on college campuses is to recruit international students (Zimmerman, 1995). The United States currently hosts the largest number of international students in the world. During the academic year of 2007-2008, there were 623,805 international students studying at various types of higher institutions in the United States; international students constituted about 31% of total U.S. higher education enrollment at the bachelor's level, and about 49% at the graduate level (*Open Doors Report*, 2008). The continuous influx of international students enriches cultural and intellectual diversity on American campuses, but also poses many challenges to their host institutions and communities. Meanwhile, international students must adjust to a variety of cultural, linguistic, and social challenges resulting from their geographical relocation. Understandably, not all international students are able to fit into the new social milieu as smoothly as wished. As Al-Sharideh and Goe (1998) pointed out, "Unfamiliarity with American customs, norms and values may make it difficult for international students to effectively interact with Americans and meet personal and academic demands" (p. 699). The challenges encountered by international students are well documented in extant literature. When examining adjustment of international students, previous researchers mainly discussed differences among international students based on background variables rather than individual perceptions. In contrast, this study aims to explore similarities and differences among international students based on their own perceptions of cross-cultural adjustment. Specifically, international students were asked to identify factors that affected their

adjustment, positively or negatively, during their first year in the United States. The first year experience was focused because students often experience higher levels of stress in their first year (Jay & D'Augelli, 1991). Therefore, it is important to study the first year experience from international students' perspective (Ramsay, Jones, & Barker, 2007) in order to gain a more detailed understanding of international students' acclimation processes.

To achieve the research objectives, this study utilized both Q method and interviews. Q method allowed the author to look at cross-cultural adjustment from a holistic perspective and examine differences among international students based on individual perceptions rather than demographic variables.

Literature Review

Adjustment is viewed as "representing a transitional process that unfolds over time as students learn to cope with the exigencies of the university environment" (Al-Sharideh & Goe, 1998, p. 701). Over the past 50 years, scholars from various disciplines have studied how international students adjust to studying and living in the United States. The following literature review focuses on adjustment problems and various factors affecting adjustment.

Adjustment Problems of International Students

Over the years, researchers have identified a number of common problems encountered by international students during their adjustment processes. One of the earliest studies was conducted by Forstat (1951). In her examination of adjustment problems of 182 international students at an American university, she found that problems mentioned by many international students included dating, financial matters, the English language, housing, the academic system, and food. Sharma (1973) categorized three types of problems (academic, personal, and social) experienced by international students. The major academic problems included difficulties in understanding lectures, class participation, or preparing oral and written reports. The personal problems included housing, homesickness, lack of financial resources, food, and cross-sex companionship. Social problems included American customs, making friends, and acceptance by social groups.

Discrimination has also been discussed by researchers. Morris (1960) noted that international students perceiving a loss of status tended to be less favorable to the United States. Four decades later, although the American campus has become increasingly diverse, issues of racial and ethnic discrimination still seem to be prevalent on campus, as reported in some recent studies. For instance, Poyrazli and Lopez (2007) found that international students experienced higher levels of discrimination than did American students. Lee and Rice (2007) provided a detailed analysis of how international students in the United States perceive discrimination. Some problems they discussed include perceptions of unfairness, inhospitality, cultural intolerance, and direct confrontation. They argued that some challenges faced by international students should not just be considered as adjustment problems; instead, they could also be attributed to inadequacies in the host society.

Factors Affecting International Student Adjustment

Manese, Sedlacek, and Leong (1988) argued that international students differ in their perceptions of adjustment to university life. Therefore, a specific analysis of the subgroups among international students would yield a more complete understanding of these students. Many research findings support Manese et al.'s (1988) argument. For instance, Perkins, Perkins, Guglielmino, and Reiff (1977) found significant differences in adjustment among different national groups of international students in the United States. Their survey results indicated that Chinese students perceived English proficiency, educational preparation, discrimination, and homesickness as more serious problems than did Indian students and other international students. Other studies found that Asian students encountered more adjustment problems than European students (Barratt & Huba, 1994; Poyrazli & Kavanaugh, 2006; Yeh & Inose, 2003). In terms of discrimination, previous studies noted that students from Western countries and those who perceived little or no discrimination had fewer adjustment difficulties than those from non-Western countries and who considered discrimination a problem (Lee & Rice, 2007; Poyrazli & Lopez, 2007; Surdam & Collin, 1984).

In addition, Wilkening (1965) argued that international students' personal adjustment was highly associated with their length of stay in the United States. Poyrazli and Kavanaugh (2006) reported that married international students experienced lower levels of social adjustment strain than did single students. English proficiency has also been found to be positively related to international students' academic achievement (Poyrazli & Kavanaugh, 2006). Students who have better English proficiency tend to adapt better (Surdam & Collin, 1984).

There were also limited studies on personality variables. Wang (2009) argued that individual resilience characteristics (personal abilities to cope with change) better correlate with international student adjustment problems than do background variables (e.g., age, length of stay, country of origin, marital status, major, etc.). In particular, international students with high levels of resilience tended to have fewer adjustment problems.

Many researchers believed that socializing with Americans will help international students better adapt to their host community. For instance, Antler (1970) found that foreign students who spent more time with Americans were more satisfied with their adjustment to life in the United States compared to those who spent much time with their own countrymen. Surdam and Collin (1984) drew a similar conclusion. Zimmermann's (1995) study indicated that interacting with American students is the most important factor that influences cross-cultural adaptation. Al-Sharideh and Goe (1998), however, found that the importance of interacting with Americans will be buffered if an international student forms strong ties with other international students sharing a common cultural background. In other words, international students from the same cultural background may form an ethnic community within certain universities, which provides social support when coping with adjustment problems.

Research Questions

Previous studies on international student adjustment have greatly enhanced our understanding of barriers encountered by international students in the United States. Researchers also agree that international students are not a monolithic group, and they have examined multiple variables that might affect international student adjustment. Such variables include nationality, social interaction, English proficiency, gender, marital status, personality, and length of time spent in the United States. Yet few studies discussed differences among international students based on their own perceptions. Therefore, this study attempts to explore certain similarities and differences among international students based on how they perceive the most influential factors in their adjustment processes. Specifically, two research questions are posed:

- RQ1: What similarities do international students have in terms of their perceptions of positive and negative factors that influence their cross-cultural adjustment?
- RQ2: How do international students differ in their perceptions of positive and negative factors that influence their cross-cultural adjustment?

Method

This study utilized both the Q method and interviews to collect data. Because Q methodology is newly used in examining the adjustment of international students, a detailed explanation of this method is necessary. Q methodology was invented by William Stephenson in the 1930s (Brown, 1980) and has been often used in the fields of psychology, social marketing, and mass communication. Q methodology enables researchers to study individual subjectivity in an objective way. It is “subjective” in the sense that participants of a Q study will interpret measurement items in their own way and sort them in a manner they deem appropriate. It is “objective” in the sense that factor analysis is employed to analyze the sorts done by participants.

The factor analysis used in Q methodology is grounded in different assumptions and measures different aspects than the factor analysis used in quantitative research, which is often called “R methodology” (Brown, 1980). First, R methodology assumes that differences among people can be understood in terms of demographic variables. It relies on objective measurements and searches for universal patterns of human behavior. In contrast, Q methodology attempts to examine the social world from the internal standpoint of the participant. Q methodology is interested in how the participant perceives a certain issue. Hence, the Q sorting (participants sort the items presented to them) is a subjective and self-referential process (Brown, 1980).

Second, the two methodologies employ different research procedures. R methodology is deductive, that is, researchers formulate hypotheses, construct measurements, and then conduct and control their research. The hypotheses or categories are established before participants take a test or survey. With Q methodology, researchers design their research,

construct measurements (Q items), and then allow participants to assign meanings to the items (Brown, 1980). It is more inductive: factors or categories will be identified only after all Q sorts are completed (Stephenson, 1952). Individuals who sort items in a similar way will be grouped together.

Third, R and Q methodologies' respective meanings for "sample" refer to different things. In R methodology, the N participants are measured by M tests; the N participants are samples selected randomly from the parent population (Stephenson, 1953). Samples should be large enough so that research findings can be generalized to a larger population. Q methodology, in contrast, inverts the R techniques, that is, a set of M statements are measured by N participants (Stephenson, 1953). The set of M statements rather than participants are the samples. These samples (or statements) are interdependent because during a Q sorting each participant needs to compare all statements before rank-ordering them. In addition, since Q methodology is not interested in generalization, the number of participants is usually small, and participants are selected purposively so that they can represent as many different patterns as possible (Stephenson, 1953).

Thus, although both Q and R methodologies use factor analysis to analyze data, they have fundamental differences. R methodology is concerned with statistical significance and factor analyzes the correlations among tests. Q methodology is concerned about subjectivity and factor analyzes the correlations among participants. Q methodology is by nature exploratory: no meaning exists until participants' sorts create meaningful patterns. Hence, patterns emerging from Q sorts are the product of participants' perceptions, rather than the researcher's speculations. Q methodology is appropriate for this study because it allows international students to reveal their inner thoughts about cross-cultural adjustment from a holistic perspective. Interviews were also conducted in which participants were asked to explain why they considered certain items helpful and others not helpful.

Measuring Items

Initially, numerous items were generated based on existing literature and preliminary interviews with five international students. These five students were acquaintances of the researcher. During the interviews they were asked to identify factors relating to their cross-cultural adjustment. Later, based on suggestions from an expert on Q methodology, 40 items were finally selected for this study (see Appendix A). These 40 items cover various aspects of the acclimation experiences of international students, including English proficiency, individual characteristics, social support, motivation, cultural differences, financial situations, and so forth.

Participants

Participants were recruited in several ways: (1) using friendship networks, (2) earlier participants introducing potential later participants, (3) looking for international students at the university's library, and (4) the university's Office of International Affairs sending an

email to international students asking potentially-interested students to contact the researcher. Participation was completely voluntary.

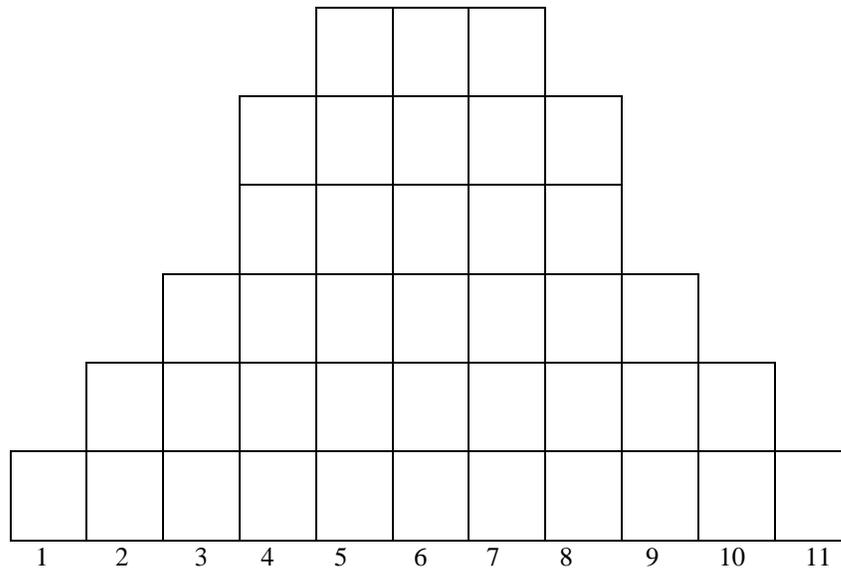
All 30 participants were enrolled at a large university located in the south of the United States when this study was conducted. At the time of study, the university hosted about 25,000 students, including more than 1,500 international students, which constituted 6% of the total student population. The university is a Research I university, offering bachelor's, master's, and doctoral degrees in a variety of disciplines.

Participants were from 22 countries spanning five continents. Countries represented in this study included: Austria (1), Brazil (1), Bosnia (1), China (4), Egypt (1), Hungary (1), India (2), Indonesia (2), Italy (1), Ivory Coast (1), Japan (1), Jordan (1), Kenya (1), Korea (2), Nigeria (2), Peru (1), Poland (1), Romania (1), Sri Lanka (2), Taiwan (1), United Arab Emirates (1), and Venezuela (1). Twenty-eight participants were degree-seeking students, and two participants were exchange students. All but two students attended the current university as their first American school. Nine participants were undergraduate students, and 21 were graduate students. At the time of the study, participants had lived in the United States for as little as four months to as many as 8.5 years, with a mean of 2.1 years. Their ages ranged from 20 to 39 years of age, with a mean of 27.7 years. Half of them were male and half were female. The majority of the participants were single. Participants were studying in many disciplines and had different religious beliefs.

Data Collection

The researcher and each participant met one on one. At the beginning of each meeting, each participant was given a consent form that states the study's purposes and procedures as well as participants' rights. After signing the consent form, each participant was asked to evaluate 40 items (each item was written on an individual card) in terms of their helpfulness during their first year in the United States, and then asked to rank order these 40 items according to an 11-point scale, ranging from "hindered most" (1) to "helped most" (11). As shown in Figure 1, participants were asked to fill in each solid-lined square with one item.

After sorting these 40 items, each participant filled in a demographic questionnaire asking their country of origin, field of study, gender, class standing, religious belief, marital status, and age. Afterwards, the researcher interviewed each participant regarding the items he or she placed in the extreme columns (1, 2, 3, 9, 10, and 11). Columns 1, 2, and 3 include items that hindered adjustment, and columns 9, 10, 11 include items that helped them during their adjustment. All but three interviews were tape recorded with permission from the participants. The interview notes were mainly used to explain why participants perceived certain items positively and others negatively.



Hindered Most

Helped Most

Figure 1. Q sorting scale
 Note. There are a total of 40 squares.

Results

The PC-QUANAL software (Tubergen, 2001) was used to analyze the 30 Q sorts (from 30 participants). The principle component factor analysis with the varimax rotation was employed to extract salient factors. Three major factors were identified (with an Eigen value greater than 1.0), which accounted for approximately 45% of the total variance. The 30 participants were then separated into three groups based on these three salient factors. Participants in the same group showed similar Q sorting patterns. Although the three groups of participants differed from each other, they also shared certain similarities. The similarities among these three groups will be discussed first below, followed by a description of the unique characteristics of each group.

Similarities Among International Students

No participants thought that cultural differences (Item 37) helped them during their adjustment, and some even considered it the biggest hindrance. Compared to European and Latin American students, students from Asia, the Middle East, and Africa were more likely to consider cultural differences stressful. As one student commented, “If there were not many cultural differences, I would be more efficient.”

Table 1
Consensus Items

Item No.	Statement	Type 1 Z score ^a	Type 2 Z score ^a	Type 3 Z score ^a
37	Cultural distance between my home country and the U.S.	-1.688	-2.307	-1.992
38	Differences in learning styles between my home country and the U.S.	-1.536	-0.509	-1.421
29	My financial situation	-0.943	-1.361	-2.093
10	Americans' perceptions of my home country	-1.337	-1.145	-1.134
34	My expectations about my life in the U.S. before I came to this country	-1.251	-0.735	-0.406
35	My academic performance in my discipline	1.062	1.341	1.507

^aA positive Z score indicates that participants perceived the item to be helpful, and a negative Z score indicates that participants perceived the item to be not helpful. The higher the absolute value of a Z score, the higher the degree of significance will be.

Differences in learning styles (Item 38) also created certain barriers, especially during the early stages of adjustment. Many participants reported that American professors require more assignments, more class discussions, and greater initiative. Participants noted that they must study throughout the semester in order to get a good grade. Despite the differences or difficulties, participants highly praised the facilities and learning environment at their university. They considered their learning experience in the United States to be positive and effective. In fact, many participants were satisfied with their academic performance (Item 35), which helped their adjustment. As one student pointed out, "Doing well at school let me feel better about myself; if you are happy, it helps you to integrate into this society."

Moreover, financial situation (Item 29) was a serious concern for many participants. To cover their expenses, some students had to take on a few jobs, including those they did not like. Several students remarked that they were white-collar employees in their home country, but in the United States they had to take on blue-collar jobs. Limited budget also prevented international students from participating in social activities. As one student stated, "If you don't have money, you are not free to go everywhere and experience everything."

In addition, "Americans' perceptions of my home country" (Item 10) was rated negatively by international students in all three types. According to the interview data, participants interpreted this issue based on two aspects: ignorance and stereotypes. Some international students reported that Americans did not know anything about the country they were from and often asked them silly questions, such as "Do you have TV or computers there?" Misconceptions or negative stereotypes also bothered some international students. For instance, a student from South Asia mentioned that, "All they [Americans] know about my country is ethnic conflict." One student from the Middle East complained, "Their perceptions about Middle Easterners are [that we are either] suicide bombers or terrorists. These are not true." A student from Eastern Europe expressed a more radical opinion, "Americans group

others together, either American or non-Americans. They see you as an alien....they treat you as if you don't have [a] personality.”

Last, most participants mentioned that they had unrealistic expectations (Item 34) before coming to the United States. Some international students expected a dynamic and interesting life in the United States, and were disappointed after their arrival. They found that their host community was not that multi-cultural and open, and the average American's life was different from those portrayed in the media. They also did not expect so many difficulties and restrictions while studying in the United States. Study and work (research, teaching, or other jobs) required too much time, and it was not as easy to make American friends as they wished. The gap between reality and their expectations led to frustrations, especially at the beginning of their sojourn.

Differences among International Students

Besides those similarities, each of the three groups has its own unique characteristics. Based on the salient characteristics, I labeled the three groups (or types) as: *Social butterfly* (Type I), *Collectivistic-oriented* (Type II), and *Self-reliant* (Type III). I will describe each type respectively. Some previously discussed problems will not be discussed in detail.

The 10 international students in the first group believed that their ability to communicate with others helped them most while adjusting to their new environment. They described themselves as social, outgoing, and open-minded. Their personality and oral English skills enabled them to effectively communicate with Americans and make new friends. As one student said, “If I am not a social being, the events on campus won't be helpful.” Another student added, “When you are confident about your English, it's easier to make new friends.”

In addition, most students in this group tended to seek support from international students who were not from their own country. One reason is that most of them were from a country that had a small number of students enrolled at their university. Another reason is that they preferred to not stick with their fellow citizens. As one student explained, “Just because we are from the same country doesn't mean we are going to be good friends.”

In terms of hindrances, this group of students encountered many similar difficulties as other groups did. In addition to problems discussed previously, students in this group frequently reported homesickness. Missing family back home made them want to return home as soon as possible. As one student expressed, “My family creates a connection in my heart, so I always think that this [studying in the U.S.] is just a temporary experience, and I don't plan to stay here.” Two other students said when they compared the American churches to their hometown churches, they started to appreciate their home churches and miss them more.

It appears that students in the second group considered social support the most helpful factor in their transition to a new life. Many of them expressed gratitude toward friends from their own countries. As one student admitted, “When I need help, I will first look for my fellow countrymen.” Another student added, “They [fellow countrymen] are like my family. Whenever I need something, I will call them and they will help me.” Some students even contacted their own ethnic community before they came to the United States.

This group of students also sought help from American friends or international students from other countries. They mainly met American friends through activities organized by the Office of International Affairs at their school. Noticeably, most of their American friends were Christians who were willing to help international students and teach them the Bible.

Although students in this type were satisfied with their academic performance, they reported the biggest problem with English proficiency of the three groups. Most in this group admitted that their English skills, especially oral and written, greatly hindered them both at and outside of school. All of them studied English before they came to the United States, but their previous English education emphasized reading and test-taking, not writing and speaking skills.

Students in the third group considered their commitment to study their strongest motivation while studying in the United States. Some said that because they gave up all they had in their own country and started from nothing in the United States they had to put 100% effort into their study. As one student commented, "I have spent much money and took a long flight to come here. I have to try my best." Another student said that sometimes she wanted to give up because the pressure and obstacles were so great, but she finally stayed because she wanted to get a degree.

These students usually depended on their family back home for emotional support and encouragement. As one student explained, "Whenever I have problems, I will discuss them with my family [over the phone]. They will always support me." A few students also sought help from their fellow countrymen when needed.

Many students in this group identified financial difficulty as their biggest problem. This group was also less likely to get involved in social activities on campus because they were concentrating on their school work and jobs. In addition, they did not have much desire to assimilate into American society. One student mentioned that she felt frustrated when spending time with Americans because "the lifestyle and worldviews are different." Another student said that as he gradually saw more of America, he felt more and more incomplete, because his perceived differences reminded him that the United States is not his home and he does not fit into the American system.

Type I: Social butterfly

Table 2

Salient Characteristics of Type I (N = 10)

Item No.	Statement	Z-score ^a
21	Just the kind of person I am-my basic personality	2.295
23	My oral English skills	1.885
39	My social skills	1.875
17	International students from other countries	1.875
11	My English writing skills	1.104
4	My religious community in my home country	-1.171
34	My expectations about my life in the U.S. before I came to this country	-1.251
10	Americans' perceptions of my home country	-1.337
38	Differences in learning styles between my home country and the U.S.	-1.536
37	Cultural distance between my home country and the U.S.	-1.688
30	Homesickness	-2.127

^aA positive Z score indicates that participants perceived the item to be helpful, and a negative Z score indicates that participants perceived the item to be not helpful. The higher the absolute value of a Z score, the higher the degree of significance will be.

Type II: Collectivistic-oriented

Table 3

Salient Characteristics of Type II (N = 13)

Item No.	Statement	Z-score ^a
18	Friends from my own country	2.105
16	American friends who are part of the university community	1.351
35	My academic performance in my discipline	1.341
17	International students from other countries	1.324
21	Just the kind of person I am--my basic personality	1.194
2	Services and advice offered by the Office of International Affairs	1.153
10	Americans' perceptions of my home country	-1.145
29	My financial situation	-1.361
11	My English writing skills	-2.009
37	Cultural distance between my home country and the U.S.	-2.307
23	My oral English skills	-2.431

^aA positive Z score indicates that participants perceived the item to be helpful, and a negative Z score indicates that participants perceived the item to be not helpful. The higher the absolute value of a Z score, the higher the degree of significance will be.

Type III: Self-reliant

Table 4

Salient Characteristics of Type III (N = 7)

Item No.	Statement	Z-score ^a
26	My commitment to my study	2.281
8	My immediate family in my home country	2.216
23	My oral English skills	1.628
35	My academic performance in my discipline	1.507
18	Friends from my own country	1.400
10	Americans' perceptions of my home country	-1.134
27	My desire to assimilate into American society	-1.223
38	Differences in learning styles between my home country and the U.S.	-1.421
37	Cultural distance between my home country and the U.S.	-1.992
29	My financial situation	-2.093

^aA positive Z score indicates that participants perceived the item to be helpful, and a negative Z score indicates that participants perceived the item to be not helpful. The higher the absolute value of a Z score, the higher the degree of significance will be.

Discussion

This study identified three adjustment patterns among international students, based on their group: social butterfly, collectivistic-oriented, and self-reliant. These three types of international students encountered some similar adjustment problems, such as cultural differences, financial difficulty, discrimination, and unrealistic expectations. The first three problems were widely discussed in previous research. Cultural differences could lead to misunderstandings, frustrations, distrust, and conflict. To better inform international students about American customs and rituals, the university could disseminate relevant information through brochures, pamphlets, websites (Poyrazli & Lopez, 2007), and workshops, as well as facilitate interactions between American and international students. Noticeably, for international students, adjusting to American academic culture is more urgent than adapting to the mainstream culture because their top priority is academic achievement (Heikinheimo & Shute, 1986). Many participants reported that they worked hard and did well at school. Academic achievement encouraged them to continue their scholarly commitments and also somewhat helped them cope with difficulties.

Some participants mentioned that some Americans helped them with assignments, invited them to attend activities, taught them American norms, or provided them with transportation. However, discrimination, stereotypes, and feelings of isolation were still frequently mentioned during the interviews. This perceived discrimination creates an invisible wall between international students and Americans. Although scholars agree that interacting with Americans will help international students better adapt to their new environment, many participants found that making American friends is not easy. Americans and international

students do not have the same status or cultural ties: the former, the host, belongs to and understands the host culture; the latter, a type of academic sojourner, is a cultural outsider required to adjust to the norms and systems of the host culture. As such, international students more naturally follow the rules of the host society if they want to socialize with Americans and seek long-term development in the United States. As Ellingsworth (1988) argued, the burden of adaptation will always shift to the less advantaged side. However, Americans may not realize that their behaviors might be interpreted as discrimination by international students. Thus, it is important to foster dialogue between the two sides. The university could organize workshops, conferences, panels, or create online blogs which provide a platform for Americans and international students to express their opinions, share their experiences, and clarify their concerns. Such activities might help increase a shared sense of understanding and promote a more welcoming environment (Poyrazli & Lopez, 2007).

Having unrealistic expectations is an issue rarely discussed in previous literature. Participants often complained that the information they received before coming to the United States was superficial, inaccurate, or misleading. We cannot determine how the media portray the American life or culture. What the university can do, however, is provide more complete information and offer more realistic suggestions. And international students should also try to search for better information from multiple sources and make more informed judgments.

The three types of international students mainly differed in their primary sources of support, social skills, and English proficiency. First, social support is very important for international students who are making transitions from one culture to another (Ramsay, Jones, & Barker, 2007). All participants sought social support while adjusting to their new environment, but their primary sources of support differed. The first type of students tended to socialize with like-minded international students from different countries; the second type often received help from their own nationals; and the third type mainly relied on their own family for support. Although Al-Sharideh and Goe (1998) noted that strong ties with people from similar cultural backgrounds help international students adjust and cope, they also warned that extensive immersion in one's ethnic community might negatively affect the self-esteem of international students. This phenomenon is evidenced in the second group, who mainly socialized with their countrymen and also reported the biggest problem with English skills.

Social skills also affected the adjustment of international students. Not surprisingly, many participants described themselves as open-minded, independent, and goal-oriented. After all, studying abroad requires courage, determination, and persistence; and those who are brave enough to meet this challenge certainly share some common traits. However, participants also differed in their personalities and social skills. Some students were extroverted and social, while others were shy and reserved. It would be easier for social butterflies, such as the first type of students, to make new friends and adapt to the new environment than for those who are shy.

English proficiency can either help or hinder an international student depending on how well he or she masters the language. Since international students received different levels of English education in their home countries, and certain foreign languages are linguistically more different from English, some students had to spend more effort to improve their English

language skills. Different from what Poyrazli and Kavanaugh (2006) found, English skills are not necessarily positively related to academic performance. For example, some international students spoke poor English, such as many in the second group, but still received very good grades on their course work. It is possible that oral English skills were less stressed in their field of study, such as biology or engineering. Noticeably, all international students were required to take the TOEFL, GRE, or GMAT tests before attending an American college. Scores on those standardized tests do not always accurately measure one's English skills.

Many scholars suggested providing counseling and other types of services to help international students cope with adjustment problems. Unfortunately, although the university in which this study was conducted had a variety of student service programs, they were rarely utilized by international students. Among the participants, only two students used counseling services, and only a few of them visited the writing center. The reasons were unknown. The university could better advertise existing services, and also improve the effectiveness of services, either by ensuring a confidential and comfortable environment for counseling or services; or tailoring their services to each student's unique needs rather than providing "one-size-fits-all" interventions (Hayes & Lin, 1994; Reynolds & Constantine, 2007). In addition, since most international students tended to seek support from their peers rather than the university staff, the school could train leaders of each ethnic student organization (such as the Indian Student Association) and ask them to play a greater role in facilitating the adjustment of international students.

Limitations of this Study

This study attempted to understand international students' adjustment from their own perspectives. By doing so, we are able to obtain a more nuanced understanding of their experience of cross-cultural adjustment. Yet the findings need to be viewed in light of a few limitations. First, Q factor analysis only produces ideal types. Participants who sorted the 40 items in a similar way were grouped into one type. Certainly there would be differences among participants in the same type. The salient characteristics of each type may describe some participants better than others. In other words, some students categorized in a certain type may fit in that type better than other types, but may not fit in the current type strongly. Second, some items, especially in terms of factors that hindered adjustment, were mentioned by all types of students but were arranged in different orders by them. Hence, it was not surprising to see that different types were not completely distinct from each other. Actually, it reminds us that although international students might differ in how they perceive their adjustment processes, they do share many similar experiences and opinions. Third, a few items were redundant or not very relevant. The initial consideration was to identify as many items as possible, but during the study, the researcher discovered that a few items, such as advice from my professors, my host family, going to local clubs or bars, and social activities arranged by people in my discipline, were rarely applicable to most participants. Hence, redundant and irrelevant items will be dropped in future research.

Suggestions for Future Research

First, it is imperative to study Americans' perceptions of international students. Cross-cultural adjustment is an interactive process between international students and the host community. Unfortunately, discrimination and stereotypes were frequently mentioned by participants. Examining the host's (faculty, staff, American students, and local residents) attitudes can help us better understand where these stereotypes come from and what expectations the host may have of international students.

Second, more studies are needed to examine individual characteristics of international students. Looking at the demographics of the three groups identified in this study, I found that each group consisted of students from different backgrounds. Among those demographic variables, only country of origin was more likely to correlate with participants' perceptions of adjustment, especially in terms of cultural differences and English education. This finding reminds us that examining background variables alone cannot obtain a complete picture of differences among international students. The current study provides insights into individual perceptions among international students, and future studies could expand this line of research by collecting data from a larger pool of international students.

Last, many international students reported that it is not easy to make American friends. How can the barriers between international students and Americans be diminished? Apparently, further explorations of the development of cross-cultural friendship or relationship would provide more insights into this issue.

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References

- Al-Sharideh, K. A., & Goe, W. R. (1998). Ethnic communities within the university: An examination of factors influencing the personal adjustment of international students. *Research in Higher Education, 39*(6), 699-725.
- Antler, L. (1970). Correlates of home and host country acquaintanceship among foreign medical residents in the United States. *Journal of Social Psychology, 80*(1), 49-57.
- Barratt, M. F., & Huba, M. E. (1994). Factors related to international graduate student adjustment in an American community. *College Student Journal, 28*(4), 422-435.
- Brown, S. (1980). *Political subjectivity*. New Haven, CT: Yale University Press.
- Ellingsworth, H. W. (1988). A theory of adaptation in intercultural dyads. In Y. Kim, & W. Gudykunst (Eds.), *Theories in intercultural communication* (pp. 259-279). Beverly Hills, CA: Sage Publication.
- Forstat, R. (1951). Adjustment problems of international students. *Sociology and Social Research, 36*(September-October), 25-30.
- Hayes, R. L., & Lin, H. (1994). Coming to America: Developing social support systems for

- international students. *Journal of Multicultural Counseling and Development*, 22(1), 7-16.
- Heikinheimo, P. S., & Shute, J. C. M. (1986). The adaptation of foreign students: Student views and institutional implications. *Journal of College Student Personnel*, 27(5), 399-406.
- Jay, G. M., & D'Augelli, A. R. (1991). Social support and adjustment to university life: A comparison of African-American and White freshmen. *Journal of Community Psychology*, 19(2), 95-108.
- Lee, J. J., & Rice, C. (2007). Welcome to America? International student perceptions of discrimination. *Higher Education*, 53(3), 381-409.
- Manese, J., Sedlacek, W., & Leong, F. (1988). Needs and perceptions of female and male international undergraduate students. *Journal of Multicultural Counseling and Development*, 16(1), 24-29.
- Morris, R. T. (1960). *The two-way mirror: National status in foreign students' adjustment*. Minneapolis, MN: University of Minnesota Press.
- Open Doors Report 2008*. (2008). Retrieved September 6, 2009, from <http://opendoors.iienetwork.org>
- Perkins, C., Perkins, M., Guglielmino, L., & Reiff, R. (1977). A comparison of the adjustment problems of three international groups. *Journal of College Student Personnel*, 18(7), 382-388.
- Poyrazli, S., & Kavanaugh, P. R. (2006). Marital status, ethnicity, academic achievement, and adjustment strains: The case of graduate international students. *College Student Journal*, 40(4), 767-780.
- Poyrazli, S., & Lopez, M. D. (2007). An exploratory study of perceived discrimination and homesickness: A comparison of international students and American students. *The Journal of Psychology*, 141(3), 263-280.
- Ramsay, S., Jones, E., & Barker M. (2007). Relationships between adjustment and support types: Young and mature-aged local and international first year university students. *Higher Education*, 54(2), 247-265.
- Reynolds, A. L., & Constantine, M. G. (2007). Cultural adjustment difficulties and career development of international colleges students. *Journal of Career Assessment*, 15(3), 338-350.
- Sharma, S. (1973). A study to identify and analyze adjustment problems experienced by foreign non-European graduate students enrolled in selected universities in the state of North Carolina. *California Journal of Educational Research*, 24(3), 135-146.
- Stephenson, W. (1952). Some observations of Q technique. *Psychological Bulletin*, 49(5), 483- 498.
- Stephenson, W. (1953). *The study of behavior: Q technique and its methodology*. Chicago, IL: University of Chicago Press.
- Surdam, J. C., & Collins, J. R. (1984). Adaptation of international students: A cause for concern. *Journal of College Student Personnel*, 25(3), 240-245.
- Tubergen, V. N. (2001). *QUANAL user's guide*. Lexington, KY: University of Kentucky.

- Wang, J. (2009). A study of resiliency characteristics in the adjustment of international graduate students at American Universities. *Journal of Studies in International Education*, 13(1), 22-45.
- Wilkening, W. T. (1965). *Factors associated with adjustment of foreign students studying extension education at selected land grant institutions*. Unpublished doctoral thesis, Educational Administration, University of Wisconsin, Madison.
- Yeh, C. J., & Inose, M. (2003). International students' reported English fluency, social support satisfaction, and social connectedness as predictors of acculturative stress. *Counseling Psychology Quarterly*, 16(1), 15-28.
- Zimmermann, S. (1995). Perceptions of intercultural communication competence and international student adaptation to an American campus. *Communication Education*, 44(4), 321-335.

Appendix A: 40 Q Items

1. Advice from my professors
2. Services and advice offered by the Office of International Affairs
3. Services offered by the Counseling and Testing Center
4. My religious community in my home country
5. My own ethnic religious community in this city
6. My ethnic community in this city (non-religious)
7. My host family
8. My immediate family in my country
9. My relatives here in the United States
10. Americans' perceptions of my home country
11. My English writing skills
12. Other American-oriented social activities on campus
13. Social activities arranged by the Office of International Affairs
14. Social activities arranged by people in my discipline
15. Going to local clubs or bars
16. American friends who are part of the university community
17. International students from other countries
18. Friends from my own country
19. American friends who are not part of the university community
20. My English reading skills
21. Just the kind of person I am— my basic personality
22. What I knew about America before coming to the U.S.— for example, from friends or American mass media (TV, movies, magazines, books, etc.)
23. My oral English skills
24. American mass media (TV, movies, magazines, etc.) that I see in my daily life here
25. What I knew about the American academic system before I came to the U.S.
26. My commitment to my study
27. My desire to assimilate into American society

28. My job
29. My financial situation
30. Homesickness
31. International student organizations on campus
32. Services offered by the Writing Center
33. Services/workshops offered by the Teaching and Learning Center
34. My expectations about my life in the U.S. before I came to this country
35. My academic performance in my discipline
36. My knowledge of American culture and customs
37. Cultural distance between my home country and the U.S.
38. Difference in learning styles between my home country and the U.S.
39. My social skills
40. My immediate family in the U.S.