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COLLEGE STUDENT SATISFACTION: A COMPARATIVE STUDY OF SELECTED FOREIGN AND AMERICAN STUDENTS AT IOWA STATE UNIVERSITY

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College student satisfaction: A comparative study of selected

foreign and American students at Iowa State University

by

Iran Baghban-Cichani

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CHAPTER I. INTRODUCTION

In the countries taking their first steps toward industriali-
zation, the process of development and progress actually starts with
a direct relationship to the development of education. When the in-
dustrial revolution expanded to more and more countries it generated
the great developments in education leading to the idea of universal
and compulsory education.

After the industrial revolution and especially after scientific
and technological development, the means of production, the ways of
life, human fears and hopes, and the scope of education have been
changed considerably. Centralized societies called for educated and
trained people in order to serve governments in growth and development.
Economic development increased jobs for people who were qualified, and
also forced countries to train more technicians and professional people
to live in a more complex society. Development in many societies re-
quires fundamental changes in vocational and professional education in
order to meet the needs of the society. It is hard to believe that any
society can develop without concentrating on education. This is re-
quired for all societies, of any type, whatever doctrine they have for
their future, whether they are revolutionary or reformist.

For many reasons, educational opportunity today is concentrated
in the West, especially the United States. Third world countries need

to use the scientific and technological products as a means for develop-
ment. Whereas the path to scientific progress need not necessarily
duplicate the direction followed by the major developed countries,
all third world countries accept as necessary the adoption of scien-
tific approaches to problem solving. Third world countries can retain
their national features by integrating science into their traditional
culture, and by integrating international thought into their own
national life. Certainly, the future of the third world countries
is based on the scientific advances and development of productive
capacity.

Because the United States has achieved a high level of scientific
and technological development, each year large numbers of students
from developing countries come to this country for educational pur-
poses. In the past two decades, the number of foreign students in-
creased almost two times every 10 years. For example, the enrollment
of those students has risen from 40,000 in 1956-1957 to almost 100,000
in 1966-1967 and to more than 200,000 in 1976-1977 (Julian and Stattery,
1978). These students come to the United States from more than 172
countries. The top 10 countries in 1976-1977 were: Iran, Republic of
China, Nigeria, Canada, Hong Kong, India, Viet Nam, Japan, Mexico, and
Thailand. Almost 90% of these students are from third world countries.

Information obtained from the Iowa State University's registrar's office shows that 1315 foreign students were enrolled at Iowa State University during spring quarter 1980. The total spring enrollment at Iowa State University for that year was 21,576. Foreign students attending the university, therefore, represented 6.1% of the total enrollment. The statistics just cited demonstrate the fact that foreign students are an important segment of the students in higher education institutions and, therefore, merit the attention of researchers in higher education.

Although the existence of foreign students in the United States has created good opportunity for cooperation and international understanding, the varying cultural, educational and social backgrounds of the foreign students caused new problems, which leading to an interest in the study of foreign student satisfaction at institutions of higher education. Sturtz (1971) stated that:

> It would seem particularly important for student personnel workers to have facts regarding how satisfied students are with various aspects of college and education they are receiving, and their satisfaction is related to behavior. Yet, progress has been slow in developing an understanding of the nature of college student satisfaction. (p. 220)

Foreign students have to adjust to the educational system of the host society and also to the new socio-cultural environment. In other words, they must learn to function in a new educational system, to settle in new living conditions, become acquainted with unfamiliar

customs, and function in a strange socio-cultural environment. These students may find their educational, socio-cultural experience a source of satisfaction or one of deep dissatisfaction.

Unfortunately, there are many institutions where the assessment of student attitude toward college experiences is determined intuitively or ignored until a complaint has to be remedied. If the final purpose of a college is growth and achievement of students, it would be logical for the institution to make efforts to learn about the students' feelings of satisfaction about their college experience, because these will affect their progress. Such understanding can provide bases for considering changes, whether they be related to the institution or the students' own attitudes. Knowing the reaction of the students to their college experience can help in eliminating the unnecessary strain which prevents the student from attaining the goals set by the institution.

Many of the research studies about college students' satisfaction have been based on the populations of American undergraduate students. Most of these studies related to satisfaction with college; they have been confined to evaluation in a single area, for example, Burma (1947) (Campus Organization), Berdie (1944) (Curriculum), Wedemeyer (1951) (Faculty Advisor), Westlund (1959), Willsey (1971) (Academic Performance), Lindgren (1952) (Counseling). Only a few attempts have been made to learn student satisfaction with several aspects of college experience. Betz, Klingensmith and Menne (1970) recommended the continued and broader investigation of the college student satisfaction.

> ...the few students of college student satisfaction
> in the major research literature provide little ba-
> sis for conclusion and generalization. For the most
> part, measurement of college student satisfaction
> has been based on instruments of unknown or limited
> psychometric quality; there has been no systematic
> research on college student satisfaction as a sig-
> nificant variable per se. (p. 111)

According to Betz, Menne, Starr and Klingensmith (1971), one of the least investigated variables in the college environment is college student satisfaction. The questions they raise are: what aspects of the college environment are satisfying (or dissatisfying) to students? How satisfied are students with physical, tangible aspects of college (such as study space, food service, and living conditions) and the intangible aspects of college (such as their relationships with peers and faculty, and feeling of alienation or belonging)? What variables affect satisfaction? What should be done to increase the level of satisfaction of students?

In recent years, the interest in the study of foreign students, their needs and problems in the United States, has increased (see an extensive review by Lee, Ahd-Ella, and Thomas, 1979). But few studies were conducted about how foreign students themselves feel about various aspects of college environments (Flores, 1970; Culha, 1974; Siriboonma, 1978). Therefore, it is obvious that the study of foreign student satisfaction is in its infancy, and more studies are needed to further our knowledge in this important area.

This study will measure the expressed satisfaction with selected dimensions of the campus environment. The selected dimensions of the

environment that will be measured are those utilized in the College
Student Satisfaction Questionnaire (hereafter referred to as CSSQ).
They are: (1) working conditions, (2) compensation, (3) quality of
education, (4) social life, and (5) recognition (Betz, Menne, Starr,
Klingensmith, 1971).

Some instructors may say that they want students to be dissatis-
fied. It is only by being dissatisfied, they contend, that the student
will make an effort to achieve their goals in college.

However, it is not the purpose of this study to investigate the
"healthy" discontent that creates a desire in the student to increase
their knowledge in a particular course. The present study is directed
toward expanding the knowledge regarding the foreign student satis-
faction at a science and technology institution. Information about
foreign student satisfaction would be more understandable if compared to
satisfaction levels of American students. Such comparisons have been
made in very few research projects.

Statement of the Problem

This study compares the satisfaction perceived by selected foreign
and American college students who graduated from Iowa State University
in Spring Quarter 1980, regarding the working conditions, compensation,
quality of education, social life, and recognition that existed during
their study.

It is assumed that it will be of value to administrators, personnel
workers, international educational services, and faculty members to know

more about the satisfaction that students perceive in their college experience. These perceptions should be meaningful to administrators who may identify the facilities and procedures with which students are satisfied or dissatisfied. Also, it may be possible to show which groups of students are more satisfied or dissatisfied in regard to the different aspects of the college environment. Industrial organizations differ from university, in that job satisfaction is considered to be very important in order to gain maximum productivity. Both university and industrial organizations, however, share an interest in developing human potential. If some factors prevent such growth there is room for improvement. Knowledge of student satisfaction will call for changes in emphasis in program or policies that will not damage the objectives of the universities.

Because the college is primarily a learning situation for the student, it may be possible for the student personnel workers and counselors to assist students to obtain some insight into their attitudes and discover how changing might make for greater satisfaction, happiness and achievement. In addition, it may be important for the college personnel worker to study whether the variables such as sex, age, marital status, curriculum, type of residence, academic classification, grade point average are related to foreign and American students' satisfaction.

Purpose

The purpose of this study was to compare foreign and American students' satisfaction with the university environment. Answers to questions such as the following were desired: (1) Are there significant differences between the perceptions of foreign and American students regarding their satisfaction in the following aspects: working conditions, compensation, quality of education, social life, and recognition? (2) Are the foreign and American students' satisfaction levels related to the following variables: sex, age, marital status, curriculum, type of residence, academic classification, grade point average? (3) What implications do answers to these questions have about the kinds of student perceptions for administrators, personnel workers, and faculty members?

Main Hypotheses Considered in the Study

Hypothesis I

H_o: There is no significant difference in satisfaction with selected aspects of college life between foreign and American students.

The first main hypothesis has six sub-hypotheses related to satisfaction with compensation, social life, working conditions, recognition quality of education, and total satisfaction. These sub-hypotheses are:

A. There is no significant difference in satisfaction with compensation between foreign and American students.

B. There is no significant difference in satisfaction with social life between foreign and American students.

C. There is no significant difference in satisfaction with working conditions between foreign and American students.

D. There is no significant difference in satisfaction with recognition between foreign and American students.

E. There is no significant difference in satisfaction with quality of education between foreign and American students.

F. There is no significant difference in total satisfaction (combination of the above five scales) between foreign and American students.

Hypothesis II

H_o: There is no significant relationship between satisfaction and type of students, when the effects of selected independent variables (including interaction effects) are considered.

The basic independent variable in the study was the type of student: foreign student or American student. Other variables in the study were sex, age, marital status, type of residence, academic classification, self-reported G.P.A. and curriculum area.

The second main hypothesis consists of six sub-hypotheses as follows:

A. Sex and age do not have significant effects on foreign and American students' satisfaction regarding social life.

B. Grade point average (G.P.A.) and curriculum do not have significant effects on foreign and American Students' satisfaction regarding compensation.

C. Type of residence and marital status do not have significant effects on foreign and American students' satisfaction regarding working conditions.

D. Sex and grade point average (G.P.A.) do not have significant effects on foreign and American students' satisfaction regarding recognition.

E. Curriculum and academic classification do not have significant effects on foreign and American students' satisfaction regarding quality of education.

F. Type of residence and age do not have significant effects on foreign and American students' satisfaction regarding the total satisfaction (combination of five scales).

Definition of Terms

The college student satisfaction Questionnaire Manual (Starr, Betz, and Menne, 1972) described the five scales of college student satisfaction in the following manner:

Working Conditions: The physical conditions of the student's college life, such as the cleanliness and comfort of his place of residence, adequacy of study areas on campus, quality of meals, facilities for lounging between classes;

Compensation: The amount of input (e.g., study) required relative to academic outcomes (e.g., grades), and the effect of input demands on the student's fulfillment of his other needs and goals;

Quality of Education: The various academic conditions related to the student and vocational development such as the competence and helpfulness of faculty and staff, including the advisors and counselors, and the adequacy of curriculum requirements, teaching methods, and assignments;

Social Life: Opportunities to meet socially relevant goals, such as dating, meeting compatible or interesting people, making friends, participating in campus events and informal social activities.

Recognition: Attitudes and behaviors of faculty and students indicating acceptance of the student as a worthwhile individual.

Scale scores are based on the sum of the 14 item responses for each scale. A total satisfaction score is derived by summing all 70 item responses.

Limitation of the Study

The sample was limited to 160 foreign and American students. The sample was selected from the foreign and American college students who were graduated from Iowa State University at the end of Spring Quarter, 1980. Limited facilities, time, and money did not allow for a larger sample.

Another limitation stems from the generalization of the study. Because the subjects were selected only from the foreign and American student population at Iowa State University during Spring Quarter, 1980, the results may not be generalizable beyond Iowa State University and subsequent researchers should take this limitation into account.

Organization of the Study

This dissertation is organized into five chapters. Chapter I presents the introduction, statement of the problem, the purpose, the main hypotheses, definition of terms, and limitations of the study.

Chapter II contains a review of selected literature considered relevant to the purpose of the study. It is organized into three sections: research on the satisfaction of American students; research on the satisfaction of foreign students; and comparative studies of foreign and American students' satisfaction.

Chapter III describes the methodology used in the study including hypotheses, sample selection, instrument, reliability, validity, co-variation, and data analysis.

In Chapter IV, the findings are presented and discussed.

Chapter V summarizes the findings, states conclusions and implications, and makes several recommendations pertinent to the foreign students' satisfaction.

CHAPTER II. REVIEW OF LITERATURE

The introduction included a statement that the foreign students' satisfaction with the university environment would be more understandable if it were investigated in relation to the satisfaction levels of American students and that there were very few research projects on foreign student satisfaction. This does not mean, however, that the universities and colleges have not been aware of the needs of foreign students. In many universities, systematic student personnel programs have been initiated to assist students in achieving solutions to their problems. Institutional evaluations have been conducted to learn whether students who participated in a particular educational program were better adjusted to the college setting than those students who had not participated in that program.

Because the present study is concerned with perception of foreign students' satisfaction compared with American students' satisfaction with the different aspects of the university environment, emphasis is given to reviewing those studies, concerned with college student satisfaction based on: American student population, foreign student studies and available comparative studies of American and foreign students' satisfaction regarding different aspects of the university environment.

Research on the Satisfaction of American Students

As early as 1933, Bird asked 1000 University of Minnesota students selected randomly from all classes to answer the following question: "what have been your most satisfying and your most annoying experiences as a pupil during your entire school and college career?" He received replies from 200 each of freshmen, sophomores, junior, seniors, and graduate students. The finding of the study showed no significant age, sex, or class differences in the source of satisfaction and annoyance. The teacher was mentioned most frequently as the highest source of satisfaction as well as the most noticeable annoyance. Students mostly were annoyed by teachers who had irritating personality characteristics.

Wrenn and Bell (1942) studied the first semester adjustment problems faced by freshman college students in 13 institutions. They thought the learning adjustment problem encountered by students could help in improving courses as well as help the instructor to attain a wider perspective and skill regarding the teaching of students. The Wrenn and Bell study represents a careful use of student opinion in understanding the problems faced by freshman college students. The important adjustment problems were found to be difficulty in budgeting time, unfamiliar standards of work, slow reading habits, uncertain vocational goals and heavy study loads. This study suggested that student satisfaction may be understood by having a professional worker from outside the institution conduct personal interviews with students. Also, tape recording of comments by students during group meetings was

tested as a method for assessment of student satisfaction with college life.

Hoppock (1935) conducted a study in the area of job satisfaction. Although he was not directly involved in studying student satisfaction, his techniques influenced others in studying student attitudes and satisfaction. He used a technique of measuring job satisfaction in which he seemed concerned with feelings of satisfaction, rather than with students' adjustment in terms of conformity. He concluded that scores tended to cluster at the satisfied end of the scales and that only about one-third of the workers were dissatisfied with their jobs. He also named and discussed many factors which might be considered in any satisfaction study. Hoppock's research is important not just as a pioneering effort in its area of job satisfaction, but also his techniques have been followed by researchers investigating student satisfaction with college facilities.

Roy (1949) was concerned with the development of an instrument that could measure college students' satisfaction. He believed that the satisfaction of students with the college setting was correlated with other variables and that an increase in their satisfaction might help in furthering their progress. The areas to be included were obtained by discussions of students' problems with student leaders, groups of students, and with personnel workers. Those were transferred into a scale similar to the scale which was used by Hoppock to study job satisfaction, and were distributed to a pilot group for suggestions and comments. The new scale was given to students in the intro-

ductory courses in psychology and sociology at the University of
Minnesota in the spring of 1945.

Roy defined college satisfaction as an attitude toward the differ-
ent phases of the college environment. He called it a feeling of
pleasantness and regards it as being on a continuum running from an
extreme position of satisfaction through neutrality to an extreme
position of dissatisfaction. He said that there are many points of
dissatisfaction in the college environment and that it was easier to
recognize dissatisfaction than satisfaction. Finally the instrument
was taken by 890 students, but only 207 completely filled out all the
scales in the instrument. Roy hypothesized that those who achieved the
most were apt to be the most satisfied. A study of these students show
over one-third of those in the top quarter on the American Counsel on
Education Psychological Test in the satisfied group and the rest of
them in the dissatisfied group. This seems to indicate a negative
relationship between satisfaction and ability.

Gamelin (1953) compared the satisfaction of students with college
life in eleven of the sixteen Minnesota colleges of liberal arts in
1951. He modified the College Satisfaction Index, which was developed
by Roy, (1949) and used the modified form in his study. He found that
some differences were statistically significant but still too small to
have practical value. He assumed sex differences on all scales, al-
though Roy had found them only on some. Gamelin's study showed some
indications that satisfaction stemmed from inner qualities of the stu-
dents rather than from the activities which are provided for them.

In studying the interrelationship between measured satisfaction with college and certain academic and personality variables, Almos (1957) found that the students were mildly satisfied with their first year of college experience. His results suggested that the more satisfied students remained in school longer, had more aptitude for college work, received higher grades, and possessed more characteristics frequently attributed to the extrovert. Other personality characteristics or environmental factors which the students encountered appeared to bear little relationship to measured feelings of satisfaction with college life.

In some studies, the concern has been with learning how extensively students were participating in social activities. And, because participation in this part of the educational program is on a voluntary basis, it is possible that the degree of participation in those activities might imply indirectly how well students were satisfied with their social life. In 1947, Burma conducted a survey to determine whether there were too many campus organizations as contended by the faculty or whether students, in saying that inadequate provision was being made for extracurricular activities, were justified in their complaint. His sample included 1000 students in the Los Angeles, California metropolitan area. The findings showed that of all the students completing the questionnaire, 40 percent were not participating in any extracurricular activities. Almost 20 percent were participating in three organizations and a few students were participating in six to nine campus activities. Students who received high grades were most active

in social organizations. Those receiving "As" were almost twice as active as those receiving "Cs". Students also were asked to estimate the numbers of organizations that existed on the campus and to mention whether the number was adequate for their needs. The number of organizations as reported by the student manager's office was 40. Student estimates of the number of organizations on campus varied from 3 to 100. The modal estimate was 20 and the average 21. It became obvious that the majority of the students were not familiar about the types and the number of organizations on campus.

Williamson, Layton, and Snoke (1949) conducted a study hoping to analyze the social needs of students and provide means for implementing new programs. Included in the questionnaire were requests for information on the students' participation in organizations, the extent of participation in different activities, preference and desires in regard to activities and certain family and personal background data. One of the most significant results of the study is the fact that 71 percent of women and 60 percent of the men were participating in one or more student activities. The results also indicated a tendency for younger students to participate more actively than older students.

Studies of students' social life have tended to investigate the extent to which college students were participating in student extra-curricular activities. The results show that further information is needed on student satisfaction with college social life.

Students perceive aspects of the college setting differently. A study involving freshmen students in eight institutions was conducted

by the Center of Higher Education at the University of California at
Berkeley ("The Invisible Thread: A University's Reputation," 1966),
and showed that different students were attracted by various aspects
of the university environment. The students in two of the three secular
colleges saw the existence of a liberal atmosphere (such as political
freedom and a minimum regulation on social behavior) as a very important
characteristic. The reputation of a large state university and high
academic standards were perceived by the students as major character-
istics. Friendly and close student-faculty contact was perceived as
the dominant characteristics by the students in three denominational
colleges.

By using The College Characteristic Index (CCI), Thistlethwaite
(1960) investigated the relationship between college experiences and
changes in major fields of study and the level of training which the
subjects sought. His findings showed that the student perception of the
faculty press and student press were related to the change in the di-
rection and level of career choice. He finally concluded that "ex-
periences in college which encouraged the student's belief that he may
be successful in a career-field, provided role models for imitation,
or proved that his expectations about certain career-fields were
inappropriate, were related to the stability and direction of change
of study plans" (p. 233).

Individual differences in perception of the college setting were
explored by Marks (1970). The purpose of the study was to determine the
types of consistent individual perceptions that college students (fresh-

men) had of their college environment and to identify the structure of each of the perceptual-judgmental spaces. One hundred male students who entered Georgia Institute of Technology in the fall of 1969 were divided into two equal groups and 21 selected pairs of items were given to them. One sample's responses were given with regard to the "actual" college setting and the next sample's responses pertained to the "idealized" college setting. The finding showed that a considerable amount of the variance and covariance of judgment on the "actual" setting could be accounted for by three perceptual spaces. Type I perceptual space was explained by two dimensions. One dimension was the social desirability and the second dimension was a perception of the tradition of the institution in terms of its difficulty and hard work required of the students. Type II perceptual space was structured along three dimensions, which were the openness and freedom of the college as a social structure, the academic excellence of the college, the scholarship which was maintained by incentive structure and an atmosphere of open inquiry. Type III perceptual space was described by "play" aspects of the college environment. Generally, students perceived the college setting according to their perceptual spaces; some of the students perceived the reputation of the college and the academic excellence as the most important dimension, while others perceived the social dimension of the college environment as the most important component.

The nature of the environmental press existent within the College of Education at the University of Missouri Columbia was studied by Butler (1970). He defined the environmental press as the forces that

acted upon the student and contributed to his socialization. The College and University Environment Scales (CUES) test was given to 500 students and faculty members to find out the extent to which students and faculty perceptions of press vary and also to find out what dimensions the press indicated. It was found that students at different levels and also faculty differed in their perceptions of the environmental forces. Students at the freshman level and faculty perceived the environment as showing more positive press than did the other groups. Seniors, master and doctoral groups perceived the environment as providing the least desirable press. The results also showed that freshmen who had higher grade point averages perceived a significantly greater amount of scholarly atmosphere in college than did those who had lower grade point averages. The perceptual congruency of perception of administrators, faculty members, and undergraduate students about a college setting was the subject of a research conducted by Hendricks (1970). He found no significant differences in the perception of the university environment indicated by the three groups. A significant difference in perception was found between what administrators thought were students' views about the campus environment and what in fact were student views. The students perceived the campus to be more formalistic and less scholarly than the administrators.

Some studies focused on how students feel about college life and the variables that affect or are related to students' feeling of satisfaction or dissatisfaction with different components of the college environment. In an early study on college student satisfaction involving

154 college freshmen, Berdie (1944), by adopting the first page of Hoppock's Job Satisfaction Blank, examined the feasibility of predicting a level of students' satisfaction with curriculum by college grades, scores on a series of ability tests and student response on strong vocational interest blank. The finding indicated that no single factor showed a high correlation with students' satisfaction with curriculum. A significant correlation of .23 between grade point average and satisfaction in curriculum was found. He also indicated that the upper half of the group, which was a high satisfaction group, had a significantly higher grade point average than the low satisfaction group.

In studying the relationship of high potentiality and satisfaction with college experience, Westlund (1959) found that freshman students of high potentiality were more satisfied with curriculum, instructors, opportunities for cultural development, and college in general than freshmen of average potentiality. Freshman women were more satisfied than freshman men with curriculum, social life and opportunities for cultural development. There was no significant difference between students of high and average potentiality, or between men and women, on satisfaction with faculty advising.

Seymour (1963) found that agreement between students' pictures of themselves and their pictures of a successful student was significantly related to satisfaction. Students who consider themselves as successful are more satisfied than students who view incongruence

between the "ideal student" and themselves. Seymour also found that there is no significant relation between grades and satisfaction.

The student college congruence correlate has been examined by Pervin (1967). He attempted to show that satisfaction is the product of congruency between the perceived environment and perceived self. He hypothesized that for optimal satisfaction the perceived environment should fall on the continuum between the perceived self and ideal self. The findings of the study gave strong support for the hypothesis of a relationship between the perceived self-college similarity and satisfaction. In other words, he concluded that the fit between the characteristics of individuals and the characteristics of the college determined students' satisfaction. He also found that college satisfaction had significant impact on behavior. Two other studies tend to support Pervin's findings. Ernest (1966) found that people prefer occupations perceived as congruent with their self-concepts. Lundy et al. (1966) seemed to support the hypothesis that subjects describe people they like best as similar to their self-concept.

Waterman and Waterman (1970) attempted to find out whether student dissatisfaction is related with crisis periods of occupational and educational indecision. This study, which was based on Erikson Theory of ego identity, found that critical periods of indecision were related to student dissatisfaction.

Richardson (1969), using the College Student Questionnaire, investigated the relationship of congruence between student and institution and the satisfaction with college. He found a linear relation-

ship between orientation-environment congruence and student satisfaction
with faculty, administration, major, and students measured by The
College Student Questionnaire (part II). The trend was for subjects
in a position of high congruence with their college environment to re-
port more satisfaction than did subjects of low or moderate congruence.
The results of this study seem to show little relationship between
student satisfaction and student-college congruence. Even though the
relationship may be a factor, it does not determine satisfaction.

Salzman (1969) studied the relationship between students' needs
and perception of the college setting and the relevance of needs and
perceptions for experience of satisfaction with the college setting.
His results showed a significant relationship between students' needs
and their perceptions of the college environment for both the total
sample and the satisfied and dissatisfied groups. The students who
were satisfied showed greater need to conform, to follow instruction,
to be generous and to have things run smoothly. On the other hand,
dissatisfied students expressed greater need to be recognized, to be
successful, to criticize and to attack contrary viewpoints.

A specially developed questionnaire was employed by Fenske (1970)
in a study for the purpose of examining the degree of student's
satisfaction with the four aspects of the college setting (academic,
social, extracurricular-special interest, and extracurricular-
recreational) and the relationship between the satisfaction scores
and 12 variables from the student profile section of the American
College Test (ACT) battery. The results indicated that academic and

social interpersonal dimensions to be a more satisfying source of collegiate experiences than either of the extracurricular dimensions. Approximately two-thirds of the respondents reported satisfaction with other students, but only one-fifth of the respondents found association with faculty as a major source of satisfaction. The variables that were reported as having significant relationship with the levels of satisfaction in one or more of the four aspects of satisfaction were: 1) high school achievement, 2) grade point average in college, 3) high school leadership score, 4) residence of students, 5) distance from campus. The dimensions of academic environment may be roughly comparable to satisfaction with faculty and satisfaction with major field of study.

The impact of attitude on academic performance of students at the Mississippi State College for women was investigated by Marsalis (1970). The purpose of the study was to find out whether or not attitudes of college students towards teachers (when reciprocally similar or dissimilar) reflected a parallel in the students' grades. By using the Q-sort technique, students and faculty were asked to rate each other twice before and after the assigning of mid-term grades. With the use of the correlation method, the analysis of data showed that when faculty appeared to view students as possessing attitudinal characteristics similar to themselves, students attributed attitudinal characteristics to their instructors which they did not assign to themselves. Student and faculty perception of each other and differences between students perception of faculty and faculty perceptions of students showed

no significant effect on the students' grades (before and after the assignment of grades).

Using the College Satisfaction Index (CSI), Berdie, Pilapil, and Im (1970) examined the satisfaction with college of graduating seniors and the relationship of students' satisfaction with academic ability, aptitude measured prior to college, personality characteristics, and academic success and progress in college. The analysis of the nine (CSI) scale scores (Curriculum, Instructors, Social Life on the Campus, Professional Counseling, Faculty Advising, Opportunities for Cultural Development, Health Service, Living Quarters, and College in General) indicated that a student's satisfaction with one aspect of the college setting is independent of their satisfaction with components of the college setting. A significant correlation was found between student satisfaction with social life and grade point average. Students having lower grades tended to be more satisfied than students having higher averages. There was no significant correlation between student satisfaction with college in general and transcript data (including grade point average). In general, the results showed that the effect of students' satisfaction with college on academic behavior is not global in nature. Rather, different aspects of the college environment have different impacts on how students perform academically.

Zimmerman (1969) obtained positive correlation between academic achievement and attitude towards faculty, the major, study habits and facilities in a study of male and female students from the sophomore, junior, and senior classes at Lycoming College. He gave the scholastic

aptitude test and the College Student Questionnaire, part II and obtained the grade point average of each student in the sample to determine the relationship between scholastic aptitude, attitudes toward various aspects of the college environment and academic performance. The attitude of students measured in this study were: attitudes towards administration, faculty, academic major, student body, study habits and facilities, and extracurricular activities. The results showed that female students were more satisfied with the administration, faculty, academic major, students, and facilities and study habits than male students. In general, Zimmerman indicated that satisfaction with the faculty, academic major, and study habits and facilities were important factors that contributed to student achievement.

By using the College Student Questionnaire, part II, Willsey (1971) investigated the relationship between academic performance of students and satisfaction with the college setting. The results of this study showed that overall satisfaction and satisfaction with faculty were significantly related to grade point average. The higher the grade point average, the greater degree of satisfaction. This research for the first time established a significant relationship between grade point average and satisfaction. Nevertheless, grade point average needs more investigation to clearly understand its relationship to different aspects of student satisfaction.

Several studies have been done on the relationship between student satisfaction and student tenure in college. The relationship between

persistence in college and satisfaction was investigated by Robinson (1968). His results showed that male and female students who were dropped out reported a greater degree of dissatisfaction with faculty, scholastic habits and advisement, than those students who persisted. And those who persisted were more satisfied with their college than those students who withdrew or were dropped by the university.

The differences in college student satisfaction among academic dropouts, nonacademic dropouts, and nondropouts were studied by Starr, Betz, and Menne (1972). The results indicated that students who remained in college were more satisfied than students who dropped out, and of students who were dropped out, those who left for nonacademic reasons were more satisfied than those students who were dropped for academic reasons. In addition, three scales of the College Student Satisfaction Questionnaire: compensation, recognition, and quality of education discriminated between students who remained and those students who dropped out. Differences were negligible on the social life and working condition scales. According to the author, generally, the satisfaction differences revolved around the requirements and academic services of the university and the individual feelings of worth among students and faculty. The results suggest that student satisfaction is an important factor in student tenure. The students who are satisfied are more likely to persist from beginning to graduation than dissatisfied students.

Age, academic classification, sex, have been studied for the possible relation with student satisfaction. Martin (1968) conducted

a study of college satisfaction of freshmen who had enrolled in a
Canadian college. He reported no significant correlation between the
students' conception of the "ideal" college and their perception of
the "real" college. His sample included freshmen who were found to be
more satisfied with college at the first of the year than at the end.
Graduate students were less satisfied than freshmen at the beginning or
at the end of the year. The study seems to indicate that students be-
come less satisfied as they grow older.

In a study of women over 25 years of age compared to women in the
18-21 year old group, Sturtz (1971) showed that the women over 25 are
more satisfied than the younger women. These findings conflict with
those of the Martin (1968) study reviewed previously. Nevertheless, it
should be noticed that age was the primary factor in the Sturtz study,
and not the primary factor in the Martin study. However, the age
variable needs further study to find out how it influences student
satisfaction.

Betz, Klingensmith, and Menne (1970) looked at the relationship
between aspects of student satisfaction measured by the six scales:
policies and procedures, working conditions, compensation, quality of
education, social life and recognition of the College Student Satis-
faction Questionnaire (CSSQ) and sex, type of residence and year in
college. The sample consisted of 297 male and 166 females from the
four year college years. From the whole sample, 140 men and 112 women
lived in dormitories, 148 men in fraternity residences and 54 women in
sorority residences. The results of this study showed that sex was

not significantly related to the satisfaction scales, except for the social life scale, which had a high correlation with sex. It was reported that the type of residence was significantly related to the scales of policies and procedures, working conditions, compensation, quality of education and social life. It was also found that year in college is significantly related to the policies and procedures, compensation, quality of education and social life scales. Year in college, sex, and type of residence were not found to be significantly related to the recognition scale. In general, the results showed that type of residence and year in college were related to several components of college satisfaction, but sex differences seemed to have little relationship with student satisfaction with the college setting.

In contrast to the results of the Betz et al., (1970), which were mentioned previously, Schultz (1972) found satisfaction differences between men and women students on three of the College Student Satisfaction Questionnaire scales (social life, recognition, and total satisfaction). This difference has likely been due to differences in the designs of the studies.

In 1972, Betz, Starr, and Menne also conducted a study to determine whether satisfaction of students in large public universities differed from that of students attending small, private colleges. They hypothesized that the satisfaction of men and women would not differ. The finding of the study confirmed the hypothesis that satisfaction differed between students at large public universities and students at small private colleges. The hypothesis that the satisfaction of men and women

would not differ was supported. However, the interaction effect suggested that sex may make a difference when it is considered along with the type of institution.

In a study investigating the accuracy with which student affairs personnel, residence advisors, and faculty members can predict student satisfaction through the students' frame of reference, Passons (1971) found that faculty members' estimates of student satisfaction with administration were significantly lower than those reported by the students. Also, the student affairs staff's prediction of degree of satisfaction with faculty was significantly below that indicated by students. No significant differences were found in satisfaction with students.

In a similar study, Hallenbeck (1974) explored the students' expressed level of satisfaction and the perceptions of that satisfaction by academic advisors and the student affairs staff at Iowa State University, measured by the College Student Satisfaction Questionnaire. The sample consisted of 300 undergraduate students, 300 academic advisors, and 92 student affairs staff members. The findings of the study did not support any of Hallenbeck's hypotheses. Some significant differences were found among and within groups in all comparisons. It was found that students' expressed level of satisfaction did not vary greatly on the variables measured by the College Student Satisfaction Questionnaire. As a group, academic advisors did not accurately perceive the level of student satisfaction. The student

affairs staff more accurately perceived the students' reported level of satisfaction than did the academic advisors.

The perception of students with respect to the college administration, faculty, students, and college in general was explored by Balais (1975). The results of this study showed that the freshmen were the most satisfied group and the seniors were the least satisfied. The females scored significantly higher than the males on the four satisfaction scales. Also, students with a high level of total college satisfaction obtained significantly higher grades than students whose satisfaction with college in general was low.

By using the College Student Satisfaction Questionnaire (CSSQ), Gallo (1977) examined the student perceived satisfaction with the variables of sex, marital status, learning preference, and enrollment within the university. The results showed significant differences between the single and married students. Women were more dissatisfied with the college setting than were men. There were no significant differences between the two learning preferences on the College Student Satisfaction Questionnaire.

Research on the Satisfaction of Foreign Students

The research in the area of foreign students' needs and problems in the United States (which began appearing in the late 1940s) is extensive. But there are very few research projects regarding how foreign students themselves feel that their needs are satisfied.

The relationship between English proficiency of foreign students at New York University, and academic achievement, extent of cultural

contact and degree of social satisfaction were investigated by Brandwine (1965). The hypotheses of this study were that: 1) English proficiency of foreign students is related to academic achievement, 2) English proficiency is related to the extent of cultural and social contact, 3) English proficiency is related to the degree of social satisfaction. Findings indicated that foreign students exempt from taking the English proficiency test had higher grade point averages than those students who took the test; they showed more cultural and social contact and a greater degree of social and cultural satisfaction. Findings also showed that the total English proficiency test scores were a valid predictor of success. Part of the second and third hypotheses were not confirmed. The English proficiency test scores were not significantly related to cultural contact and social satisfaction. Further analysis of the data showed that when tested and untested groups were compared, the students in the untested (English Proficiency) group benefitted to a great extent from scholarships, spent a longer time in the United States, and were more mature--all of which may have contributed to the finding that there was a significant relationship between the students in the untested group and the extent of social and cultural interaction and satisfaction.

A few studies in the area of foreign student satisfaction differentiated systematically between graduate and undergraduate foreign students. Some of this research was summarized in an article by Walton (1971). A study of Middle Eastern students by Gezi in 1959 (Walton 1971) showed that the general satisfaction of graduate students was much higher

than that of undergraduate students. He indicates that "since graduate students usually come to the United States with clearcut purposes, such as the attainment of advanced training or a professional degree, they are more likely to adapt themselves to the requirements of their colleges and to the different demands of the college environment..." (quoted in Walton, 1971).

In another study, Melly and Wold (Walton, 1971) indicated that graduate students were more satisfied with their academic program than were undergraduates.

The characteristics of international alumni of Cornell University from 1935 to 1959 and their satisfaction with their college experience were investigated by Green in 1964 (Walton, 1971). His results showed that alumni admitted as undergraduates reported English difficulty more frequently than did those admitted as graduate students. In general, this research indicated that foreign graduate students have less difficulty in adjusting to the academic environment than do foreign undergraduates.

Porter (1962) found that the younger foreign students checked, on the average, less satisfaction than the older foreign students. However, the difference between the two groups was not significant.

Hamann (1975) investigated the degree of satisfaction the foreign students expressed regarding their majors, the faculty, other students and the administrators. The sample of the study consisted of 35 graduate students from foreign groups (Brazil, India, and Nigeria) who studied for at least six months at the University of Wisconsin in

Madison, and a sample of 70 American graduate students. The results of the study indicated that the overall satisfaction score with other students was lower for the Indian students than for the other three groups. Satisfaction with the administration of their programs was lower for the American students than for any other groups. Nigerian students were most satisfied with their majors. The Indian students were least satisfied with their majors. The nationality group most satisfied with all areas were the Nigerians, while the Indian and Americans were the least satisfied group. As an entire group, the subjects were most satisfied with their majors and least satisfied with other students.

Using the College Student Satisfaction Questionnaire (Form C), Siriboonma (1978) conducted a study to determine the relationships between Iowa State University foreign student satisfaction and nine demographic variables (sex, academic classification, age, region, source of support, curriculum, marital status, type of residence, and length of stay).

The results of this study showed that graduate students reported greater satisfaction with working conditions than did undergraduates. Those in the 28-and-above age group were more satisfied with working conditions than were those in the other age groups. But students who were in the 18-22 age group were the least satisfied with working conditions of all the age groups. Married students reported a higher level of satisfaction than single students. Students living in married student housing reported more satisfaction than those residing in

apartment/private residence. Those living in dormitories were the least satisfied with working conditions. No significant differences were reported in levels of satisfaction when students were grouped by sex, region, source of support, curriculum and length of stay.

In regard to the satisfaction with compensation, male students were more satisfied with compensation than were female students. Graduate students were more satisfied than undergraduates. Students in the 28-and-above group were more satisfied than those who were in other age groups. No differences were found when students were grouped according to source of support, curriculum, marital status, type of residence and length of stay.

Considering the satisfaction with quality of education, graduate students were more satisfied than were the undergraduates. Students in the 28-and-above age group reported a higher level of satisfaction than did those in the other age groups. Married students were more satisfied than single students. No significant differences were found in satisfaction when students were grouped by sex, curriculum, type of residence, and length of stay.

European students reported greater satisfaction with social life than did those coming from other parts of the world. From all groups within the sample, Africans were least satisfied with social life. Sex, academic classification, age, source of support, curriculum, marital status and length of stay were not found to be significant factors in social life satisfaction.

Considering satisfaction with recognition, graduate students were more satisfied with recognition than were undergraduates. Students in the 28-and-above age group showed a higher level of satisfaction than those in the other age groups. Students in the 23-27 age group were the least satisfied with recognition. Married students reported greater satisfaction with recognition than did the single students. Also, students residing in married student housing were more satisfied than those residing in the other accommodations. Students living in apartments and private residences were least satisfied with recognition. The other demographic variables were explored and not found significant in students' perceived satisfaction.

On Total Satisfaction scales, graduate students reported a greater satisfaction with their overall college experience than did the undergraduates. Students in the 28-and-above group were more satisfied with their overall college experience than students in the other age groups. Students in the 23-27 age group were the least satisfied group in terms of their overall college experience. Married students were more satisfied with their overall college experience than single students. Also, students residing in the married housing expressed greater satisfaction with their overall college experience than did students who live in apartments/private residences.

Comparative Studies of Foreign and American
Students' Satisfaction

This section will review several studies that have been conducted
in which the comparative approach to foreign student satisfaction was
used.

Flores (1970) compared the perceptions towards the college environ-
ment held by Filipino undergraduate students at Silliman University and
Philippines and American college students from the University of
Redlands, The Pennsylvania State University, and the Educational Testing
Service norm group. The College Student Questionnaire (part II) was
employed in this study. The results of the study showed that Filipino
students by sex and class were more consistent in satisfaction with the
faculty and administration than with their fellow students. The female
Filipino students expressed more satisfaction with faculty, college
administration, and students than did male students. When compared
with the American students, the Filipino students reported significantly
higher satisfaction with the faculty and the college administration.
Filipino female and male students differed significantly in the satis-
faction with faculty and administration, but no significant differences
were noted between the male and female American students on these two
variables. A significant difference was found between male and female
Filipino students regarding family independence, but no significant
differences were found between the sexes on this variable in the
American groups, except for the Educational Testing Service norm group.
A highly significant difference was found between Filipino and American

freshmen and sophomores in their satisfaction with administration and faculty and attitude toward the family. The Filipino students showed more satisfaction with the faculty and the administration and less satisfaction with family independence than any of the American groups.

Although the topic is not directly related to the foreign students' satisfaction in the United States, Johnson (1971) conducted a comparative study to provide attitudinal and empirical information about foreign students. In the first phase of his study, he designed the 13-Item "problem" section of the questionnaire, and administered to 214 students attending the University of Tennessee. Students were asked to mark whether each item was a "very important problem," "important problem," "sometimes a problem," or "not a problem." In the second phase of the study, American students' opinions of the problems of foreign students were investigated. He found that American students expected foreign students to have more problems than the foreign student group reported. This finding led to the third phase of the study, which was a comparison of the responses of the foreign and American students. In cases of food, homesickness and separation from the family, there were significant differences between the foreign and American student responses. One of the unexpected findings was that the percentage of foreign students reporting problems with food was lower than the percentage of American students. Homesickness and separation were expressed as greater problems by the foreign students. In conclusion, Johnson mentioned that because the American students'

responses were close to the responses of foreign students, Barbara Walton's (1971) statement that "the foreign student is more student than foreign in the problems he faces" (Johnson, 1971) was substantiated.

Lee, Ahd-Ella, and Thomas (1979) conducted an extensive review of literature regarding the needs and problems of foreign students in the United States. They concluded that the question of how foreign students themselves feel about those needs remains largely uninvestigated. Further, they mentioned that the comparative study of Culha (1974) on foreign student needs and satisfaction is probably one of the few studies that has been done in this area.

Culha (1974) hypothesized that the needs of foreign students differ from those of American students, and foreign students are relatively less satisfied; the satisfied and dissatisfied students would have significantly higher needs in the areas of adjustment considered. The results of the study indicated that the only significant difference in mean need score appeared to be on the emotional security scale, with the American student group scoring higher than the foreign student group. On a scale-by-scale comparison of the foreign and the American student group satisfaction, significant differences were found for 10 of the 14 scales used in the study. Of these ten, differences on six scales (social activity, creativity, friends, university rules and procedures, emotional security and overall satisfaction) were significant at the 0.01 level, and differences on ability utilization and basic values were significant at the .05 level. The data on all but one of these

scales showed that foreign students were less satisfied than American students. The mean of the foreign student group on University Rules and Procedures was higher than that of the American group. The results also showed that the needs of the satisfied and dissatisfied foreign students significantly differed, with the "dissatisfied" students having higher need scale means.

Summary

The literature reviewed in this chapter discussed the comparative research that has been conducted in the area of student satisfaction focused on American and foreign student populations. However, this review has not led to a definite consensus regarding the factors that contribute to college student satisfaction.

Students perceive different components of the college environment, such as educational quality, working conditions, social life, recognitions, faculty-student relations and administrative policies and procedures as affecting their satisfaction with college. These aspects of the college setting were indicated as having different impact on students, depending upon their perceptual spaces, needs, year in college, and satisfaction. This point is very important, because the way an individual perceives the college setting will decide the aspects of the college environment which would pressure him/her most and which would affect his/her behavior in college.

Studies in the area of student college congruence showed little evidence to conclude a direct relationship between student college

congruence and satisfaction. It could be a variable which influences satisfaction, but it is not the cause. In the area of students' needs and their relationship to the level of satisfaction with environment (which is related to congruence), the most satisfied students perceived the college setting as a friendly environment. Dissatisfied students tended to report greater needs to be recognized and to be successful. The most dissatisfied students were those students who knew no faculty members or faculty at their department. Satisfied students perceived the college setting as meeting more of their needs than did dissatisfied students. The more successful the student is, the more satisfaction he feels.

The review of literature described students' perception or satisfaction with the college environment and related such perception or satisfaction with different factors, such as personality traits, interests, student orientation, and academic performance. The studies showed some conflicting results. Some studies found positive correlations between satisfaction and academic performance. Students with the higher level of satisfaction tended to obtain higher grades than students whose satisfaction with college in general was low, or reported that these factors had significant contributions to the prediction of academic performance. But in one study it was found that those factors were not effective predictors of academic achievement.

Demographic variables such as sex, age, curriculum, college academic classification, marital status, type of residence have been studied to determine their effect on different aspects of college stu-

dent satisfaction. Age and type of residence seem to affect the level of satisfaction more than any other variables.

Evidently, as the review of literature has shown, the study of college students in general and more specifically foreign students is in its infancy and there is need for more research relating foreign students' satisfaction with different aspects of college environment. The present study compares foreign and American student satisfaction measured on the following scales: working conditions, compensation, quality of education, social life and recognition. Also the further question of whether the foreign and American students' satisfaction is related to the variables such as: sex, age, marital status, curriculum, type of residence, academic classification and grade point average is pursued. It is hoped that the present investigation will add information to the presently existing literature on foreign student satisfaction with the college environment.

CHAPTER III. METHODOLOGY

The purpose of this study was to examine the perception of foreign students regarding their satisfaction with different aspects of the college environment and whether their perceptions differ from those of American students. The following sections will describe the hypothesis of the study, the criteria for selection of the sample, the selection of the instrument to measure satisfaction with college life, evidence of reliability and validity of the instrument, and the statistical techniques used in the analysis of results.

Main Hypothesis of the Study

Hypothesis I

H_o: There is no significant difference in satisfaction

with selected aspects of college life between foreign

and American students.

Hypothesis I consists of six sub-hypotheses related to satisfaction with compensation, social life, working conditions, recognition, quality of education, and total satisfaction. The sub-hypotheses are:

A. There is no significant difference in satisfaction with compensation between foreign and American students.

B. There is no significant difference in satisfaction with social life between foreign and American students.

C. There is no significant difference in satisfaction with working conditions between foreign and American students.

D. There is no significant difference in satisfaction with recognition between foreign and American students.

E. There is no significant difference in satisfaction with quality of education between foreign and American students.

F. There is no significant difference in total satisfaction (combination of the above five scales) between foreign and American students.

Hypothesis II

H_o: There is no significant relationship between satisfaction and type of student when the effects of selected independent variables (including interaction effects) are considered.

As was mentioned earlier, hypothesis I tested whether there was a significant difference in satisfaction with various aspects of college life between foreign and American students. The purpose of hypothesis II was to determine whether these differences (if any) would hold up across different levels of selected independent variables such as sex, age, marital status, type of residence, academic classification, grade point average and curriculum area. In other words, the main effects of the selected independent variables and the interaction terms were included in the analysis of data. Based on the researcher's review of literature and the opinions of professional educators who deal with variables affecting student satisfaction, the following sub-hypotheses were formulated (see pages 10 and 42).

A. Sex and age do not have significant effects on foreign and American students' satisfaction regarding social life.

B. Grade point average (G.P.A.) and curriculum do not have
    significant effects on foreign and American students'
    satisfaction regarding compensation.

C. Type of residence and marital status do not have signifi-
    cant effects on foreign and American students' satisfaction
    regarding working conditions.

D. Sex and grade point average (G.P.A.) do not have significant
    effects on foreign and American students' satisfaction re-
    garding recognition.

E. Curriculum and academic classification do not have signifi-
    cant effects on foreign and American students' satisfaction
    regarding quality of education.

F. Type of residence and age do not have significant effects
    on foreign and American students' satisfaction regarding
    the total satisfaction (combination of five scales).

Samples

Two groups of students were used as subjects in this study. The
first group consisted of 84 foreign students, whose names were taken
from a list of foreign students who expected to graduate at the end of
Spring Quarter of 1980. The list was obtained from the registrar's
office at Iowa State University. Because the author of the present
study was primarily concerned with the foreign students from the third
world countries, four of the students who were from Japan, Norway,
Switzerland and England were excluded from the list. Table 1 indi-
cates the country of origin of the students who comprised the foreign
student sample. The students from Iran and Hong Kong constituted the
first and second largest number, and the students from Jordan, Ecuador,

Table 1. Breakdown of the country of origin of the foreign student
group sample

Name of the country	N	%
Iran	21	26.25
Hong Kong	10	12.50
Nigeria	7	8.75
Taiwan	5	6.25
Thailand	4	5.00
Venezuela	4	5.00
India	4	5.00
Korea	4	5.00
Malaysia	3	3.75
Ethiopia	2	2.50
Singapore	2	2.50
Brazil	2	2.50
Indonesia	2	2.50
Ghana	2	2.50
Iraq	2	2.50
Philippines	2	2.50
Algeria	1	1.25
Turkey	1	1.25
Ecuador	1	1.25
Jordan	1	1.25
Total	80	100.00

Turkey and Algeria constituted the smallest number of foreign students
in the sample.

A comparison group of 80 American students was selected from a
list of all American students who expected to graduate at the end of
Spring Quarter of 1980. This list was obtained from the Iowa State
University's Registrar's Office. The total number of American students
in the list was 2,234. Because the author was interested in selecting
80 American students on the basis of academic classification and sex,
the same as in the foreign student sample, the list was categorized on
this basis and the following new lists were obtained. Undergraduate
female (803), undergraduate male (1099), graduate female (71), and
graduate male (139). After the lists were ordered, a systematic sample
was selected according to the suggestion of Borg and Gall (1974, p. 120).
Under this procedure a sampling interval (K) is set and a number (r)
between 1 and K is selected at random. With the population ordered,
the rth element and every Kth element thereafter is selected in the
sample. The sampling interval (K) of 80 for undergraduate female (which
would yield 10 students), 36 for undergraduate male (which would yield
30 students), 15 for graduate female (which would yield 5 students),
5 for graduate male (which would yield 35 students) were the choices.

By this procedure the samples are matched in terms of number of
students by academic classification and sex. For this analysis, the
proportions were controlled to eliminate any differences that might
result because of differences in original proportions in the two groups.
Generalizations from the American group are limited to a group with

these proportions as sampled, i.e., in order to obtain values for the American based on original proportions in the population, a weighted analysis would need to be completed.

A letter of explanation, the questionnaire, answer sheet, and supplemental questions were assembled in a packet for each student in the sample groups. The packets were delivered to the students' residence by the author. Two weeks later, the completed questionnaires were picked up at the students' residence.

Descriptive statistics for the foreign and American student groups are revealed in Table 2. One-hundred and sixty foreign and American students completed the College Student Satisfaction Questionnaire. The majority of the foreign students were male (81%). Also 81 percent of the American sample was male. The percent of foreign students who were single was 65, while this percent for American students was 67.5.

About 53 percent of the foreign students were 25 and younger, compared with 59 percent of the American students. Nineteen percent of the foreign students were 30 or above 30, while 11 percent of American students were in this category.

Sixty-three percent of the foreign students and 58 percent of the American students were living in off-campus housing.

Fifty percent of the foreign and American students were in under-graduate programs and expected to receive a bachelor's degree. Fifty percent were in graduate school and expected to receive a masters or Ph.D. degree.

Table 2. Descriptive characteristics of the foreign student (N=80) and American student (N=80) samples

Characteristic	Foreign Students		American Students	
	N	%	N	%
Sex				
Male	65	81.2	65	81.2
Female	15	18.8	15	18.8
Total	80	100	80	100
Marital Status				
Single	52	65.0	54	67.5
Married	28	35.0	26	32.5
Total	80	100	80	100
Age				
22 – 25	42	52.5	47	58.7
26 – 29	23	28.7	24	30.0
30 and plus	15	18.8	9	11.3
Total	80	100	80	100
Type of Residence				
Dormitory/Fraternity/ Sorority	30	37.5	34	42.5
Private residence/ Married housing	50	62.5	46	57.5
Total	80	100	80	100

Table 2. (continued)

Characteristic	Foreign Students		American Students	
	N	%	N	%
Academic Classification				
Undergraduate	40	50.0	40	50.0
Graduate	40	50.0	40	50.0
Total	80	100	80	100
Curriculum				
Sciences and Humanities, Home Economics, Education	36	45.0	51	63.7
Engineering, Veterinary Medicine, Agriculture	44	55.0	29	36.3
Total	80	100	80	100
Grade Point Average				
2.00 - 2.49	9	11.2	16	20.0
2.50 - 2.99	19	23.8	22	27.5
3.00 - 3.49	28	35.0	26	32.5
3.50 - 4.00	24	30.0	16	20.0
Total	80	100	80	100

It is not surprising that more than half (55%) of the foreign students were majoring in engineering, veterinary medicine and agriculture, compared with only 36 percent of the American students.

The grade point averages of 30 percent of the foreign students and 20 percent of the American students were reported above 3.5. Only 11 percent of the foreign students' grade point averages were below 2.49 and 20 percent of the American students' grade point averages were below 2.49. However, 32.5 percent of the American students were between 3.00 to 3.49.

The Instrument

The instrument used in the study was the College Student Satisfaction Questionnaire, Form C (CSSQ). The CSSQ consists of 70 items relating to various aspects of college life. Because a 5-choice Likert-type scale was used, an individual's score was the summation of the numbers he/she had chosen from one to five to show extreme dissatisfaction to extreme satisfaction. The possible score range of one to five expressed three as its mean. Each student had a total score in addition to scores for each of the five scales. The highest possible score was 350; the lowest score was 70. A score of average was 210, while the average for each of the five scales would be almost 42. The exact responses are listed as:

1 = I am very Dissatisfied
2 = I am somewhat Dissatisfied
3 = I am Satisfied, no more no less
4 = I am quite Satisfied
5 = I am very Satisfied

The five scales measure satisfaction with: 1) compensation (for example, amount of study required to attain good grades), 2) social life (for example, making friends), 3) working conditions (for example, comfort of residence), 4) recognition (for example, faculty acceptance of the student as worthwhile), 5) quality of education (for example, adequacy of teaching methods). Each scale is based on the sum of the 14-item responses. The total satisfaction score is derived by summing all 70 responses. In addition, the students were asked to report the following: sex, marital status, age, type of residence, academic classification, curriculum, and grade point average (G.P.A.).

Reliability

Internal reliability coefficients (Cronbach's Coefficient alpha) were computed for each of the CSSQ scales for the total group (foreign and American student groups combined) and for each group separately. Reliability coefficients are shown in Table 3. For the total group of 160 students, reliability coefficients ranged from .839 for the compensation scale to .952 for total satisfaction. The reliability coefficient of each CSSQ scale was higher for the American student group than it was for foreign students. For the American student group, reliability coefficients ranged from .854 for the working conditions scale to .959 for the total satisfaction. For the foreign student group reliability coefficients ranged from .801 to .944. Because satisfaction can be affected by changes in environment, and because stability over the time was not crucial, test-retest reliability was not obtained for CSSQ.

Table 3. CSSQ internal consistency reliability coefficients for the foreign, American and total student group

Scale	Number of Items	Foreign Students (80)		American Students (80)		Total (160)	
		Alpha	Standardized Alpha	Alpha	Standardized Alpha	Alpha	Standardized Alpha
Compensation	14	0.804	0.803	0.868	0.871	0.838	0.839
Social Life	14	0.864	0.864	0.913	0.911	0.924	0.923
Working Conditions	14	0.793	0.801	0.850	0.854	0.824	0.829
Recognition	14	0.881	0.883	0.853	0.856	0.865	0.866
Quality of Education	14	0.839	0.843	0.894	0.896	0.868	0.871
Total Satisfaction	70	0.943	0.944	0.959	0.959	0.951	0.952

Evidence of Validity

The reliability of an instrument is a necessary but not
sufficient condition for its validity. The reliability of CSSQ
scales was reported in the previous section. It was also reported that
the CSSQ met the criterion. It is not easy to establish the validity
of a questionnaire to measure "satisfaction" because there is not any
special external criterion upon which to base a test of validity. How-
ever, Betz, Menne, Starr and Klingensmith (1971) factor analyzed the
six dimensions of satisfaction which made up the questionnaire at this
time. Three different factor analytic approaches were used, and the
results were generally similar for all three methods. The researchers
stated that the factors which they derived substantially supported their
original scales. Another possibility for checking the validity of an
instrument is to investigate how well the instrument could differenti-
ate among certain aspects of the area which it is supposed to measure.
Starr, Betz, and Menne (1972) compared the satisfaction and dropout
rate, a positive relation to age, and a positive relation to type of
residence.

Covariation

CSSQ scales intercorrelations based on data for the total group
are shown in Table 4. The highest correlation was .724 between recog-
nition and quality of education scales. The lowest correlation was .294
between the compensation and social life scales. All correlations were

Table 4. CSSQ scales intercorrelation matrix for total group (foreign and American students combined) N=160

Scales	Compensation	Social Life	Working Condition	Recognition	Quality of Education	Total Satisfaction
Compensation	.839[a]	.294	.407	.617	.663	.725
Social Life		.923	.594	.381	.497	.740
Working Condition			.829	.520	.564	.787
Recognition				.866	.724	.810
Quality of Education					.871	.867
Total Satisfaction						.952

[a]Reliability coefficients in the principal diagonal.

positive. The intercorrelation among all 70 items of the questionnaire is reported in Appendix D.

Data Analysis

Analysis of the data was completed by using the Statistical Package for Social Science (SPSS) (Nie, Hull, Jenkins, Steinbrenner, and Brent 1975), and the Iowa State Univeristy computer facilities.

T-tests were calculated to test the main hypotheses I (sub-hypotheses A through F) to investigate the difference in satisfaction with various aspects of the college environment between foreign and American students.

Other hypotheses were treated by several three-way analyses of variance (Mason and Bramble 1978). These three-way analyses of variance were used to study the relationship between satisfaction with various aspects of the college environment (dependent variables) and the following independent variables: types of student, sex, marital status, age, type of residence, academic classification, curriculum and grade point average. If a difference was found in satisfaction between foreign and American students, tests of sub-hypotheses A to F were to be done to determine whether these differences would hold up across different levels of independent variables. In other words, for each hypothesis, the main effects of the selected independent variables and different interaction terms were included.

CHAPTER IV. PRESENTATION AND DISCUSSION OF FINDINGS

The main purpose of this study was to examine the perception of foreign students regarding their satisfaction with selected aspects of college life and the ways in which their perceptions differ from those of American students. Information was gathered through the use of the College Student Satisfaction Questionnaire (CSSQ) and other sources. Two samples each consisted of 80 students chosen to represent foreign and American students at Iowa State University.

The CSSQ is made up of five scales, each with 14 items, which was designed to measure students' satisfaction in various areas of college life. The five scales are: 1) compensation, which measures the amount of study required relative to academic outcomes (e.g., grades), and the effect of input demands on the students' fulfillment of their other needs and goals; 2) social life, which measures opportunities to meet socially relevant goals, such as meeting compatible people, making friends, participating in campus events and informal social activities; 3) working conditions, which measure the physical conditions of the student's college life, such as cleanliness and comfort of their place of residence, adequacy of study areas on campus, quality of meals, facilities for lounging between classes; 4) recognition, which measures attitudes and behavior of faculty and students indicating acceptance of the student as a worthwhile individual; and 5) quality of education, which measures the various academic conditions related to the student,

including the competence and helpfulness of faculty and staff, advisors,
and counselors, and the adequacy of curriculum requirements, teaching
methods, and assignments.

This chapter will be organized around the hypotheses of the study.
Each of the hypotheses is tested and the findings related to its testing
are presented.

Hypothesis I

H_o: There are no significant differences in satisfaction
with selected aspects of college life between foreign
and American students.

As was mentioned earlier, the first main hypothesis has six sub-
hypotheses related to satisfaction with compensation, social life,
working conditions, recognition, quality of education and total satis-
faction. The sub-hypotheses are:

A. There is no significant difference in satisfaction with
compensation between foreign and American students.

B. There is no significant difference in satisfaction with
social life between foreign and American students.

C. There is no significant difference in satisfaction with
working conditions between foreign and American students.

D. There is no significant difference in satisfaction with
recognition between foreign and American students.

E. There is no significant difference in satisfaction with
quality of education between foreign and American students.

F. There is no significant difference in total satisfaction
(combination of the above five scales) between foreign
and American students.

Mean differences

The T-test was used to test the significance of mean differences
on each of the CSSQ scales and combinations of those scales between
foreign and American students. The results of this analysis are summa-
rized in Table 5.

Table 5 shows that the foreign student group had its highest mean
on satisfaction with quality of education and compensation (above 3.2).
The lowest mean for the foreign students was on satisfaction with social
life, with the mean for this scale being 2.83, which is less than the
scale mean. The possible score range of one to five expressed three
as its mean.

For the American group, the highest scale means were on satis-
faction with social life (3.65), working conditions (3.33); and the
lowest was on recognition (3.15). These scores are higher than the
scale mean. Significant differences at the .01 level were observed on
working conditions, social life and total satisfaction, with the
American group scoring higher than foreign students on these scales.
The data on all but one of these scales showed that foreign students were
less satisfied than American students. The mean of the foreign student
group on quality of education was higher than that of the American stu-
dent group. However, this difference was not statistically significant.

Table 5. Means[a] and variances[b] for foreign (n=80) and American (n=80) student groups

| Scale | Number of Items | Means | | T-value | Variance | | F-value |
		Foreign students	American students		Foreign students	American students	
Compensation	14	3.15	3.24	-1.13	0.82	0.81	1.29
Social Life	14	2.83	3.65	-8.26**	0.88	0.97	1.20
Working Condition	14	3.04	3.33	-3.21**	1.08	1.03	1.28
Recognition	14	3.13	3.15	-0.18	1.02	0.91	1.47
Quality of Education	14	3.29	3.26	0.32	0.91	1.02	1.44
Total Satisfaction	70	3.11	3.30	-2.60**	0.94	0.95	1.30

[a]Average of item means.

[b]Average of item variances.

**Significant <0.01.

In further analysis, when the two groups were compared item by item composing each scale, the following results were obtained:

Compensation items - The only significant differences at the 0.01 level were observed on the following items, with the American group scoring higher than the foreign student group on these items (Appendix E, Table E-1).

> The amount of time you must spend studying.
> The chance you have for a "fair break" here if you work hard.

Social life items - Significant differences at the 0.01 level were observed on all 14 items, with the American group scoring higher than the foreign students on these items (Appendix E, Table E-2).

Working conditions - Significant differences at the 0.01 level were observed on the following items, with the American group scoring higher than the foreign students on these items:

> The chance of getting a comfortable place to live.
> The availability of good places to live near the campus.
> The cleanliness of the housing that is available for students here.
> The place provided for students to relax between classes.
> The activities and clubs you can join.
> The concern here for the comfort of students outside of classes.
> The availability of comfortable places to lounge.
> The chance to live where you want to.
> The place where you can go just to rest during the day.

On the following 2 items, the foreign student group scored significantly higher than the American group (Appendix E, Table E-3):

The chance to have privacy when you want it.

The chance to get scheduled into the courses of your choice.

Recognition items - In recognition items, significant differences at the 0.01 level were observed on 2 items, with the American group scoring higher than foreign students on these items:

The help that you can get when you have personal problems.

The counseling that is provided for students here.

However, significant differences at the 0.05 level appeared on 2 items, with the foreign student group scoring higher than American students. The items are (Appendix E, Table E-4):

The amount of personal attention students get from teachers.

The availability of your advisor when you need him.

Quality of education items - Significant differences at the 0.01 level appeared to be only on 2 items, with the foreign student group scoring higher than American students on these items (Appendix E, Table E-5):

The chance of getting into the courses you want to take.

The sequence of courses and prerequisited for your major.

Variability

The data on the variance of scores on the satisfaction scales for the foreign and American student groups are reported in Table 5.

For the foreign student group, the greatest variability in satisfaction scales was observed on the working condition scale and the least variability on the compensation scale. For the American student

group the highest variability appeared on the working condition scale and the lowest variability on the compensation scale. When the variability of the two groups was compared scale-by-scale, no statistically significant difference was found on any of the scales. On an item-by-item comparison of the variability of the foreign and American student groups, statistically significant differences at the 0.05 level were found on three items (Appendix E):

> The kinds of things you can do for fun without a lot of planning ahead.
>
> The counseling that is provided for students here.
>
> The appropriateness of the requirements for your major.

Hypothesis II

H_o: There is no significant relationship between satisfaction and type of student, when the effects of the selected independent variables (including interaction effects) are considered.

Hypothesis II, as was mentioned earlier, consists of six sub-hypotheses. In this section the tests of these sub-hypotheses will be presented.

A. Sex and age do not have significant effects on foreign and American students' satisfaction regarding social life.

A three way analysis of variance was used to examine this hypothesis. As was mentioned earlier, although the main effects of three independent variables (type of student, sex and age) are included, the main focus of this part of the study was on the interactions. The results of the analysis of variance are presented in Table 6.

Table 6. Analysis of variance for satisfaction with social life when type of student, sex and age are considered

Source of variance	d.f.	Sum of squares	Mean squares	F-Ratio
Main effects				
Type of student	1	5171.14	5171.14	67.89[**]
Sex	1	0.30	0.30	0.00
Age	2	24.13	12.06	0.15
Two way interaction				
Type of student x sex	1	36.65	36.65	0.48
Type of student x age	2	443.17	221.58	2.80
Sex x age	2	178.54	89.27	1.17
Three way interactions				
Type of student x sex x age	2	34.23	17.11	0.22
Residual	148	11272.77	76.16	
Total	159	17201.27	108.18	

[**]Significance <.01.

As Table 6 shows, the effect of type of student is significant at
the 0.01 level, with the American group scoring higher than the foreign
student group, while the main effects for sex and age, the two-way and
three-way interactions, are not significant. Because there were no
significant interactions, this difference between the two groups was
found to hold across the different levels of sex and age variables. The
researcher failed to reject this null hypothesis.

There were no significant differences found between students when
grouped by sex on the social life scale. This result is in agreement
with findings of the Betz, Klingensmith and Menne study (1970), in which
they found sex to have no effect on the level of student satisfaction
with the social life scale. When students were grouped by age, no
significant difference was found. This finding is supported by the
Hallenbeck study (1974), in which no significant difference was found
in satisfaction with social life based on the classification of age
variable.

B. Grade point average (G.P.A.) and curriculum do not have
significant effects on foreign and American students'
satisfaction regarding compensation.

The same three-way analysis of variance was used to test the effects
of grade point average and curriculum on foreign and American student
satisfaction regarding compensation. Table 7 illustrates the analysis
of variance related to the main effects, three two-way interactions as
well as a three-way interaction. Setting $\alpha = 0.05$, the main effect
for curriculum and grade point average is significant, while for the

Table 7. Analysis of variance for satisfaction with compensation when type of student, curriculum, and grade point averages are considered

Source of variance	d.f.	Sum of squares	Mean squares	F-Ratio
Main effects				
Type of student	1	3.90	3.90	0.08
Curriculum	1	189.57	189.57	3.92[*]
Grade point average (G.P.A.)	3	648.99	216.33	4.48[**]
Two way interactions				
Type of student x curriculum	1	84.73	84.73	1.75
Type of student x G.P.A.	3	83.66	27.88	0.57
Curriculum x G.P.A.	3	29.40	9.80	0.20
Three way interactions				
Type of student x curriculum x G.P.A.	3	240.92	80.30	1.66
Residual	144	6951.39	48.27	
Total	159	8262.59	51.96	

[*]Significance <.05.

[**]Significance <.01.

the type of student, two-way and three-way interactions are not significant. Students majoring in engineering, veterinary medicine and agriculture expressed higher satisfaction with compensation than students majoring in the science and humanities, home economics and education curricula. This finding is in agreement with the study by Fenske (1970), Berdie, Pilapil and Im (1970), and Willsey (1971), reported in Chapter II, in which they reported that grade point average has significant relationship with the levels of student satisfaction. Students with higher grade point averages expressed higher satisfaction with compensation. Table 8 illustrates the mean scores of students' satisfaction with compensation on curriculum and grade point average.

Table 8. Mean scores of students' satisfaction with compensation on curriculum area and G.P.A.

	1	2	3	4
Curriculum	43.70 (87)	45.83 (73)	–	–
G.P.A.	42.52 (25)	42.29 (41)	45.63 (54)	47.20 (40)

C. Type of residence and marital status do not have significant effects on foreign and American students' satisfaction regarding working conditions.

To test this hypothesis, a three-way analysis of variance was performed on working conditions to identify the effect of type of residence

and marital status on foreign and American satisfaction with working conditions.

Table 9 illustrates the result of this analysis of variance related to main effects for type of student, type of residence, and marital status and interaction terms. The main effect of type of student is significant (with a strong F-value of 10.70 with a significant level of 0.001) while for type of residence and marital status, two-way and three-way interactions were not significant. Foreign students are less satisfied with working conditions, compared to American students. Since no significant interactions were observed, the difference between the foreign student group and the American student group was found to hold across different levels of type of residence and marital status. Therefore, the researcher failed to reject the null hypothesis.

D. Sex and grade point average (G.P.A.) do not have significant effects on foreign and American students' satisfaction regarding recognition.

The same three-way analysis of variance was performed on satisfaction with recognition to identify the effects of type of residence, sex, grade point average and interaction terms. Table 10 illustrates the main effects for type of student, sex, grade point average and two-way and three-way interactions.

As Table 10 demonstrates, no significant differences were found in main effects and interactions. This indicates that in satisfaction with recognition between foreign and American students, between male and female, among four levels of grade point average, no significant

Table 9. Analysis of variance for satisfaction with working conditions
when type of student, type of residence and marital status
are considered

Source of variance	d.f.	Sum of squares	Mean squares	F-Ratio
Main effects				
Type of student	1	674.67	674.67	10.70[**]
Type of resident	1	65.79	65.79	1.04
Marital status	1	0.00	0.00	0.00
Two way interactions				
Type of student x type of residence	1	142.87	142.87	2.26
Type of student x marital status	1	65.11	65.11	1.03
Type of residence x marital status	1	67.83	67.83	1.07
Three way interactions				
Type of student x type of residence x marital status	1	94.86	94.86	1.50
Residual	152	9580.38	63.02	
Total	159	10630.74	66.86	

[**]Significance <.01.

Table 10. Analysis of variance for satisfaction with recognition when type of student, sex and grade point average are considered

Source of variance	d.f.	Sum of squares	Mean squares	F-Ratio[a]
Main effects				
Type of student	1	0.52	0.52	1.41
Sex	1	7.44	7.44	0.00
Grade point average	3	471.58	157.19	0.11
Two way interactions				
Type of student x sex	1	14.03	14.03	0.20
Type of student x grade point average	3	338.50	112.83	1.66
Sex x grade point average	3	241.52	80.50	1.18
Three way interactions				
Type of student x sex x grade point average	3	168.61	56.20	0.48
Residual	144	9783.87	67.94	
Total	159	11067.77	69.60	

[a]None of the F-Ratios were significant at $P \leq .05$.

differences were found. Also, the two-way and three-way interactions appeared to be insignificant.

    E. Curriculum and academic classification do not have significant effects on foreign and students' satisfaction regarding quality of education.

This hypothesis was also treated by a three-way analysis of variance. Table 11 illustrates this analysis related to the main effects of type of student, curriculum area and academic classification and two and three-way interaction. The result shows no significant F-value for any of the above mentioned main effects and interaction terms. In other words, in satisfaction with quality of education, no significant differences were found between foreign and American students; between students majoring in science and humanities, home economics and education and those majoring in engineering, veterinary medicine and agriculture; between graduate and undergraduate students. As Table 11 indicates, the two-way and three-way interactions were not significant.

    F. Type of residence and age do not have significant effects on foreign and American students' satisfaction regarding the total satisfaction (combination of five scales).

The same three-way analysis of variance was performed on the total satisfaction score to identify the effects of type of student, type of residence, age and interaction terms. Table 12 illustrates the result of this analysis of variance.

As Table 12 demonstrates, the main effect of type of student variable is significant (with a F-value of 7.187 with a significant level

Table 11. Analysis of variance for satisfaction with quality of education when type of student, curriculum and academic classification are considered

Source of variance	d.f.	Sum of squares	Mean squares	F-Ratio[a]
Main effects				
Type of student	1	0.03	0.03	0.00
Curriculum	1	227.02	227.02	3.16
Academic classification	1	52.03	52.03	0.72
Two way interactions				
Type of student x curriculum	1	0.99	0.99	0.01
Type of student x academic classification	1	8.00	8.00	0.11
Curriculum x academic classification	1	14.78	14.78	0.20
Three way interactions				
Type of student x curriculum x academic classification	1	11.97	11.97	0.16
Residual	152	10889.78	71.64	
Total	159	11208.91	70.49	

[a]None of the F-Ratios were significant at $P \leq .05$.

Table 12. Analysis of variance for total satisfaction when type of
          student, type of residence and age are considered

Source of variance	d.f.	Sum of squares	Mean squares	F-Ratio
Main effects				
Type of student	1	7770.93	7770.934	7.18**
Type of residence	1	243.41	243.41	0.22
Age	2	2199.13	1099.56	1.01
Two way interaction				
Type of student x type of residence	1	173.63	173.63	0.16
Type of student x age	2	3634.85	1817.42	1.68
Type of residence x age	2	899.39	449.69	0.41
Three way interaction				
Type of student x type of residence x age	2	3467.00	1733.50	1.60
Residual	148	160019.87	1081.21	
Total	159	177528.93	1116.53	

**Significance <.01.

of 0.008). For type of residence and age, the two-way and three-way interactions were not significant. In general, foreign students were less satisfied than American students considering the total satisfaction score. Because no significant interactions were found, the difference between the foreign student group and the American student group was found to hold across different levels of type of residence and age. Thus, the researcher failed to reject the null hypothesis.

From the studies conducted by Martin (1968) and Sturtz (1971), reported in the literature review, differences in satisfaction based on age were expected. But in the present study no differences were found. The data from the present investigation also indicate that place of residence does not have an effect on the level of satisfaction. This finding is in disagreement with the finding of Betz, Klingensmith and Menne (1970), in which they found type of residence to have an effect on the level of student satisfaction.

Since college student satisfaction is not a static phenomenon, the time differences in which these investigations were conducted could explain the differences in the effect of age and type of residence. Different populations of students will be expected to respond differently to the College Student Satisfaction Questionnaire, and also would be satisfied by different things.

CHAPTER V. SUMMARY, CONCLUSIONS

AND RECOMMENDATIONS

Purpose and Procedures

With more than 200,000 foreign students studying in the United

States universities (Julian and Stattery, 1978), it is important to

examine their perceptions regarding the satisfaction with the college

environment and whether their perceptions differ from those of American

students. It is important to study the satisfaction of these students

in the United States, because their experience affects not only the

students' success abroad but also their attitudes and feelings about

this country. The significance of satisfaction with college life in a

foreign country goes beyond the student and his/her immediate environ-

ment. Therefore, it is important to study the satisfaction levels of

foreign students.

The purpose of this study was to compare foreign and American

students' expressed satisfaction with various aspects of college life.

The College Student Satisfaction Questionnaire (CSSQ) was chosen for

this study because it elicits attitudes on five major areas related to

college life.

The CSSQ includes 70 items, which are divided into five groups of

14 items each. The five groups are scales of the questionnaire. The

scales of the CSSQ consist of compensation, social life, working con-

ditions, recognition, and quality of education. The student responses

were tabulated on a 1-5 choice Likert-type scale, so that a student
who chose only ones would receive the lowest possible score, which is
70, and a student who chose all fives would receive the highest possi-
ble score, which is 350. A mean score of three equated a total of
210.

Several other variables were added to the questionnaire to
determine whether they are related to satisfaction. The selected
students were asked their sex, age, marital status, type of residence,
academic classification, grade point average and curriculum area.

Two groups of students were used as subjects in this study. The
first group consisted of 80 foreign students from third world countries
and the second group consisted of 80 American students. The names
of these students were taken from a list of students who expected to
graduate at the end of Spring Quarter, 1980. The data received from
160 students were used to test the following null hypotheses:

Hypothesis I

H_o: There are no significant differences in satisfaction
with selected aspects of college life, between foreign
and American students.

Hypothesis I has six sub-hypotheses as follows:

A. There is no significant difference in satisfaction with
compensation between foreign and American students.

B. There is no significant difference in satisfaction with
social life between foreign and American students.

C. There is no significant difference in satisfaction with working condition between foreign and American students.

D. There is no significant difference in satisfaction with recognition between foreign and American students.

E. There is no significant difference in satisfaction with quality of education between foreign and American students.

F. There is no significant difference in total satisfaction (combination of the above five scales) between foreign and American students.

Hypothesis II

H_o: There is no significant relationship between satisfaction and type of students, when the effects of the selected independent variables (including interaction effects) are considered.

Hypothesis II also consists of six sub-hypotheses, as follows:

A. Sex and age do not have significant effects on foreign and American students' satisfaction regarding social life.

B. Grade point average and curriculum do not have significant effects on foreign and American students' satisfaction regarding compensation.

C. Type of residence and marital status do not have significant effects on foreign and American students' satisfaction regarding working conditions.

D. Sex and grade point average do not have significant effects on foreign and American students' satisfaction regarding recognition.

E. Curriculum and academic classification do not have
   significant effects on foreign and American students'
   satisfaction regarding quality of education.

F. Type of residence and age do not have significant
   effects on foreign and American students' satisfaction
   regarding the total satisfaction (combination of
   five scales).

Findings

(1) On satisfaction (measured by the CSSQ), the foreign student
group had the highest mean on quality of education and compensation
(above 3.2). The lowest mean for the foreign students was on satis-
faction with social life, with mean for this scale being 2.83, which is
less than scale mean. The possible score range of one to five expressed
three as its mean.

(2) For the American student group, the highest scale means were
on satisfaction with social life (3.65) and working conditions (3.33);
the lowest was on recognition (3.13), which is, however, higher than
the scale mean.

(3) When the two groups were compared, the significant differences,
at the 0.01 level, appeared to be on working condition scale, social
life scale, and total satisfaction, with the American group scoring
higher than foreign students on these scales.

(4) In further analysis, when two groups were compared item-by-
item in each scale, the results on compensation items were that the
only significant differences at the 0.01 level were observed on the
following items, with the American group scoring higher than the

foreign student group on these items:

> The amount of time you must spend studying.
>
> The chance you have for a "fair break" here if you can work hard.

(5) On social life items, significant differences at the 0.01 level were observed on all 14 items, with the American group scoring higher than the foreign student group.

(6) On working conditions items, significant differences at the 0.01 level were observed on the following items, with the American group scoring higher than the foreign student group.

> The chance of getting a comfortable place to live.
>
> The availability of good places to live near the campus.
>
> The cleanliness of the housing that is available for students here.
>
> The places provided for students to relax between classes.
>
> The activities and clubs you can join.
>
> The concern here for the comfort of students outside of classes.
>
> The availability of comfortable places to lounge.
>
> The chance to live where you want to.
>
> The place where you can go just to rest during the day.

Significant differences at the 0.01 level appeared on 2 items, with the foreign student group scoring higher than American students on these items:

> The chance to have privacy when you want it.
>
> The chance to get scheduled into the courses of your choice.

(7) On recognition items, significant differences at the 0.01 level were observed on 2 items, with the American group scoring higher than the foreign student group.

The help that you can get when you have personal problems.

The counseling that is provided for students here.

Significant differences at the 0.05 level appeared on 2 items, with the foreign student group scoring higher than American students. The items are:

The amount of personal attention students get from teachers.

The availability of your advisor when you need him.

(8) On quality of education items, significant differences at the 0.01 level were observed on only 2 items, with the foreign student group scoring higher than the American student group.

The chance of getting into the courses you want to take.
The sequence of courses and prerequisites for your major.

(9) The scale response variability (as illustrated by scale variance) for foreign and American student groups was similar.

(10) The results showed that the effect of type of student on satisfaction with social life was significant, while the sex, age, two-way and three-way interactions were not significant. Since there were no significant interactions, the difference between the two groups regarding satisfaction with social life was found to hold across the different levels of sex and age variables.

(11) No significant differences were found among students when grouped by sex and age on the social life scale.

(12) When students were grouped by curriculum area on the compen-sation scale, students majoring in engineering, veterinary medicine and

agriculture expressed higher satisfaction than those students majoring in science and humanities, home economics and education.

(13) Grade point average had significant relationship with the levels of satisfaction in the compensation scale. Students with higher grade point averages expressed higher satisfaction with compensation.

(14) The foreign students are significantly less satisfied on working conditions scale, compared to American students. Type of residence, marital status and interactions were not significant. Since no significant interactions were found, the difference between the foreign student group and the American student group was found to hold across different levels of type of residence and marital status.

(15) When students were grouped by sex and grade point average on the recognition scale, no significant differences were observed among these groups.

(16) No significant differences were found between students when grouped by type of students, curriculum and academic classification on the quality of education scale.

(17) In general, foreign students were significantly less satisfied than American students in the total satisfaction score. Type of residence, age, and interactions were not significant. Because no significant interactions were found, the difference between the foreign student group and the American student group appeared to hold across type of residence levels and age levels.

(18) No significant differences were found among students when grouped by type of residence and age on the total satisfaction score.

Conclusions

Satisfaction of foreign students and American students with college life differs significantly on social life and working conditions, with American students responding more favorably. In social life, these differences were found to hold across different levels of sex and age variables. In working conditions, these differences also were found to hold across different levels of type of residence and marital status. No significant differences were found between those two groups on satisfaction with compensation, recognition and quality of education. However, when the above five scales were combined together on the total satisfaction score, the American students were observed as being significantly more satisfied than foreign students.

Recommendations

(1) Because the foreign students expressed less satisfaction than American students on the social life and working conditions scale, further study is needed to determine what factors caused differences on those two scales. This additional study might provide information on relevant variables and might, in turn, lead to an increase in the level of foreign student satisfaction with social life and working conditions.

(2) In this study, the variable age and type of residence did not have any significant effects on overall levels of satisfaction with college life. This result is in disagreement with several of those cited in the review of literature. More extensive research using the

multi-variate analysis technique with large sample groups covering foreign and American students of several universities should be undertaken to identify the effects of various demographic variables on overall student level of satisfaction.

(3) Further research is needed to specify what could be done to increase the level of foreign students' satisfaction with social life and working conditions at Iowa State University.

(4) With the increasing foreign student enrollment at Iowa State University, it may be necessary to resort more frequently to using instruments such as the College Student Satisfaction Questionnaire to learn what students think of college programs. This might enable the college to anticipate problems and develop a closer relationship with foreign student organizations and the student body.

(5) A special program should be developed to insure open and accurate communication between foreign and American students regarding their frustration, satisfaction and problems with college life. This program should include different aspects of student life in the university.

(6) The results of this study can be used by individuals who at some point in their career will have the opportunity to work with foreign students at counseling services and student personnel services. Also, the results could have immediate relevance to those presently employed as international student advisors. Certainly, foreign student advisors need to be alerted to the fact that they are dealing with students who have some unique problems and needs.

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APPENDIX A: LETTER TO RESPONDENTS

Dear Student,

I would like approximately 20 minutes of your time to help with a research project being conducted at Iowa State University. You are one of the relatively small number of ISU students selected to receive and be asked to complete the enclosed instrument.

The purpose of the study is to compare foreign and American students' satisfaction in regard to different aspects of the college environment such as: working conditions, compensation, quality of education, social life, and recognition.

It is important to my work that you answer the questions honestly. Your answers will remain completely confidential. Name or other identifying information will never be associated with your survey form.

However, if you would like a general summary of the research after it is completed, please attach a note requesting such a summary to this answer sheet.

Thank you very much for your help.

Most sincerely,

BAGHBAN, I. CICHANI

APPENDIX B: COLLEGE STUDENT SATISFACTION QUESTIONNAIRE
              (CSSQ)

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APPENDIX C: SCORING FOR COLLEGE STUDENT SATISFACTION
            QUESTIONNAIRE (CSSQ) SCALES

Scale 1 - Compensation

2, 5, 7, 16, 20, 22, 29, 34, 35, 37, 47, 53, 56, 58

Scale 2 - Social Life

1, 10, 19, 25, 31, 33, 39, 41, 49, 55, 57, 59, 62, 66

Scale 3 - Working Conditions

6, 12, 14, 18, 21, 24, 27, 28, 38, 46, 48, 52, 61, 68

Scale 4 - Recognition

3, 4, 8, 9, 11, 13, 23, 26, 30, 32, 42, 50, 54, 60

Scale 5 - Quality of Education

15, 17, 36, 40, 43, 44, 45, 51, 63, 64, 65, 67, 69, 70

Scale 6 - Total Satisfaction

Sum of scales 1-5

ALL ITEMS ARE SCORED USING LIKERT FORMULA.

APPENDIX D: SCALES INTERCORRELATION MATRIX FOR TOTAL GROUP
            (FOREIGN AND AMERICAN STUDENTS) N=160

Table D1. Intercorrelation matrix for compensation scale (N=160)

	Item 2	Item 5	Item 7	Item 16	Item 20	Item 22	Item 29	Item 34	Item 35	Item 37	Item 47	Item 53	Item 56	Item 58
Item														
2	1.00													
5	0.30	1.00												
7	0.27	0.32	1.00											
16	0.24	0.16	0.29	1.00										
20	0.41	0.21	0.20	0.26	1.00									
22	0.18	0.12	0.35	0.52	0.19	1.00								
29	0.42	0.42	0.38	0.19	0.38	0.24	1.00							
34	0.38	0.09	0.11	0.17	0.42	0.05	0.23	1.00						
35	0.33	0.22	0.50	0.52	0.27	0.49	0.45	0.28	1.00					
37	0.05	0.22	0.21	0.08	0.10	0.03	0.28	0.17	0.24	1.00				
47	0.38	0.24	0.34	0.20	0.36	0.19	0.26	0.54	0.39	0.08	1.00			
53	0.26	0.35	0.39	0.34	0.20	0.33	0.24	0.23	0.36	0.11	0.35	1.00		
56	0.25	0.18	0.16	0.26	0.27	0.18	0.20	0.23	0.30	0.29	0.17	0.33	1.00	
58	0.30	0.12	0.28	0.32	0.28	0.30	0.27	0.32	0.35	0.19	0.32	0.38	0.47	1.00

Table D2. Intercorrelation matrix for social life scale (N=160)

Item	Item 1	Item 10	Item 19	Item 25	Item 31	Item 33	Item 39	Item 41	Item 49	Item 55	Item 57	Item 59	Item 62	Item 66
1	1.00													
10	0.49	1.00												
19	0.22	0.20	1.00											
25	0.36	0.39	0.30	1.00										
31	0.55	0.40	0.24	0.51	1.00									
33	0.45	0.41	0.16	0.54	0.55	1.00								
39	0.48	0.48	0.21	0.57	0.50	0.64	1.00							
41	0.42	0.35	0.22	0.61	0.47	0.52	0.65	1.00						
49	0.48	0.41	0.49	0.45	0.49	0.47	0.52	0.53	1.00					
55	0.41	0.37	0.37	0.40	0.56	0.48	0.43	0.48	0.51	1.00				
57	0.35	0.32	0.29	0.52	0.43	0.55	0.57	0.68	0.59	0.50	1.00			
59	0.38	0.39	0.24	0.53	0.44	0.60	0.66	0.56	0.49	0.45	0.57	1.00		
62	0.42	0.32	0.24	0.68	0.48	0.48	0.53	0.53	0.45	0.43	0.50	0.53	1.00	
66	0.54	0.33	0.30	0.53	0.54	0.55	0.56	0.59	0.62	0.47	0.60	0.51	0.47	1.00

Table D3. Intercorrelation matrix for working conditions scale (N=160)

	Item 6	Item 16	Item 14	Item 18	Item 21	Item 24	Item 27	Item 28	Item 38	Item 46	Item 48	Item 52	Item 61	Item 68
Item														
6	1.00													
12	0.52	1.00												
13	0.34	0.46	1.00											
18	0.08	0.17	0.16	1.00										
21	0.23	0.32	0.28	0.36	1.00									
24	0.07	0.30	0.22	0.16	0.37	1.00								
27	0.02	-0.04	0.02	0.23	0.21	0.20	1.00							
28	0.18	0.17	0.24	0.30	0.09	0.28	0.15	1.00						
38	0.28	0.40	0.49	0.19	0.29	0.48	0.13	0.32	1.00					
46	0.04	0.02	-0.09	0.28	0.22	0.14	0.14	0.09	-0.08	1.00				
48	0.17	0.39	0.35	0.30	0.36	0.57	0.09	0.27	0.44	0.18	1.00			
52	0.55	0.51	0.28	0.22	0.27	0.19	-0.02	0.22	0.29	0.16	0.34	1.00		
61	0.18	0.30	0.25	0.29	0.33	0.63	0.18	0.24	0.52	0.09	0.65	0.30	1.00	
68	0.26	0.25	0.28	0.41	0.62	0.33	0.20	0.13	0.28	0.26	0.44	0.33	0.41	1.00

Table D4. Intercorrelation matrix for recognition scale (N=160)

	Item 3	Item 4	Item 8	Item 9	Item 11	Item 13	Item 23	Item 26	Item 30	Item 32	Item 42	Item 50	Item 54	Item 60
Item														
3	1.00													
4	0.29	1.00												
8	0.54	0.17	1.00											
9	0.42	0.28	0.37	1.00										
11	0.11	0.12	0.16	0.26	1.00									
13	0.21	0.13	0.27	0.16	0.13	1.00								
23	0.37	0.20	0.34	0.33	0.17	0.55	1.00							
26	0.36	0.33	0.53	0.39	0.28	0.18	0.33	1.00						
30	0.21	0.09	0.27	0.31	0.33	0.29	0.32	0.38	1.00					
32	0.47	0.22	0.34	0.32	0.12	0.44	0.51	0.25	0.33	1.00				
42	0.40	0.14	0.43	0.35	0.27	0.37	0.52	0.39	0.36	0.36	1.00			
50	0.27	0.15	0.24	0.25	0.31	0.28	0.34	0.30	0.21	0.30	0.35	1.00		
54	0.50	0.28	0.44	0.45	0.22	0.12	0.33	0.51	0.28	0.37	0.52	0.21	1.00	
60	0.41	0.16	0.40	0.37	0.37	0.35	0.29	0.50	0.25	0.32	0.48	0.38	0.56	1.00

Table D5. Intercorrelation matrix for quality of education scale (N=160)

	Item 15	Item 17	Item 36	Item 40	Item 43	Item 44	Item 45	Item 51	Item 63	Item 64	Item 65	Item 67	Item 69	Item 70
Item														
15	1.00													
17	0.45	1.00												
36	0.26	0.44	1.00											
40	0.43	0.42	0.29	1.00										
43	0.47	0.45	0.22	0.48	1.00									
44	0.42	0.47	0.30	0.35	0.46	1.00								
45	0.24	0.08	-0.08	0.27	0.24	0.24	1.00							
51	0.34	0.51	0.37	0.37	0.46	0.33	0.11	1.00						
63	0.29	0.33	0.35	0.32	0.28	0.29	0.07	0.29	1.00					
64	0.41	0.38	0.46	0.39	0.48	0.43	0.05	0.35	0.53	1.00				
65	0.36	0.32	0.09	0.28	0.35	0.24	0.20	0.38	0.19	0.25	1.00			
67	0.43	0.34	0.20	0.31	0.30	0.30	0.23	0.37	0.28	0.34	0.36	1.00		
69	0.34	0.07	-0.09	0.26	0.36	0.20	0.37	0.26	0.25	0.27	0.33	0.50	1.00	
70	0.47	0.40	0.33	0.39	0.43	0.36	0.21	0.46	0.36	0.46	0.36	0.60	0.49	1.00

APPENDIX E: ITEM-BY-ITEM COMPARISON OF THE MEAN DIFFERENCES
AND VARIABILITY OF THE FOREIGN AND AMERICAN
STUDENTS GROUP

Table E1. Item analysis for working conditions scale (N=160)

	Means			Standard Deviation		
	Foreign	American	T value	Foreign	American	F value
- The chances of getting a comfortable place to live.	3.15	3.81	-3.84**	1.18	0.99	1.41
- The availability of good places to live near the campus.	2.66	3.29	-3.44**	1.16	1.14	1.03
- The cleanliness of the housing that is available for students here.	3.16	3.69	-3.75**	0.97	0.79	1.52
- The chance to have privacy when you want it.	3.55	3.10	2.74**	1.01	1.06	1.09
- The availability of good places to study.	3.50	3.41	0.55	1.05	0.96	1.20
- The places provided for students to relax between classes.	2.64	3.11	-2.78**	1.06	1.10	1.08
- The chance to get scheduled into the courses of your choice.	3.34	2.81	2.85*	1.19	1.14	1.09
- The activities and clubs you can join.	3.11	3.91	-5.29**	1.04	0.86	1.47

*Significance <.05.

**Significance <.01.

Table E1. (continued)

	Means			Standard Deviation		
	Foreign	American	T value	Foreign	American	F value
– The concern here for the comfort of students outside of classes.	2.58	3.14	-4.17**	0.76	0.94	1.53
– The noise level at home when you are trying to study.	3.35	3.13	1.29	1.11	1.10	1.04
– The availability of comfortable places to lounge.	2.79	3.21	-2.73**	0.94	1.03	1.20
– The chance to live where you want to.	2.91	3.66	-4.65**	0.99	1.04	1.10
– The places where you can go just to rest during the day.	2.63	3.13	-3.44**	0.88	0.96	1.20
– The availability of quiet study areas for students.	3.20	3.20	0.00	1.11	1.06	1.11

Table E2. Item analysis for quality of education scale (N=160)

	Means			Standard Deviation		
	Foreign	American	T value	Foreign	American	F value
- The chance to take courses that fulfill your goals for personal growth.	3.43	3.49	-0.38	0.98	1.13	1.32
- The preparation students are getting for their future careers.	3.20	3.26	-0.42	0.91	0.98	1.16
- The quality of the education students get here.	3.40	3.94	-3.44**	1.01	0.96	1.12
- The chance for a student to develop his best abilities.	3.25	3.48	-1.58	0.83	0.97	1.34
- The chance to explore important ideas.	3.06	3.10	-0.24	0.99	0.96	1.05
- The quality of the material emphasized in the courses.	3.35	3.13	1.65	0.90	0.82	1.22
- The chance of getting into the courses you want to take.	3.48	2.86	3.54**	1.09	1.10	1.02
- The chance to prepare well for your vocation.	3.33	3.39	-0.40	0.88	1.06	1.45
- The practice you get in thinking and reasoning.	3.26	3.40	-0.96	0.90	0.91	1.03
- Your opportunity here to determine your own pattern of intellectual development.	3.19	3.33	-0.93	0.97	0.90	1.17

**Significance <.01.

Table E2. (continued)

	Means			Standard Deviation		
	Foreign	American	T value	Foreign	American	F value
- The chance to participate in class discussions about the course material.	3.06	3.04	0.16	0.93	0.99	1.12
- The sequence of courses and prerequisites for your major.	3.36	3.05	1.93*	0.97	1.08	1.23
- The chance you have to substitute courses in your major when you think it is advisable.	3.28	3.01	1.53	1.08	1.10	1.03
- The appropriateness of the requirements for your major.	3.40	3.15	1.57	0.84	1.15	1.89**

*Significance <.05.

Table E3. Item analysis for recognition scale (N=160)

	Mean			Standard Deviation		
	Foreign	American	T value	Foreign	American	F value
- The way teachers talk to you when you ask for help.	3.68	3.46	1.36	1.08	0.89	1.48
- The competence of most of the teachers in their own fields.	3.43	3.31	0.76	0.92	0.95	1.05
- The amount of personal attention students get from teachers.	3.15	2.83	2.10	1.03	0.92	1.25
- The chance "to be heard" when you have a complaint about a grade.	2.86	2.86	0.00	1.09	0.95	1.31
- The help that you can get when you have personal problems.	2.98	3.43	-3.36**	0.89	0.81	1.20
- The ability of most advisors in helping students develop their course plans.	3.08	2.93	0.84	1.13	1.12	1.02
- The interest that advisors take in the progress of their students.	2.95	2.94	0.07	1.16	1.09	1.12
- Teachers' concern for students' needs and interests.	3.04	2.88	1.25	0.91	0.74	1.52
- The chance to get help in deciding what your major should be.	3.03	2.98	0.34	0.93	0.93	1.00
- The availability of your advisor when you need him.	3.31	2.91	2.14	1.22	1.15	1.12

**Significance <.01.

Table E3. (continued)

	Means			Standard Deviation		
	Foreign	American	T value	Foreign	American	F value
- The chances of getting acquainted with the teachers in your major area.	3.15	3.28	-0.76	1.01	1.08	1.15
- The counseling that is provided for students here.	2.94	3.30	-2.71	0.72	0.96	1.79*
- The friendliness of most faculty members.	3.35	3.40	-0.35	0.98	0.81	1.49
- The willingness of teachers to talk with students outside of class time.	3.11	3.31	-1.36	0.98	0.88	1.24

*Significance <.05.

Table E4. Item analysis for compensation scale (N=160)

	Means			Standard Deviation		
	Foreign	American	T value	Foreign	American	F value
- The amount of work required in most classes.	3.19	3.18	1.83	.84	.81	1.07
- The amount of study it takes to get a passing grade.	3.20	3.29	-0.58	.97	.94	1.06
- The chance you have of doing well if you work hard.	3.95	3.79	1.06	.93	1.00	1.17
- The kinds of things that determine your grades.	3.05	2.94	0.78	.91	.90	1.02
- Teachers' expectations as to the amount that students should study.	3.20	2.74	3.64**	.86	.74	1.35
- The fairness of most teachers in assigning grades.	3.39	3.15	1.81	.91	.75	1.47
- The difficulty of most courses.	3.21	3.11	0.81	.82	.75	1.21
- The pressure to study.	2.94	2.85	0.60	.94	.89	1.14
- The chance of getting a grade which reflects the effort you put into studying.	3.23	2.96	1.48	1.09	1.15	1.12
- The number of Ds and Fs that are given to students.	2.83	3.02	-1.37	.84	1.00	1.44

**Significance <.01.

Table E4. (continued)

	Means			Standard Deviation		
	Foreign	American	T value	Foreign	American	F value
- The amount of time you must spend studying.	3.26	2.88	2.62**	.92	.89	1.09
- The chance you have for a "fair break" here if you work hard.	3.09	3.41	-2.14**	.95	.96	1.01
- What you learn in relation to the amount of time you spend in school.	3.23	3.30	-0.53	.86	.95	1.22
- The amount of study you have to do in order to qualify someday for a job you want.	3.35	3.41	-0.52	.76	.74	1.06

Table E5. Item analysis for social life scale (N=160)

	Means			Standard Deviation		
	Foreign	American	T value	Foreign	American	F value
- The opportunity to make close friends here.	3.19	4.11	-5.96**	1.06	0.90	1.38
- The friendliness of most students.	2.91	3.64	-5.00**	0.98	0.85	1.35
- The chance to work on projects with members of the opposite sex.	2.99	3.24	-1.75	0.93	0.88	1.14
- The social events that are provided for students here.	2.94	3.76	-4.62**	1.14	1.11	1.04
- The chance to get acquainted with other students outside of class.	2.58	3.39	-5.37**	0.95	0.96	1.02
- The chances to go out and have a good time.	2.95	4.04	-6.70**	1.03	1.02	1.01
- The things you can do to have fun here.	2.69	3.81	-7.08**	0.89	1.10	1.52
- The chance of having appropriate social activities here.	2.83	3.54	-4.46**	0.91	1.10	1.46
- The chances for men and women to get acquainted.	2.66	3.51	-5.84	0.87	0.97	1.24

**Significance <.01.

Table E5. (continued)

	Means			Standard Deviation		
	Foreign	American	T value	Foreign	American	F value
- The chances to meet people with the same interests as you have.	3.00	3.55	-4.03**	0.86	0.87	1.03
- The choice of social activities you have here.	2.63	3.58	-5.86**	0.91	1.13	1.57
- The kinds of things you can do for fun without a lot of planning ahead.	2.83	3.76	-6.92**	0.73	0.97	1.79*
- The campus events that are provided for students here.	2.95	3.70	-5.14**	0.93	0.92	1.01
- The activities that are provided to help you meet others.	2.51	3.40	-6.21**	0.87	0.94	1.15

*Significance <.05.

APPENDIX F: HUMAN SUBJECT COMMITTEE APPROVAL

INFORMATION ON THE USE OF HUMAN SUBJECTS IN RESEARCH
IOWA STATE UNIVERSITY
(Please follow the accompanying instructions for completing this form.)

(1.) Title of project (please type): <u>College student satisfaction: A comparative study</u> of selected foreign and American students at I.S.U.

(2.) I agree to provide the proper surveillance of this project to insure that the rights and welfare of the human subjects are properly protected. Additions to or changes in procedures affecting the subjects after the project has been approved will be submitted to the committee for review.

BAGHBAN, Iran   March 6/1980   Iran Baghban
Typed Named of Principal Investigator   Date   Signature of Principal Investigator

163 N. Hyland Ave. Ames, Iowa, 50010   292-3338
Campus Address   Campus Telephone
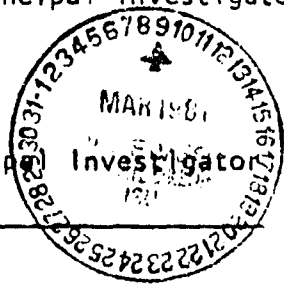
(3.) Signatures of others (If any)   Date   Relationship to Principal Investigator

(4.) ATTACH an additional page(s) (A) describing your proposed research and (B) the subjects to be used, (C) indicating any risks or discomforts to the subjects, and (D) covering any topics checked below. CHECK all boxes applicable.

- [ ] Medical clearance necessary before subjects can participate
- [ ] Samples (blood, tissue, etc.) from subjects
- [ ] Administration of substances (foods, drugs, etc.) to subjects
- [ ] Physical exercise or conditioning for subjects
- [ ] Deception of subjects
- [ ] Subjects under 14 years of age and(or) [ ] Subjects 14-17 years of age
- [ ] Subjects in institutions
- [ ] Research must be approved by another institution or agency

(5.) ATTACH an example of the material to be used to obtain informed consent and CHECK which type will be used.

- [ ] Signed informed consent will be obtained.
- [ ] Modified informed consent will be obtained.

(6.) Anticipated date on which subjects will be first contacted: Month Day Year

Anticipated date for last contact with subjects: ___ ___ ___

(7.) If Applicable: Anticipated date on which audio or visual tapes will be erased and(or) identifiers will be removed from completed survey instruments:

Month Day Year

(8.) Signature of Head or Chairperson   Date   Department or Administrative Unit

(9.) Decision of the University Committee on the Use of Human Subjects in Research:

[X] Project Approved [ ] Project not approved [ ] No action required

George G. Karas   3/12/81
Name of Committee Chairperson   Date   Signature of Committee Chairperson