

AN EXPLORATORY STUDY OF INTERNATIONAL STUDENT SATISFACTION

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ABSTRACT

The specific objectives of this study, conducted to measure international student satisfaction with their university experience, were to assess the effectiveness of services provided by the campus Office of International Student Services, to identify international students' problems in adjusting to campus life on this campus, and to measure international students' satisfaction with the university environment. The major finding was that students' perceptions of pre-arrival information were more important determinants of satisfaction than were some post-arrival experiences. Neither the nature and severity of adjustment problems nor the level of participation in campus life were found to be significant predictors of satisfaction.

INTRODUCTION

Over the past ten years, medium-sized private and public universities have engaged in more aggressive recruitment of international students. International students enrich the university environment. Their presence internationalizes the campus in a way that could not be achieved simply by adding cross cultural-courses. American students have first-hand opportunities to become acquainted with people from around the world, to understand their cultures, and to prepare themselves for operating in the global economy. In addition, the declining college-age population in the United States has left empty seats in the classroom that international students fill.

Building a culturally diverse student population takes time. In order to attract students from countries around the world, it is essential to develop a critical mass from a country. It is necessary to first attract approximately ten students, and from this base, more will come. Of course, the base will expand only if the students are satisfied with both academic and non-academic opportunities and services of the university.

This study was conducted to generate information to guide the Office of International

Student Services in serving International Students. The office is responsible for sending *pre-arrival* information, conducting international student orientations, and handling problems on a case-by-case basis. Thus, the study was designed to examine the effectiveness of the services of the Office of International Student Services.

Four focus groups were conducted to identify the most salient issues and concerns of international students and to determine whether problems varied among students of different nationalities. Each focus group was comprised of students from a different country (Korea, Italy, India and Turkey). Both men and women participated in each of the groups. Cultural differences were identified. Italian, Indian and Turkish students felt the pre-arrival information was insufficient and inaccurate. Korean and Indian students indicated problems with academic advising, and Koreans experienced language difficulties.

Italian students said they wanted to live on campus to learn the American culture. The remaining groups indicated that campus housing was too expensive, there was not enough privacy, or that they wanted to live with students from their own culture. University organized activities were not favored by any of the groups, but for different reasons. For example, Italians wanted to explore social activities on their own; they felt uncomfortable at university organized activities. Other groups tended to say that not enough activities were directed towards them.

This study measured international students' satisfaction with the educational environment. It was an exploratory study that differed from tests of the CS/D models in several ways:

1. The study examined the extent to which multiple components of the educational experience influenced international student satisfaction. The study did not follow the traditional CS/D process models (Erevelles and Leavitt 1992). Expectation, a key construct of the CS/D models, was not measured.
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2. The study measured satisfaction with an on-going complex service. By contrast, many tests of CS/D examined satisfaction with a product purchase and/or use experience, generally considering a single transaction or consumption experience (see Perkins 1992).

3. Student satisfaction with the educational experience may be more akin to measuring service quality. The service quality literature (e.g. Zeithaml, Parasuraman and Berry 1990, 1993; Cronin and Taylor 1992, 1994) suggests that evaluation over many transactions is a measure of service quality rather than consumer satisfaction.

The study was conceptualized, in part, in accordance with Spreng, MacKenzie and Olshavsky (1996). These authors contended that satisfaction with information about the product or service as well as satisfaction with product/service attributes determine overall satisfaction. Thus, we measured perceptions of the information sent to students prior to arriving in the United States.

RESEARCH OBJECTIVES

This study was conducted to measure international student satisfaction. Specific objectives of the study were to assess the effectiveness of services provided by the Office of International Student Services, to identify problems in adjustment to campus life in this country, and to measure international students' satisfaction with the university environment.

If the *pre-arrival* information was accurate and complete, one might expect the students to have fewer problems adjusting to the university environment. Further, those who experienced fewer problems in adjustment would be more satisfied. Likewise it would be expected that those who participated in campus activities thus becoming part of the community would be more satisfied. Therefore it was hypothesized that:

H1: Adjustment to the university would be a more important determinant of satisfaction than the pre-arrival information.

H2: Students who had fewer problems

adjusting to the university environment would be more satisfied.

H3: Students who participated in campus activities would be more satisfied.

It would be expected that perceived quality of university services would moderate international student satisfaction. Both the academic and non-academic environments would be important to students. Course work and interaction with faculty would be salient. Therefore, it was hypothesized that

H4: Students who perceived the quality of academic services to be high would be more satisfied.

One of the key issues that surfaced during the focus groups was housing. Students expressed concerns about on-campus housing. Many chose to live off-campus where they believed the cost to be lower and the quality-of-life better. Therefore, it was hypothesized that:

H5: Students who perceived the quality of housing on campus to be high would be more satisfied with the university.

METHODOLOGY

A four page booklet style questionnaire was developed. The questionnaire was divided into six sections, each focusing on a different aspect of international student adjustment and satisfaction. The questionnaire was pretested on twenty-six students in a marketing research class which included two internationals. Revised questionnaires were mailed to 500 of the international students at the university. A low response rate prompted an intercept administration. International students were contacted in the residence halls, academic buildings and the student union. An effort was made to survey a representative sample of students from the various countries.

MEASURES

Multiple indicators were used to measure

student perceptions of the pre-arrival information, adjustment to the university, perceived performance of the university and satisfaction with the educational experience. Scales were constructed to measure students' adjustment. These included problems upon arrival and the level of participation in campus activities.

Perceptions of the Pre-Arrival Information

Respondents were asked to rate the pre-arrival information on topics including tuition and fees, transportation, housing, banking, health insurance, and academic issues such as program offerings and registration processes. Ratings were obtained on five-point scales (poor-excellent). The ratings on the seven items were summed.

Measures of Adjustment

Adjustment to campus life was measured by a series of questions on the nature and severity of problems encountered upon arrival and on their participation in campus activities. Students were asked to rate the difficulties of finding housing, banking services, transportation, and insurance. They were also asked about difficulties with communication and cultural adjustment.

A second measure of *adjustment* was the level of participation in campus activities. Information on participation was solicited through a series of questions on awareness of and participation in social activities and attendance at the International Student Orientation.

Measures of Performance

Perceived performance was measured by students' interaction with faculty and perceptions of housing. Respondents were asked who assisted them in resolving academic issues such as course selection and registration. Particular emphasis was placed on the quality of students' relationships with their academic advisors.

Because housing issues were among the most important to students in the focus groups, several questions addressed housing issues. Respondents were asked their impressions of various attributes of on-campus housing. They were also asked whether they chose to live on or off campus, and

the primary reason for choosing to live off campus.

Measures of Satisfaction

Three questions were used to assess global satisfaction with the university. These three were derived from the literature on measuring consumer/customer satisfaction (e.g., Hunt 1989; Hausknecht 1991). Students were first asked how satisfied they were with their educational experience, a global measure of satisfaction. Next they were asked whether they would choose the university again, a measure of intention which indicates that the previous purchase was satisfactory (Hunt 1989). The final question asked the likelihood of recommending the university to others in their home country. These three were summed to create an interval-like scale.

RESULTS

Completed, usable surveys were received from 147 students, representing a 29 percent response rate. Respondents represented international students from 22 different countries in Asia, Africa, Europe and Central/South America. Representation from the various regions was relatively proportional. Approximately two-thirds of the respondents were graduate students enrolled in the Business School. Half were completing their first year at the university. The majority (67.2%) lived off-campus.

Reliability of the Scales

Cronbach's alpha was used to assess the reliability of the scales developed to measure the constructs. Alpha for all scales was above .70 as shown in Table 1. The table shows the number of items used to construct each scale along with alpha.

International Student Satisfaction

Satisfaction was measured by three questions. First, students were asked how satisfied they were with their educational experience. Second, they were asked whether they would choose the university again; and third, they were asked

whether they would recommend the university to others in their home countries. As shown in Table 2, the intercorrelation of the three measures of satisfaction (SAT, AGAIN and RECOM) as well as their individual correlations with the composite measure of satisfaction (TOTSAT) were positive and statistically significant.

Table 1
Cronbach's Alpha for All Scale

Scale to measure:	n of items	alpha
Pre-arrival information (satisfaction with information)	6	.778
Problems upon arrival (Adjustment)	10	.729
Perception of housing (Performance)	6	.777
Helpfulness of academic advisor (Performance)	4	.922
Satisfaction	3	.761

Table 2 presents the correlations among the independent variables and between the independent variables and the measures of satisfaction. The perceived quality of the academic assistance, whether or not they liked the campus housing and the pre-arrival information are shown to be significantly correlated with the composite measure of satisfaction (TOTSAT) and with all three components of the satisfaction measure.

The number of campus activities in which respondents participated (PARTIC) is significantly

related only to whether the respondent would recommend the university to others; however, the relationship is negative. The number and severity of the problems encountered (PROBS) is related to whether the respondent would choose this university again. The length of time the respondent has been at the university is unrelated to satisfaction; it is only related to the level of participation in campus activities. The longer the student had been at the university, the more campus activities s/he has attended.

Demographic characteristics of the respondents were not related to any of the satisfaction measures nor were they related to the independent variables. Neither gender nor marital status nor home country were related to any of the measures.

Hypotheses Tests

The first three hypotheses were concerned with students' adjustment to the university. It was hypothesized that problems encountered during adjustment and participation in campus activities would be more important than the *pre-arrival* information determining satisfaction. These hypotheses were tested simultaneously using GLM regression on SAS. The three independent variables of pre-arrival information, problems encountered, and participation in campus activities were entered. The composite measure of satisfaction (TOTSAT) was the dependent variable. The equation was significant at $p = .003$ ($F=6.81$). The equation explained a very small

Table 2
Correlations Between Variables to Measure Satisfaction with the University Environment

	AGAIN	RECOM	TOTSAT	PARTIC	ARIVINF	PROBS	ACADSE	ATUNIV	HOUSING
How SATisfied	.4927***	.5408***	.7459***	.0433	.3377***	.0996	.2542**	.0712	.3386***
Would come AGAIN		.6240***	.8125***	.0983	.2105*	.2248**	.3179***	.0141	.2462**
Would RECOM			.9066***	.1809	.3557***	.1632	.3307***	.1121	.2045*
TOTSATisfaction measures				.1170	.3634***	.2043*	.3633***	.0483	.3219***
#of activities PARTICIPated in					.0655	.1130	.0287	.2322**	.0354
Perception of (pre)ARRIVAL INFO.						.1581	.2821**	.0087	.2687**
PROBLEMS encountered							.1550	.0232	.0169
ACADSER (academic advisor helpfulness)								.0547	.2033
How long ATUNIVersity									.0702
Perception of HOUSING									

*p < .05 **p < .01 ***p = <.001

proportion of the variation in satisfaction ($R^2=.136$). The parameter estimates and significance of the independent variables are given in Table 3.

Table 3
Regression Coefficients for Adjustment

Predictor	coef.	t	p
Intercept	7.457	8.91	.0001
Pre-arrival info.	0.120	3.82	.0002
Problems on arrival	-0.035	-1.74	.0946
Participation	-0.076	-0.61	.5434

As shown in the table, only pre-arrival information ($p = .0002$), was significant. Thus, the three hypotheses were not supported. Contrary to the hypotheses, perceptions of the pre-arrival information were more influential on satisfaction than the number and severity of the problems encountered.

The fourth and fifth hypotheses posited a relationship between students' perceptions of selected academic and non-academic components of their educational experience and satisfaction. The quality of academic advising and of on-campus housing were tested simultaneously using the GLM procedure. Consistent with the model posited by Spreng, MacKenzie, and Olshavsky (1996), satisfaction with the *pre-arrival* information was an important predictor of satisfaction. The equation was statistically significant ($F=11.95$; $p=.0001$). The three variables explained nearly one fourth of the variance in satisfaction ($R^2 = .2201$). The parameter estimates and significance of the independent variables are given in Table 4.

Table 4
Regression Coefficients for Performance

Predictor	coef.	t	p
Intercept	5.104	10.68	.0001
Pre-arrival info.	0.080	2.53	.0130
Academic Service	0.086	3.15	.0021
Housing	0.055	2.54	.0120

As shown in the table, all three independent variables were significant. The perceived quality of housing was an important determinant of

satisfaction. In order to determine whether the perception of housing was mediated by students choice of on-campus or off-campus housing, a GLM model including the dummy variable for choice of housing was run. With this addition, the housing variable ceased to be significant and the R^2 dropped to .2014.

The independent variable of pre-arrival information was found to be an important moderator of satisfaction with the selected measures of performance. When pre-arrival information was removed from the equation, the proportion of explained variance dropped substantially ($R^2=.1858$). Thus, perceptions of the accuracy and completeness of the pre-arrival information, moderated student satisfaction along the dimensions examined.

DISCUSSION

The primary purpose of this study was to measure international student satisfaction. The questions asked and the resultant measures used for these analyses were able to explain less than one-fourth of the variance in satisfaction. Many variables that would be expected to explain differences failed to do so. Several plausible explanations for the results are offered.

1. The data for this study was gathered from 147 international students at a mid-sized university in the northeastern United States. The students, from the five continents and countries such as Finland, France, Argentina, Romania, Tanzania, Thailand, and Uganda, would be expected to have vastly different attitudes, values, and perceptions.. No more than 20 students came from any single country. Thus, the sample of 147 students might have been too heterogeneous.

2. Some of the questions may have been misunderstood or interpreted differently by the respondents. While all students are able to read and write in the English language, terms used in the survey might have had different meanings to some students.

3. The respondents were currently enrolled at the university and still involved with the services of the institution. Their attitudes and perceptions might differ from one day to the next, depending on that day's experiences.

4. Students might have given responses that

were socially desirable. In some cultures, it is considered impolite to express dissatisfaction. Conversely, some students might not want to reveal a problem. For example, when asked whether they had difficulties with the language, nearly half (47%) said that this was not a problem. Less than 15 percent indicated that language was a serious problem.

5. The study was designed to gather information on factors that could be somewhat controlled by the Office of International Student Services. These might not have included some of the most salient student issues.

6. The composite measure of satisfaction used in this study was developed by combining a global measure of satisfaction, a measure of intentions, and a third measure, the willingness to recommend the university to others. Although the three were intercorrelated at .5 or above, they clearly tap different dimensions of satisfaction. Students who reported that they would come to this university again, might not have been fully satisfied. Conversely, those who were satisfied, might be hesitant to recommend the school to others from their country.

The Findings on International Student Satisfaction

The major finding of this study was that students' perceptions of pre-arrival information, were more important determinants of satisfaction than some post-arrival experiences. Neither the nature and severity of adjustment problems nor the level of participation in campus life were found to be significant predictors of satisfaction.

Recruiters of international students recognize the importance of obtaining a "critical mass" of ten or more students in order to attract more. International students, though they come to this country for an American education, prefer to interact with fellow countrymen with whom they share a common language and a common value perspective. It would be expected that international students who have more countrymen with whom to socialize would be more satisfied. This was not the case. We found no differences in satisfaction between students whose countries were well represented and those who had three or fewer classmates from their home countries.

Alternative explanations may be offered for the failure to find an effect of problems encountered or level of participation on student satisfaction. Several international students said that when moving to a new country, particularly a country whose culture is vastly different, adjustment problems are anticipated. Students reported relying heavily on friends and family from their own country for assistance with housing, transportation, banking, medical care and other life essentials. They also reported relying primarily on their friends for advice on course selection and other academic matters.

After considering international students' patterns of behavior, particularly their preference for socializing with fellow countrymen, it is no surprise that the level of participation in campus activities was not a determinant of satisfaction. While it might have been expected that those students who "fit in" with the campus lifestyles, would be more satisfied, international students tastes and preferences for social activities are often quite different from that of American students--for whom the activities are designed. Many internationals are not interested in the types of social activities targeted to Americans. Yet, among those who indicated dissatisfaction, many failed to participate in activities planned in accordance with student requests and organized by the Office of International Student Services.

The findings of this study support Spreng, MacKenzie and Olshavsky (1996) in their contention that satisfaction with the "product" and satisfaction with the "information about the product" are distinct constructs. They stated that information satisfaction is more important for products with "lots of experience attributes" because the consumer is dependent upon someone else for information (Spreng, MacKenzie and Olshavsky 1996:28). Certainly an education, particularly in a foreign environment, is replete with experience attributes.

EPILOG

Based on the results of this study, the *pre-arrival* information sent to international students was revised to include more complete information about life in the northeastern United States, housing, transportation, insurance, and other life

issues. The following year, the Office of International Student Services found a reduction in the number and severity of adjustment problems reported by first year students.

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