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**A COMPARATIVE STUDY OF PERCEPTIONS OF FOREIGN
UNDERGRADUATE STUDENTS, SELECTED FACULTY, AND STUDENT
PERSONNEL STAFF OF THE CAMPUS ENVIRONMENT OF MICHIGAN
STATE UNIVERSITY**

Michigan State University

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A COMPARATIVE STUDY OF PERCEPTIONS OF FOREIGN UNDER-
GRADUATE STUDENTS, SELECTED FACULTY, AND STUDENT
PERSONNEL STAFF OF THE CAMPUS ENVIRONMENT OF
MICHIGAN STATE UNIVERSITY

By

Hyung Kwan Kim

A DISSERTATION

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ABSTRACT

A COMPARATIVE STUDY OF PERCEPTIONS OF FOREIGN UNDER- GRADUATE STUDENTS, SELECTED FACULTY, AND STUDENT PERSONNEL STAFF OF THE CAMPUS ENVIRONMENT OF MICHIGAN STATE UNIVERSITY

by

Hyung Kwan Kim

The perceived environment of an American university is a powerful factor affecting the foreign undergraduate student's educational life and growth, and the faculty and student personnel staff are the major sources of academic and nonacademic guidance for the student. This study's purpose was to examine whether foreign undergraduate students (and their subgroups) differ from faculty and student personnel staff in the perceptions of campus environment at Michigan State University.

The university environment was described in relation to the five basic scales--practicality, scholarship, community, awareness, and propriety--of the second edition of the College and University Environment Scales (CUES II). The participants were 190 foreign undergraduate students, eighty-six faculty, and eighty-seven student personnel staff members. The students' subgroups were formed by age, sex, class level, academic areas of study, financial sponsorship, living arrangements, self-rated English ability, and country type. The multivariate analysis of variance and the univariate F-test were

used to determine differences in perceptions among the three reference groups and the subgroups of foreign undergraduate students. The t-test was utilized to determine differences in perceptions between each of the students' subgroups and faculty, and between each of the students' subgroups and student personnel staff.

The findings indicated that significant differences in perceptions existed on practicality and scholarship dimensions of the campus between the compared groups. Although there were some subgroups exhibiting no differences in perceptions, most of the foreign undergraduate students tended to view the campus as being more practical than did the faculty and student personnel staff. Likewise, a majority of the students tended to regard the university as being more academic than did the faculty and student personnel staff.

While there were two subgroups exhibiting significant differences in perceptions on community dimension, most of the students were in close agreement with the faculty and student personnel staff in viewing community, awareness, and propriety dimensions of the university.

The foreign undergraduate students' perceptions of the campus environment seemed to be affected by class level, country type, English ability, and age. The campus environment was perceived somewhat differently between the students' subgroups based on the above four variables.

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CHAPTER I

INTRODUCTION

Thousands of foreign students come to the United States every year to study at American colleges and universities. Recent statistics of the Institute of International Education show that 286,340 foreign students from 186 different countries and territories enrolled at American colleges and universities in the academic year of 1979-1980.¹ This number shows an 8.5 percent increase over the previous year. This growth rate has occurred through most of the past twenty-six years.² However, it is significant to note that the proportion of undergraduate students to graduate students has increased in recent years. According to information from the Institute of International Education, of the total foreign student population in 1979-1980, 64.7 percent were undergraduates, while 35.3 percent were graduate students.³

With this great influx of foreign undergraduate students, American institutions of higher education are becoming increasingly important in their role of educating them. The potential influence

¹Douglas R. Boyan and Alfred C. Julian, Open Doors: 1979/1980, Report on International Educational Exchange (New York: Institute of International Education, 1981), p. 2.

²Ibid.

³Ibid., p. 21.

of American colleges and universities cannot be overstated as these institutions seek to contribute to the intellectual and emotional development of these students. However, in spite of the rapid growth of foreign undergraduate students and growing concerns about the students' college life on American campuses, there is still a question as to how college life affects them and just how this impact varies within institutions and individuals.

American colleges and universities have many diverse goals in admitting foreign students. Alistair W. McCrone summarizes the purposes of accommodating foreign students on American campuses at the third colloquium on foreign students in five points: (1) to give direct education to the foreign students, (2) to enable foreign students to better satisfy their professional and educational aspirations, (3) to enable American colleges and universities to do a better job of educating American students, (4) to enable American colleges and universities to contribute to the social and economic development of other nations through the education and training of leaders, (5) to further communication and understanding among people of different nations, thereby favoring world peace.⁴

Acceptance of these goals of American colleges and universities should lead to a careful examination of the ways in which various segments of a campus can contribute to the favorable educational experience of foreign undergraduate students. It seems obvious

⁴Alistair W. McCrone, "In Quest of the Ideal," The Foreign Undergraduate Students: Institutional Priorities for Action (New York: College Entrance Examination Board, 1975), pp. 20-21.

that a foreign undergraduate student's educational experiences on an American campus do not take place only in the classroom and laboratory. A student spends most of his/her time outside the formal instruction situation, that is, in the environment of the entire campus, not just the classroom. Therefore, what happens in the interactions with the campus environment during this time may well be crucial in reinforcing or obstructing the foreign student's educational experience. Metraux states this point as follows:

The relations of the student within the university are much more important in shaping attitudes and in achieving the general aims of cross-cultural education than his relations with government agencies. The institution of higher learning remains the focus of specific experience in cross-cultural education: and the responsibility for successfully reaching the immediate and long-range goals of exchange programs rests primarily with the universities and colleges, and with the human beings who for various reasons have undertaken to work for and with foreign students.⁵

The environment of any campus is a mixture of "such psychological, social, and physical components as these: campus mores, traditions, rules; acceptable standards of behavior and achievement; innovative-conservative balance; issues and controversies; grounds, architecture, facilities; value orientations and priorities; organizational structure."⁶ Therefore, the emphases and variations of these components are among the factors that explain the differences among colleges and universities. Paul Bloland discusses the importance of

⁵Guy S. Metraux, Exchange of Person: The Evolution of Cross-Cultural Education (New York: Social Science Research Council, 1952), pp. 35-36.

⁶Paul L. Dressel, Handbook of Academic Evaluation (San Francisco: Jossey-Bass Publishers, 1976), p. 166.

campus environment on college students' educational development:

. . . the educational experience cannot be thought of solely or even primarily as a classroom dominated experience. Research evidence is beginning to accumulate that indicates that much of the educational potency of a particular institution lies in the impact of its environment or climate upon the learning students. It is the totality of the learning experience, formal and informal, curricular and extracurricular, that is influential and it is this totality that requires further examination and assessment if education is to be maximized.⁷

Certainly, the same thing can be said of foreign undergraduate student's educational growth and development on American campus.

Statement of the Problem

One important consideration in viewing a campus environment is the perceptions of the people who make up the university community.⁸ A foreign undergraduate student's perceptions of the campus environment are important because they may be some of the most critical factors in motivating and directing the student's behavior on a foreign campus. As a growing student body, foreign undergraduate students can provide valuable information with their perceptions concerning whether American institutional environments are meeting their educational needs.

Faculty perceptions of the campus environment are important to foreign undergraduate students in that the content and direction

⁷Paul A. Bloland, Student Group Advising in Higher Education (Washington, D.C.: The American Personnel and Guidance Association, 1967), p. 4.

⁸Leonard L. Baird, "Importance of Surveying Student and Faculty Views," in Understanding Student and Faculty Life, ed.: Leonard L. Baird, Rodney T. Hartnett and Associates (San Francisco: Jossey-Bass, 1980), p. 2.

of their advising and conseling may partially evolve from their perceptions of the characteristics of the university. They are also important because the faculty has a major role in defining and interpreting the institutional goals and policies related to the processes of education by being in a position to refer foreign undergraduate students to academic services. The importance of faculty perceptions can further be demonstrated by referring to Fitzgerald's statement that "it is essential that all professional workers charged with educational responsibilities perform their distinctive functions on the basis of shared understanding and mutual respect."⁹ Student personnel staff perceptions of the campus environments of an institution are also important because, like the faculty, their personnel services for the foreign undergraduate student may be based on their perceptions of the campus environment. Furthermore, student personnel professionals, including foreign student advisors, are playing an important leadership role in providing mediation for many factors impinging on the foreign student's daily life on and off campus. They provide foreign students with specialized assistance to meet their unique and varied needs. By providing information, referring students to other resources, interpreting regulations and laws, and suggesting alternatives, professional personnel workers play a decisive role in helping foreign students lead successful

⁹Laurine E. Fitzgerald, "Faculty perceptions of Student Personnel Functions," in College Student Personnel: Readings and Bibliographies, ed.: Laurine E. Fitzgerald, Walter F. Johnson, and Willa Norris (Boston: Houghton Mifflin Company, 1970), pp. 159-160.

lives on American campuses.¹⁰ In summary, it seems obvious that the teaching faculty and student personnel staff are significant reference groups for foreign undergraduate students taking an educational journey on a foreign campus.

Comparison of the perceptions of the above three reference groups of the campus environment of a university would thus provide valuable information. Differences in perceptions might indicate problems in communication among foreign undergraduate students, faculty, and student personnel staff. Also, differences in perceptions might indicate the areas to be reviewed more and analyzed for the enhancement of goals of the institution in admitting foreign undergraduate students.

In view of the above considerations, the following questions are naturally raised: How do foreign undergraduate students perceive the campus environment in which they are educated? Do foreign undergraduate students differ from the other significant groups--teaching faculty and student personnel staff--in their perceptions of the campus environment? Do foreign undergraduate students' perceptions depend on their personal characteristics? This study is intended to find some answers to these questions at Michigan State University.

Purpose of the Study

The purpose of this study was to examine whether foreign undergraduate students differ from undergraduate teaching faculty and

¹⁰Ivan Putman, Jr., "International Students," in Handbook of College and University Administration, ed.: Asa S. Knowles (New York: McGraw-Hill Book Company, 1970), p. 7-244.

student personnel staff in their perceptions of the campus environment at Michigan State University (M.S.U.), and to determine whether foreign undergraduate students' perceptions differ between the subgroups as identified on the basis of their background variables. To carry out these purposes, more specifically, four comparative forms of objectives were provided.

1. Comparisons of the total group of foreign undergraduate students with undergraduate teaching faculty and student personnel staff.
2. Comparisons of the subgroups of foreign undergraduate students.
3. Comparisons of undergraduate teaching faculty with the subgroups of foreign undergraduate students.
4. Comparisons of student personnel staff with the subgroups of foreign undergraduate students.

Formulation of Research Design

As stated above, the primary objective of this study was to describe the difference and/or similarity of perceptions of foreign undergraduate students, undergraduate teaching faculty, and student personnel staff in relation to the campus environment. To fulfill the objective, the environmental perceptions were measured by the second edition of the College and University Environment Scales (CUES II), developed by C. Robert Pace.¹¹ CUES II consists of five

¹¹C. Robert Pace, College and University Environment Scales. 2nd ed. (Princeton, N.J.: Educational Testing Service, 1969).

basic scales and two subscales, but this study is limited to a description of how the three reference groups perceive the campus environment in relation to the five basic scales, that is: (1) practicality, (2) scholarship, (3) community, (4) awareness, and (5) propriety. These scales will be fully described in Instrumentation of Chapter III.

In addition, the perceptions of foreign undergraduate students are described on the basis of the variables which were chosen as hypothesized to affect the environmental perceptions of individuals.¹² That is, the foreign undergraduate students' perceptions are described in relation to the variables of age, gender, class level, academic areas of study, living arrangements (with whom they live), financial sources of support, self-rated ability in English, and types of home country.¹³

Hypotheses

The hypotheses to be tested in this study were developed in the order of the stated objectives.

- H₁ : There will be no differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students, undergraduate teaching faculty, and student personnel staff are compared to one another.

¹²More details about the variables chosen will be explained in Chapter IV.

¹³The World Bank categorizes all the countries of the world into five developmental types with main respects of per-capita income, other social, educational, and economic indicators, etc. This study will use the World Bank's classification in categorizing the foreign undergraduate students' home country types. World Developmental Report (Washington, D.C.: The World Bank, August 1980).

- H₂₋₁: There will be no differences in the perceptions of the selected characteristics of the campus environment when the ages of foreign undergraduate students are grouped into two categories: 18-23 and 24-38.
- H₂₋₂: There will be no differences in the perceptions of the selected characteristics of the campus environment between female and male foreign undergraduate students.
- H₂₋₃: There will be no differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students are compared on the basis of their class level.
- H₂₋₄: There will be no differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students are compared on the basis of their academic areas of study.
- H₂₋₅: There will be no differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students are compared on the basis of their living arrangements.
- H₂₋₆: There will be no differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students are compared on the basis of their financial sponsorship.
- H₂₋₇: There will be no differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students are compared on the basis of their self-rated ability in English.
- H₂₋₈: There will be no differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students are compared on the basis of their home country type.
- H₃₋₁: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the two age groups of foreign undergraduate students (18-23 and 24-38).
- H₃₋₂: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with female and male foreign undergraduate students.

- H₃₋₃: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the class level categories of foreign undergraduate students.
- H₃₋₄: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the academic areas of study categories of foreign undergraduate students.
- H₃₋₅: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the living arrangement categories of foreign undergraduate students.
- H₃₋₆: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the sponsorship categories of foreign undergraduate students.
- H₃₋₇: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the English ability categories of foreign undergraduate students.
- H₃₋₈: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the country type categories of foreign undergraduate students.
- H₄₋₁: There will be differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the age groups of foreign undergraduate students (18-23 and 24-38).
- H₄₋₂: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with female and male foreign undergraduate students.
- H₄₋₃: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the class level categories of foreign undergraduate students.

- H₄₋₄: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the academic areas of study categories of foreign undergraduate students.
- H₄₋₅: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the living arrangement categories of foreign undergraduate students.
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- H₄₋₇: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the English ability categories of foreign undergraduate students.
- H₄₋₈: There will be no differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the country type categories of foreign undergraduate students.

Significance of the Study

This study is significant in gathering information for institutional self-evaluation. How do foreign undergraduate students, a significant unit of the student body, perceive the campus environment, a powerful factor affecting their educational experience and growth? Do certain groups of foreign undergraduate students need more attention than others in helping them gain the greatest benefit from the university's academic and nonacademic experiences? The underlying assumption is that institutional environment can be changed and altered. Therefore, there must be evaluation

of the campus environment if the university is interested in enhancing the educational experience and development of foreign undergraduate students.

The determination of how a university environment is viewed by foreign undergraduate students and its subgroup(s) is important for the faculty and the student affairs professionals who interact with foreign undergraduate students on campus. The faculty may want to know how foreign undergraduate students see the campus environment. The student personnel staff also needs to concern itself with foreign undergraduate students in their various living areas and how they feel about their campus environment. If differences in perceptions are found, it might be necessary to consider possible adjustment and changes in the programs of personnel service provided by the university. In any case, the total university staff needs to know whether they are working with foreign undergraduate students who perceive the campus environment somewhat similarly or in many different ways. The result of this study may provide the total university staff with the necessary information to work effectively toward a more successful educational experience for foreign undergraduate students.

Definition of the Terms

The terms which were used in this study were defined as follows:

Foreign Undergraduate Students refer to all students from abroad enrolled in undergraduate schools or colleges of Michigan

State University in the spring term of 1982 who were pursuing a full-time program of study, but who had temporary visa status at the time of this study.

Teaching Faculty refers to instructional personnel whose full-time teaching load included instruction of undergraduate students in the schools or colleges of M.S.U. in which foreign undergraduate students were enrolled in the academic year of 1981-82.

Student Personnel Staff refers to full-time professional personnel who were working in the area of service available to foreign undergraduate students at Michigan State University in the spring term of 1982.

Campus Environment includes the various factors of interaction that the students go through in the stages of their educational growth and development, particularly practicality, scholarship, community, awareness, and propriety of the campus.

Organization of the Study

This study was organized into five chapters. Chapter I was an introduction to the study. It consisted of all the necessary details such as introduction, statement of the problem, purpose of the study, formulation of research design, hypotheses, significance of the study, and definition of the terms used in this study.

In Chapter II a review of literature was presented. To fully understand foreign undergraduate students' campus lives in American institutions, the related studies were reviewed. Also, the reference group theory was presented to explain how the foreign

undergraduate students' perceptions of the campus environment became a comparison reference for the teaching faculty's and student personnel workers' perceptions.

The research design and procedure of the study was extensively discussed in Chapter III. Population and sample selection, instrumentation, data collection, and treatment and analysis of the data were covered in this chapter.

In Chapter IV the analysis of the data was reported under the two sections titled: (1) Actual Respondents, and (2) Presentation of the Research Results. Finally, the study is summarized in Chapter V. This chapter also concluded the study and included recommendations for application and further research.

CHAPTER II

REVIEW OF LITERATURE

Over the past three decades there has been a great amount of literature published on the subject of foreign students in the United States. For example, Walton analyzed 200 studies produced between 1946 and 1967.¹ More recently, Spaulding and Flack in their literature review covered more than 450 items which were written during the period from 1967 to 1976.² However, an extensive review of literature indicates that very few of these publications have dealt directly with the question of how the three significant reference groups (undergraduate foreign students, teaching faculty, and student personnel staff) perceive the environment. The literature review also indicates that the studies which have dealt exclusively with undergraduate foreign students are very limited, although some have treated them as an independent variable to be differentiated from graduate level students. The literature review further indicates that undergraduate and graduate foreign students seem to share some common experiences in their schooling in the United States.

¹Barbara J. Walton, Foreign Students Exchange in Perspective: Research on Foreign Students in the United States (Washington, D.C.: Department of State Publication, 1967).

²Seth Spaulding and Michael Flack, The World's Students in the United States: A Review and Evaluation of Research on Foreign Students (New York: Praeger Publishers, 1976).

The writer, therefore, has chosen to divide this chapter into six sections with emphasis on foreign students' academic and social life in American colleges and universities. The first section will present a review of studies on the academic performance of foreign students. The second section will be a presentation of research completed in which foreign students' adjustment problems and satisfaction were investigated on American campuses. The third section will present a review of studies identifying the factors affecting foreign students' adjustment to the American campus environment. The fourth section will present a few research findings from studies of foreign students' perceptions of the various aspects of the U.S. institutional environment. The population of foreign students for the current study is delimited to undergraduate foreign students as previously mentioned. In the fifth section, therefore, a review of studies which focused on undergraduate foreign students will be examined. The final section will be a brief description of the reference group theory which is used to explain how the undergraduate foreign students' perceptions of campus environment become a comparison reference for the teaching faculty's and student personnel workers' perceptions. Such organization is deemed useful in handling the literature review in terms of the purposes of the current study.

Academic Performance of Foreign Students

Before presenting a review of research on foreign students' academic performance, it seems appropriate to first examine what the international student seeks on American campuses, since their goals

may greatly influence their academic performance, and further direct their behavior in the United States.

The evidence indicates that the goals of foreign students are basically educational. Holland stated that foreign students are primarily personally oriented toward definite academic achievement and professional development, while the other concerned groups often emphasize broad social goals such as international understanding and friendship.³ Han's survey, which was conducted to identify the goals of Far Eastern Students enrolled in the University of Southern California, found that the principal goals foreign students wanted to achieve were to acquire skills and knowledge in their major fields, to obtain a degree, and to improve career opportunities at home.⁴ Similar findings were also indicated in a study by Singh who examined the reasons for foreign students coming to the U.S. Singh concluded on the basis of information collected from the foreign students of twenty-one countries at the University of Tennessee that a majority of the students came to the U.S. to get training and degrees in their fields and to study how people function in their professions so they could take home knowledge that would be useful to their

³Kenneth Holland, "Statistics and Comments on Exchange with the United States," International Social Science Bulletin 8 (1956): 636.

⁴Pyung Eui Han, "A Study of Goals and Problems of Foreign Graduate Students from the Far East at the University of Southern California," Dissertation Abstracts International, 36, 68A, 1975.

countries.⁵ Likewise, Hull reported that academic goals were the most important to foreign students.⁶

Spaulding and Flack reached comprehensive conclusions after their extensive review of literature. They stated that the major reasons foreign students come to the U.S. are: (1) to get advanced education or training that is not available at home; (2) to acquire prestige through a degree from a U.S. institution; (3) to take advantage of available scholarship funds; (4) to escape unsettled political or economic conditions in their home country; and (5) to learn more about the United States.⁷

Academic performance of foreign students has been a major area of study, and it is generally reported that foreign students perform favorably in terms of their academic achievement. Thompson examined the academic records of 681 foreign students enrolled in Ohio State University. He reported that 240 earned degrees at different levels, i.e., thirty received their Bachelors, 148 their Masters, and sixty-two the Doctor of Philosophy, while 203 of the total number were still in the process of earning degrees. Thompson

⁵Harmohinder Paul Singh, "A Study of Socioeconomic Problems and Non-return of Selected Foreign Graduate Students at the University of Tennessee." Dissertation Abstracts International, 37, 4835A, 1977.

⁶W. Frank Hull, IV., Foreign Students in the United States of America: Coping Behavior within the Educational Environment (New York: Praeger Publishers, 1978), pp. 82-84.

⁷Spaulding and Flack, The World's Students in the United States, p. 23.

observed that "It is undoubtedly safe to assume that no other large group of students has been able to achieve this record."⁸

Studies on the academic performance of foreign students (e.g., Koenig, 1953; Thompson, 1951; Putman, 1952; Lins and Milligan, 1950; Moore, 1953; Warmbrunn and Spalter, 1957; and Hountras, 1955) were summarized by Putman. Putman indicated that these studies differed in methodology and were somewhat in conflict in results, but he reached the conclusion that foreign students achieve generally as well as American students do.⁹

Cieslak's study also reported similar findings. He mailed questionnaires to ninety-two institutions asking about the academic performance of their foreign student group in comparison to that of their general student group. Among the ninety-two institutions, fifty-three answered that it was about the same, and thirty-two reported that it was "better than the general scholastic average." As a result of his survey, therefore, Cieslak concluded that "the academic performance of foreign students as a group in American colleges and universities compares very favorably with that of American students."¹⁰

⁸Ronald B. Thompson, "Academic Records of Foreign Students," College and University 27 (October 1951): 29-33.

⁹Ivan Putman, Jr., "The Academic Performance of Foreign Students," The Annals of the American Academy of Political and Social Science 335 (May 1961): 47-49.

¹⁰Edward C. Cieslak, The Foreign Students in American Colleges: A Survey and Evaluation of Administrative Problems and Practices (Detroit: Wayne University Press, 1955), p. 130.

There has been an endeavor to predict the academic achievement of foreign students. Such studies generally have been conducted by examining the relationship between foreign students' academic records such as grade-point average (GPA) and personal background variables, but the evidence seems to be inconclusive. Hountras conducted a study to find out the predictive relationship of personal, scholastic, and psychological factors to the academic achievement of 587 foreign graduate students at the University of Michigan from 1947 to 1949. In the control group, 330 were studied, 157 of whom were on probation. Even though these large numbers of students were on probation, Hountras found no predictive significance between academic success and the factors of sex, age, marital status, length of stay in graduate school, major field of study, or geographical area.¹¹

However, Ellakany's study reported different findings. Ellakany investigated the relationship between 454 foreign students' academic achievement and their personal background variables through interviews and data from university records at Iowa State University. He found that sex, age, source of support (for undergraduate students only), native language, and marital status had significant predictive relationships with academic achievement of foreign students.¹²

¹¹Panos T. Hountras, "Factors Associated with the Academic Achievement of Foreign Students at the University of Michigan from 1947 to 1949" (Ph.D. dissertation, University of Michigan, 1955).

¹²Farouk A. A. Ellakany, "Prediction of Academic Achievement of Foreign Students at Iowa State University, 1969-70," Dissertation Abstracts International, 31, 1575A, 1970.

Telleen's study developed a model which can be used to predict Indian students' academic achievement. She first reviewed forty-one studies which were conducted on the subject of foreign students' academic achievement for the period between 1924 and 1969. Of the fifty-four factors included in those studies, fifteen were found to be significantly related to the academic achievement of 300 Indian graduate students who attended the University of Michigan from 1947 to 1968. Again, eight factors were selected for use in the predictive model, and the model was found to accurately predict the cumulative letter grade of Indian students who were not a part of the original student group in the study. However, the eight factors mostly were related to the students' academic careers in India except for age, presence of scholarship, and source of financial support.¹³

At Iowa State University more recently, Chongolnee again investigated the factors affecting the academic achievement of foreign students. The information for the study was gathered from 144 graduate students through a survey questionnaire, and cumulative GPA was used for measuring achievement. He found that the useful variables to predict foreign students' academic achievement were undergraduate GPA, admission status, first quarter GPA, degree sought, presence of

¹³Judy G. Johnson Telleen, "A Predictive Model of the Cumulative Academic Achievement of Graduate Students from India" Dissertation Abstracts International, 32, 1284A, 1971.

scholarship, length of stay in the U.S., age, and other available services to them.¹⁴

Adjustment Problems and Satisfaction of Foreign Students

A considerable number of previous studies have been done on the adjustment of foreign students to the American campus environment. However, the term "adjustment" has been used with various meanings according to the views of individuals using it.

In Lysggard's study, adjustment meant satisfaction. He stated that "the concept is used as a convenient reference to the respondent's subjective reports on their feelings of satisfaction with different aspects of the stay."¹⁵ In Florstat's study adjustment was defined as difficulties foreign students encounter in specific areas.¹⁶ Pruitt thought adjustment as one component of adaptation. He stated that "adaptation has two components, adjustment and assimilation. Adjustment means coping with one's environment sufficiently well to be happy, comfortable, and fairly free of problems. Assimilation means interacting freely with people

¹⁴Burunchai Chongolnee, "Academic, Situational, Organismic, and Attitudinal Factors Affecting the Academic Achievement of Foreign Graduate Students at Iowa State University," Dissertation Abstracts International, 39, 4078A, 1979.

¹⁵S. Lysggard, "Adjustment in a Foreign Society: Norwegian Fulbright Grantees Visiting the United States," International Social Science Bulletin 7 (1955): 46.

¹⁶Reisha Florstat, "Adjustment Problems of International Students," Sociology and Social Research 36 (September-October 1951): 25-30.

from the host country and accepting their culture."¹⁷ In some of the studies, however, the definition of adjustment included several aspects. Selltiz et al., for example, included difficulties one encountered during the stay, general reactions such as feelings of loneliness and homesickness, and satisfaction with various aspects of life in the category of adjustment.¹⁸ In the following, the writer will present a review of studies on the problems foreign students encounter and satisfaction they feel while they are studying at American institutions.

Selltiz et al. interviewed 375 foreign students enrolled in three different kinds of institutions: small colleges in towns and small cities, large universities in small cities, and large universities in large cities. The students were interviewed twice--the first time was at the beginning and the second was at the end of the academic year.

They found that although "many" foreign students had problems in one or more of the academic, social, and psychological areas of adjustment, "few" students had serious trouble. Further, they found that such problems declined over time. English language and academic work were most frequently identified as sources of trouble, particularly at the beginning of the academic year. But at the end of the

¹⁷Frances J. Pruitt, "The Adaptation of Foreign Students on American Campuses," Journal of NAWDAC 41 (Summer 1978): 144-145.

¹⁸C. Selltiz et al., Attitudes and Social Relations of Foreign Students in the United States (Minneapolis: University of Minnesota Press, 1963), pp. 123-130.

year more than half of the students reported that they were "quite satisfied" with the training they were receiving, and that a similar proportion were "quite pleased" with their own progress. As for the food, pace of living, and American customs, only small proportions of the students reported difficulties. Emotionally the majority of the students described themselves as either "not at all" or only "a little" lonely or homesick, and they reported that they were usually or always in good spirits.¹⁹

A more comprehensive view of foreign students' adjustment problems was offered by Moore. He stated that foreign students encountered the following difficulties: (1) problems related to English proficiency; (2) problems caused by differences in the educational systems; (3) problems in adjusting to American culture; (4) problems related to the complexity of the situation in terms of the number of adjustments required and the time allowed for making them; (5) problems of legal impediments to study abroad; (6) problems of academic performance; (7) problems of inadequate resources; and (8) problems of social adjustment. However, Moore indicated that foreign students' dissatisfaction with their American experience was not with the general, but with the specifics.²⁰

Moore's views were supported by many subsequent studies. Han's study at the University of Southern California identified

¹⁹Ibid., pp. 254-255.

²⁰Forrest G. Moore, The Collegiate Environment; the Experience and Reactions of Foreign Students, Government-Sponsored and Self-Sponsored (preliminary draft for Bureau of Social Science Research Meeting, October 13-17, 1965).

finance and English-related problems as the most serious encountered by foreign students from the Far East.²¹ In his study, Nenyod also isolated foreign students' difficulties. Four hundred who were enrolled in state colleges and universities in Texas participated in this study by answering a survey questionnaire. Nenyod found that the major problems of foreign students were communication, academics, finance, housing and food, religion, and social and personal things in descending order. Adjustment to the American systems and standards of education were indicated as creating other academic difficulties.²²

More recently, Collins investigated foreign students' adjustment problems by use of the Mooney Problem Check List at Howard University. The information was collected from 112 students representing twenty-eight countries and four major geographical areas: Africa, Asia, the Caribbean, and the Near East. This study revealed that the major problems of international students in descending order of importance were: social and recreational activities; finances, living conditions, and employment; home and family; personal psychological relations; and courtship, sex, and marriage.²³

²¹Han, "A Study of Goals and Problems of Foreign Graduate Students from the Far East at the University of Southern California," Dissertation Abstracts International, 36, 68A, 1975.

²²Boonmee Nenyod, "An Analysis of Problems Perceived by Foreign Students Enrolled in State Colleges and Universities in the State of Texas," Dissertation Abstracts International, 36, 5091A, 1976.

²³Paul L. Collins, "Self-Perceived Problems of International Students Attending Howard University," Dissertation Abstracts International, 37, 4895A, 1977.

However, problems of foreign students seem to change over time. Emphasizing the situational factors affecting the psychiatric aspect of adjustment of foreign students, Klien et al. reported that early in their stay, foreign students experienced psychological depression and loneliness, followed by varying academic stresses and later by emotional and interpersonal problems and conflicts about the impending return home. Thus, Klein et al. suggested that those dealing with the problems of foreign students shift the focus from the foreign aspect of foreign students to the human aspect.²⁴

Penn and Durham's study focused on the problems which foreign students might have in interaction with American students. They used a questionnaire for gathering information from foreign students and American students at Oregon State University. They found that foreign students considered difficulty in understanding English and unfamiliarity with American customs as the greatest barriers to interaction with American students. On the other hand, American students stated the following barriers: (a) unfamiliarity with foreign customs; (b) misinterpretation of actions; (c) dislike of particular national groups; (d) dislike of personal characteristics such as aggressive behavior and attitudes toward members of the opposite sex; (e) lack of common interests; and (f) language problems.²⁵

²⁴Marjorie H. Klein et al., "The Foreign Students Adaptation Program: Social Experience of Asian Students in the U.S.," International Educational and Cultural Exchange 5 (Winter 1971): 82-83.

²⁵J. Roger Penn and Marvin L. Durham, "Dimensions of Cross-Cultural Interaction," Journal of College Student Personnel 19 (May 1978): 264-267.

It seems helpful to identify foreign students' adjustment problems by examining them in relation to those of native students. A few studies, reviewed below, investigated foreign students' problems in comparison with those of American students.

Arjona compared the foreign students' adjustment problems with those of a comparable American student group as a control group. The Mooney Problem Check List was administered to 62 foreign and 62 American students enrolled in Indiana University. Foreign students seemed to have more problems than did the American students in each of the personal, emotional, and academic areas. But the problems related to home and family relationships, and morals and religion were of least concern to both foreign and American students. Only the problems in the emotional areas were found to be significantly different between the two groups. Foreign students had more problems than did American students in the emotional area.²⁶

Johnson also designed a study which consisted of a three-phase survey used to identify foreign students' adjustment problems. In the first phase of the survey, a questionnaire containing 13 item problem sections was mailed to 214 foreign students enrolled in the University of Tennessee. The students were asked to indicate whether each item was a "very important problem," an "important problem," or "not a problem." Unexpectedly, the results showed that many areas

²⁶A. Q. Arjona, "An Experimental Study of the Adjustment Problems of a Group of Foreign Graduate Students at Indiana University" (Ph.D. dissertation, Indiana University, 1956).

thought to be of great concern to foreign students were not evaluated by them as being significant. For example, the most frequently mentioned "very important problem" was English language facility, yet only 20 percent of the students gave it this high rating. Rather, 40 percent of the respondents reported that English proficiency was "not a problem." With the same questionnaire, Johnson investigated American students' opinions of the problems of foreign students. The sample of the American students was 34. The finding was that the American students expected the foreign students to have more difficulties than the foreigners reported. Only in three of the thirteen problem areas did the majority of the two groups coincide in their evaluation: English language proficiency, ability to get along financially, and separation from family.

With the wide discrepancy between the expectations of American students and foreigners' actual reports, Johnson conducted the third phase of the survey--comparison of the problems of the foreign and American students. The results revealed that only in the cases of food, homesickness, and separation from family were significant differences found between the responses of the two groups. Interestingly, the percentage of American students who reported having problems with food was higher than that of foreign students. Homesickness and separation from family were reported as greater problems by the foreign students than by the American students. Observing the results

of the study, the author commented that "foreign students are more student than foreign."²⁷

Von Dorpowski investigated foreign students' adjustment problems by comparing foreign students' perceptions of problems encountered on U.S. campuses with perceptions foreign student advisors had of foreign students' problems. The information was collected from 536 foreign students and 174 foreign student advisors in U.S. colleges and universities by the use of the Michigan International Student Problem Inventory, which consists of eleven areas related to student personnel services. This study found that the advisors tended to view the problems as more serious than foreign students themselves. However, both group agreed that financial aid, the English language, and placement were the most critical problems for the foreign students. Likewise, both groups came to an agreement that health and religious services were the least problem areas.²⁸

In general, foreign students do not seem satisfied with the fulfillment of their expectations and needs in the U.S. institutions of higher education, although most of them are satisfied to a certain degree with various aspects of their experience, rather than unsatisfied. The study conducted by Culha at the University of Minnesota investigated foreign students' needs and satisfaction by comparing

²⁷Dixon C. Johnson, "Problems of Foreign Students," International Educational and Cultural Exchange 7 (Fall 1971): 61-68.

²⁸Horst Von Dorpowski, "The Problems of Oriental, Latin American, and Arab Students in U.S. colleges and Universities as Perceived by These Foreign Students and by Foreign Student Advisors," Dissertation Abstracts International, 38, 7160A, 1978.

them with those of a group of American students. He developed the Foreign Student Importance Questionnaire and the Foreign Student Satisfaction Questionnaire to accomplish his study, and he administered these instruments to selected foreign and American student groups. He found that all needs considered important by foreign students were also considered important by American students, except on the emotional security scale. The American student group reported emotional security more important than the foreign student group did. On the satisfaction scales, the highest satisfaction areas of the foreign student group were Overall Experience, Basic Values, and Instructors. The lowest satisfaction areas were Financial Security, Living Conditions, and Social Security. For the American student group, however, the highest satisfaction areas were Overall Experience, Basic Values, and Friends and Emotional Security and the lowest were University Rules and Procedures, Living Conditions, and Instructors. However, in general, it was found that foreign students were less satisfied than American students on almost all satisfaction scales.²⁹

Lather was also concerned with foreign students' perceived needs importance and satisfaction derived in relation to four educational components: (a) faculty advisors' activities; (b) course work; (c) university activities and services; and (d) cross-cultural communication. He collected the data from 400 foreign students

²⁹Meral U. Culha, "Needs and Satisfaction of Foreign Students at the University of Minnesota," Dissertation Abstracts International, 35, 4141B, 1975.

enrolled in Western Michigan University through a mailed survey questionnaire. He found that there were significant differences between perceived levels of importance and derived levels of satisfaction in all the four educational components. Importance values were higher than satisfaction levels in every component.³⁰

A comprehensive national survey of foreign students' needs and satisfaction was conducted by Lee et al. They developed a questionnaire which consisted of twenty-four categories of needs. In administering the questionnaire, they asked foreign students how they perceived the importance and satisfaction of each need item. The information was gathered from 1,857 foreign students of developing countries (classified on the basis of the World Bank's social and economic indicators) who enrolled in 30 U.S. universities.

They found that in every category of needs, there were some which were not satisfied to the level of the perceived importance of the students, although most of the needs were satisfied to a certain extent rather than unsatisfied. Needs for practical experiences and anticipated post-return needs were among the least met. Also, financial needs and pre-return information needs were least met according to their expectations. Among all the needs of the students, informational needs were best met. Students were also quite satisfied

³⁰Frances L. Lather, "Foreign Student Perceptions of Four Critical Components Related to Educational Experiences at Western Michigan University," Dissertation Abstracts International, 39, 3403A, 1979.

with the achievement of their educational goals which they regarded as being of the highest importance.³¹

During the 1950s and 1960s, a group of social scientists who were concerned with cross-cultural education built a model which could be applied to the adjustment process of foreign students, the so-called "U-Curve" hypothesis. At the top of the curve, in the initial "spectator phase," the foreign student is a detached observer with a minimum involvement. After a period of stay, the "involvement phase" brings a decline in morale as frustrations are experienced and images about the United States and the host university may decline and subject to modification. If the students remain long enough, they go through this adaptive stage and enter a "coming to terms phase" where morale rises and interactions with Americans increase. Dubois, in discussing these phases, added a "predeparture phase."³² Ford summarized Dubois' postulation as follows:

1. The spectator phase--which is early in the student's sojourn and is characterized by psychological detachment from the new experience; a time when the student still has a tourist attitude of enjoying the new environment without having to meet many of its demands.
2. The adaptive phase--characterized by active involvement in the problem of adjustment, when the student must master the skills required by the host culture in general and by the academic environment in particular. It is the phase of the most acute strain and stress, of unresolved conflict when the so-called culture shock may be most acute.

³¹Motoko Y. Lee et al., Needs of Foreign Students from Developing Nations at U.S. Colleges and Universities (Washington, D.C.: NAFSA, 1981), p. 107.

³²Cora Dubois, Foreign Students and Higher Education in the United States (Washington, D.C.: American Counsel on Education, 1956), pp. 66-77.

3. The coming-to-terms stage--in which an equilibrium is reached in the struggle for adjustment. Regardless of whether attitudes toward the host culture and the self are positive, negative, or objective, this stage is characterized by relative stability.
4. The predeparture stage--which concludes the sojourn; at this stage the expectations of return to the home country dominate the student's feelings and attitudes. The tenor of this period again may be negative or positive, depending on the nature of the adjustment and of life expectations upon return.³³

The "U-curve" hypothesis stimulated research in the area of cross-cultural education, and was supported by the evidence of several early studies. Lysggard's study found the "U-curve" pattern in the social relations of Norwegian students with Americans and estimated that the first phase occurred during the first six months and the second phase was between the six and eighteenth months in the United States.³⁴ Coelho's study found that Indian students' evaluations of both home and the U.S. followed the "U-curve" pattern.³⁵ Morris' study also confirmed the curve for the sample of foreign students at UCLA.³⁶ Selltitz et al. found that the foreign students of their sample consistently traced the pattern of the "U-curve" on

³³Charles C. Ford, "A Case Study of the Adaptational Patterns of Asian Graduate Students in Education at Michigan State University" (Ph.D. dissertation, Michigan State University, 1969), p. 29.

³⁴S. Lysgaard, "Adjustment in a Foreign Society: Norwegian Fulbright Grantees Visiting the United States," International Social Science Bulletin 7 (1955): 45-51.

³⁵G. V. Coelho, Changing Images of America: A Study of Indian Student's Perceptions (Glencoe: The Free Press, 1958).

³⁶Richard T. Morris, The Two-Way Mirror: National Students' Adjustment (Minneapolis: University of Minnesota Press, 1960).

their attitudes and social relations with Americans in the eighth or ninth months.³⁷

Focusing on the readjustment of foreign students' returning home, Gullahorn and Gullahorn extended the "U-curve" to "W-curve." Based on the experiences of Americans returning from abroad, they found that the individual goes through a readjustment process in his home country similar to that which he experienced abroad.³⁸

However, the "U-curve" hypothesis created controversy and has been challenged by other scientists. For example, Becker conducted a comparative study of Indians, Israelis, and Europeans' attitude to the United States at UCLA. The different nationalities of the students sampled represented the under-developed, semi-developed, and highly developed countries. He found that the "U-curve" pattern operated in reverse for students from under- or semi-developed countries. Students from these two groups arrived in the U.S. with greater anxieties and expressed hostile attitudes in early and late periods of their sojourn, but in the middle period of their stay exhibited more favorable attitudes. Therefore, Becker suggested a hypothesis of "anticipatory adjustment" which means "a process of selective adoption of attitudes on the basis of their utility in easing the individual's adjustment to anticipated imminent and drastic changes in his environment."³⁹

³⁷Selltiz et al., pp. 189-193.

³⁸J. T. Gullahorn and Jeanne E. Gullahorn, "An Extension of the U Curve Hypothesis," Journal of Social Issues 19 (July 1963): 33-47.

³⁹Tamar Becker, "Patterns of Attitudinal Changes among Foreign Students," The American Journal of Sociology 73 (January 1968): 431-442.

Ford developed three adaptational patterns of foreign students to the academic environment of the College of Education, Michigan State University. Fifteen Asian graduate students were intensively interviewed for gathering information. The three patterns were:

1. Negative-anxious--Those who were highly and openly dissatisfied with their educational experiences and were highly critical of the faculty and university.
2. Negative-accommodating--Those who were generally dissatisfied with their educational experienced but who tended to accept the conditions that they perceived as being inevitable.
3. Positive--Those who were satisfied with their educational experiences.⁴⁰

The investigation of relationships between significant, independent, and dependent variables is intrinsic to social and behavioral science research and also crucial for the management of complexity in cross-cultural research.⁴¹ The writer in this study has chosen eight independent variables as hypothesized to affect undergraduate foreign students' perceptions of the campus environment. In the following section, the writer will review the publications

⁴⁰Ford, "A Case Study of the Adaptational Patterns of Asian Graduate Students in Education at Michigan State University," p. 44.

⁴¹John Useem and Ruth H. Useem, "Generating Fresh Research Perspectives and Study Design for Transnational Exchanges among the Highly Educated," paper prepared for German-American Conference, Bonn, November 1980, p. 16.

in which the selected eight variables were investigated. The eight variables are: (1) age, (2) sex, (3) class level, (4) major field of study, (5) living arrangements, (6) primary financial sources of support, (7) self-rated ability in English, and (8) home country's development level.

Factors Affecting Foreign Student's Adjustment

Age of foreign students has been investigated as one of the possible independent variables influencing their adjustment to the American campus environment, but the findings seem to be inconclusive. Han's study reported that foreign students who were more than 30 years old encountered more academic difficulties than students less than 30 years old.⁴² Such a finding seemed to be supported by the result of Hull's study which revealed that older students were more involved with academic works, while younger students were more frequently involved with Americans and were more satisfied with the non-academic aspects of their sojourn.⁴³

However, this conclusion was reversed in Porter's study. Porter developed an inventory, The International Student Problem Inventory, to measure the problems of foreign students in the areas of student personnel services: English language, academic records,

⁴²Han, "A Study of Goals and Problems of Foreign Graduate Students from the Far East at the University of Southern California," Dissertation Abstracts International, 36, 68A, 1975.

⁴³Hull, Foreign Students in the United States of America: Coping Behavior within the Educational Environment, pp. 50-51.

financial aids, living-dining, social-personal, admission and selection, placement, and orientation services. The students in the sample were from Asia, the Middle East, Latin America, Europe, Canada, and Australia enrolled at Michigan State University. Porter found that no differences existed between the problems of foreign students according to age.⁴⁴

Further, other studies showed that there was no significant relationship between age and adjustment problems of foreign students. Sharma analyzed foreign students' problems using the devised inventory covering academic, personal, and social problems. Subjects were sampled from students representing countries of the Far East, South Asia, the Middle East, Africa, and Latin America. Sharma found that age upon arrival in the U.S. had little effect on foreign student problems.⁴⁵ Lather also studied how foreign students perceived four basic educational components in terms of perceived importance and satisfaction as mentioned before. He found that there were no differences between age groups on any of the four educational aspects.⁴⁶ Lee et al. also revealed that there were no large differences between age groups of foreign students in terms of their needs

⁴⁴John W. Porter, "The Development of an Inventory to Determine the Problems of Foreign Students" (Ph.D. dissertation, Michigan State University, 1962), p. 163.

⁴⁵Sarla Sharma, "A Study to Identify and Analyze Adjustment Problems Experienced by Foreign Non-European Graduate Students Enrolled in Selected Universities in the State of North Carolina" Dissertation Abstracts International, 32, 1866A, 1971.

⁴⁶Lather, "Foreign Student Perceptions of Four Critical Components Related to Educational Experiences at Western Michigan University," Dissertation Abstracts International, 39, 3403A, 1979.

and satisfaction. But, they indicated that older students tended to be more satisfied with the way academic planning took place and with relevancy of education.⁴⁷

Sex differences also has been investigated in relation to the adjustment of foreign students. Porter's study reported that female students checked more problems than males on the Michigan International Student Problem Inventory.⁴⁸ Pruitt stated that men African students were better adjusted than women counterparts to the U.S. environment.⁴⁹ However, Collin's study results were in reverse in that male foreign students experienced significantly more problems than females.⁵⁰ This may be supported by Clubine's study. Clubine reported that female foreign students seemed to be more familiar with resource persons on campus than male students.⁵¹ Further, Lather reported that there were no differences between male and female students in their perceived educational importance and satisfaction.⁵²

⁴⁷Lee et al., Needs of Foreign Students from Developing Nations at U.S. Colleges and Universities, p. 76.

⁴⁸Porter, "The Development of an Inventory to Determine the Problems of Foreign Students," p. 158.

⁴⁹Pruitt, "The Adaptation of Foreign Students on American Campuses," p. 146.

⁵⁰Collins, "Self-Perceived Problems of International Students Attending Howard University," Dissertation Abstracts Int., 37, 4895A, 1977.

⁵¹Eugene Clubine, "The Foreign Student's Differential Knowledge and Use of Staff Members in Response to Problem Situations" (Master's Thesis, Iowa State University, 1966).

⁵²Lather, "Foreign Student Perceptions of Four Critical Components Related to Educational Experiences at Western Michigan University," Dissertation Abstracts International, 39, 3403A, 1979.

Lee et al. also reported that, in general, sex categories didn't show any differences on the needs and satisfaction composites.⁵³

In this study the writer has chosen the academic status of foreign undergraduate students (freshmen, sophomores, juniors, and seniors) as an independent variable, since it is supposed that perceptions of campus environment might be different according to academic status. According to the extensive review of literature, no study was found that investigated the relationship between the academic status and the adjustment of foreign undergraduate students.

A foreign student's major field of study seems to influence his/her educational experience and adjustment in American colleges and universities. According to Hull's study, those foreign students identifying with the Arts and Humanities were the most involved with Americans as compared with those majoring in other academic disciplines. Hull concluded that students majoring in specific areas of study vary somewhat in their interaction with the educational environment.⁵⁴ A similar finding in Quinn's study revealed that students majoring in Arts and Humanities adjusted more successfully than those in the scientific fields.⁵⁵ Lee et al. also found that foreign students' needs and satisfaction were different, to some extent,

⁵³Lee et al., Needs of Foreign Students from Developing Nations at U.S. Colleges and Universities, p. 76.

⁵⁴Hull, Foreign Students in the United States of America: Coping Behavior within the Educational Environment, pp. 31-33.

⁵⁵Walter A. Quinn, "A Study of Selected Sojourn Preferences and Priorities of Stanford University Foreign Students," Dissertation Abstracts International, 35, 7576A, 1975.

according to their major fields of study. Agricultural students placed higher importance on needs for academic planning, relevancy of education, training to apply knowledge, extracurricular learning experience, facilitation of course work, and other academic environments than those in other fields, particularly than those in engineering, and natural and life sciences. Also, they found that agricultural students' needs for academic planning were more satisfied than students in other fields. Natural and life sciences' students were more satisfied than Engineering students with practical experiences.⁵⁶ However, Siriboonma reported that the curriculum of a foreign student did not have any significant effect on their levels of satisfaction as measured by the instrument, College Student Satisfaction Questionnaire (Form C).⁵⁷

In studies of foreign students, it has been generally assumed that "with whom the foreign student lives" will affect his/her forming of social relationships, and consequently his/her lifestyle, problems, and satisfaction. Lee et al. investigated the relationship between satisfaction based on needs and the living arrangements of foreign students, that is, "with whom they lived." They found that satisfaction of some needs was significantly related to with whom the students lived. Those living with U.S. students, except those with spouses and children, compared to those living with home country

⁵⁶Lee et al., Needs of Foreign Students from Developing Nations at U.S. Colleges and Universities, p. 83.

⁵⁷Umporn Siriboonama, "An Analysis of Student Satisfaction as Perceived by Foreign Students at Iowa State University" Dissertation Abstract International, 39, 5983 A, 1979.

students or alone were more satisfied with the fulfillment of university information needs, community information needs, life information needs, housing needs, needs for practical experiences, and needs for activities with Americans. In addition, they reported that foreign students living with Americans and other foreigners perceived a higher likelihood of achieving their primary goals than those residing with fellow country students.⁵⁸ Wilson also reported that foreign students living on campus and having American roommate(s) were related to high social activities and involvement with Americans.⁵⁹

Research results on the effects of sponsorship on foreign students' adjustment seem to be inconclusive. Pruitt revealed in a study of African student adaptation that the students who were supported by their home governments had better adjustment than those who supported themselves.⁶⁰ According to Hull's study, however, foreign students without scholarships were more involved with Americans.⁶¹ Siriboonma's study reported that source of support did not have any significant effect on the students' levels of satisfaction to the aspects of working conditions, compensation,

⁵⁸Lee et al., Needs of Foreign Students from Developing Nations at U.S. Colleges and Universities, pp. 96-98.

⁵⁹Douglas W. Wilson, "Social Relationships of International Students Attending Oklahoma State University," Dissertation Abstracts International, 36, 7223A, 1976.

⁶⁰Pruitt, "The Adaptation of Foreign Students on American Campuses," p. 146.

⁶¹Hull, Foreign Students in the United States of America: Coping Behavior within the Educational Environment, p. 33.

quality of education, social life, recognition, and total satisfaction.⁶²

The majority of research findings have agreed that English proficiency was positively related to foreign students' academic and social adjustment problems, and satisfaction. According to the citation of Selltitz et al., Niyekawa found that lack of English facility led to the feelings of inferiority and depression in communication for Japanese students in Hawaii.⁶³ Nenyod revealed that most of the communication and academic problems of foreign students was attributed to their lack of English proficiency.⁶⁴ Lee et al. indicated that the most significant predictor of satisfaction of many needs of foreign students was self-evaluated English facility.⁶⁵ Spaulding and Flack concluded in their extensive review of literature that students who had difficulties with oral or written English tended to have academic and social adjustment problems.⁶⁶

The Useems suggested that home country development level or status of foreign students might be a good independent variable to

⁶²Siriboonma, "An Analysis of Student Satisfaction as Perceived by Foreign Students at Iowa State University."

⁶³Selltiz et al., Attitudes and Social Relations of Foreign Students in the United States, pp. 80-81.

⁶⁴Nenyod, "An Analysis of Problems Perceived by Foreign Students Enrolled in State Colleges and Universities in the State of Texas."

⁶⁵Lee et al., Needs of Foreign Students from Developing Nations at U.S. Colleges and Universities, pp. 80-81.

⁶⁶Spaulding and Flack, The World's Students in the United States: A Review and Evaluation of Research on Foreign Students, pp. 50-51.

be studied in cross-cultural education.⁶⁷ A few studies have been partially concerned with how foreign students' adjustment and experience are different on the basis of their home country's developmental level. Becker conducted a study which related to the adjustment patterns of foreign students from under-, semi-, and developed countries as mentioned above. He found that the students from under- and semi-developed countries displayed "almost" opposite patterns of attitudinal and behavioral changes as compared with the students from developed countries.⁶⁸

Deutsch also differentiated between students from under-developed areas and developed areas in investigating foreign students' adjustment problems. He considered Asia, Africa, and Latin America as underdeveloped regions. He reported that students from under-developed countries most frequently encountered problems related to financial matters, jobs, housing, food, homesickness, interaction with Americans, American patterns of dating and American social etiquette. On the other hand, students from developed countries most frequently faced problems with finance, jobs, and homesickness.⁶⁹

⁶⁷Useem and Useem, "Generating Fresh Research Perspectives and Study Design for Transnational Exchanges among the Highly Education," pp. 14-15.

⁶⁸Becker, "Patterns of Attitudinal Changes among Foreign Students," pp. 431-442.

⁶⁹Steven E. Deutsch, International Education and Exchange: A Sociological Analysis (Cleveland, Ohio: Case Western Reserve University Press, 1970), pp. 78-83.

Foreign Students' Perceptions of Some Aspects
of the U.S. University Environment

Foreign students' perceptions of Americans or American students seem to be complex. Maslog studied national stereotypes with forty-seven Philippine and fifty-two Indian students at the University of Minnesota. According to the results of the study, Philippine and Indian students had similar images of Americans as hard-working, practical, and materialistic.⁷⁰ Such perceptions of foreign students toward Americans or American students are supported in part by the findings of Heath's study. Heath investigated foreign students' attitudes toward American students at the International House of UCLA. He interviewed foreign students from Europe, South America, Far East, Southeast Asia, Africa, Middle East, and Australia and Canada. He reported that "the students regarded Americans as democratic, ambitious, friendly, and easy-going, but also immature and materialistic. They were impressed with American's optimism, egalitarianism, and informality (particularly in the professor-student relationship), but they also discerned superficial and ephemeral social relations. . . ."⁷¹

Hamilton investigated how foreign students perceived the university environment by comparing their views with that of American students. The scale he used was the College Characteristics Index

⁷⁰Crispin C. Maslog, "Filipino and Indian Students' Images: Of Themselves, of Each Other, and of the United States," Dissertation Abstract International, 28, 4589A, 1968.

⁷¹Louis Heath, "Foreign Student Attitudes at International House, Berkeley," International Educational and Cultural Exchange 5 (Winter 1970): 66-67.

(CCI), which is intended to measure the environmental perceptions of the students on eleven factors. It is based on items referring to curriculum, teaching and classroom activities, rules and regulations, policies, student organizations, activities, interests, features of the campus, services and facilities, and relationships among students and faculty. The information was gathered from sophomores, juniors, seniors, and graduate students of 30 foreign and 28 American students. The results indicated that foreign students' perceptions differed from American students on five of the eleven factors measured by the CCI. The differences were: (a) the foreign students tended to regard the administration as being more receptive to change than the American students; (b) foreigners felt the competition for grades to be more intense and that professors are more demanding; (c) foreigners envisioned that they had greater opportunities to develop leadership potential and assurance; (d) foreigners regarded their group activities as warmer and more friendly; (e) foreigners internalized more fully the press of a vocational orientation.⁷²

Tuso examined how African graduate students perceived their academic experiences at Michigan State University. He interviewed forty-seven African students with a structured questionnaire. The majority of the students rated lectures, group discussions, audio-visual presentations, and class reports as effective in acquiring

⁷²James T. Hamilton, "A Comparison of Domestic and International Students' Perceptions of the University Environment," Journal of College Student Personnel 20 (September 1979): 443-446.

knowledge. On types of evaluation, most of the students rated the quiz type of test negatively. The majority of the students wished to write term papers related to African concerns, but were discouraged due to the lack of relevant data and literature and the lack of professors' international experience. The majority of the students perceived that they had not been leniently graded, either because they were foreigners or Africans. On interaction with faculty members, particularly with advisors, most of the students felt they had sufficient interaction in terms of frequency, quality, and comfort. Finally, the majority of the students judged that their academic experiences would be "generally useful" for their future professional activities.⁷³

Foreign Undergraduate Students on American Campuses

The studies conducted exclusively on undergraduate foreign students were very rare, as previously mentioned. Most research dealt with the academic and social life of all foreign students on a particular campus or of all students of a particular nationality without differentiating between undergraduate and graduate foreign students. But, some studies distinguished between undergraduates and graduates on certain items.

In general, undergraduate foreign students seem to be less successful academically than graduate foreign students. Some studies on the academic performance of undergraduate foreign students were

⁷³Hamdesa Tusso, "The Academic Experience of African Graduate Students at Michigan State University" (Ph.D. dissertation, Michigan State University, 1981), p. 417.

summarized in an article by Walton. An early study by Koenig (1953) revealed that the proportion of "above average" grades increased at higher academic levels. Warmbrunn and Spalter's study (1957) also found that undergraduates failed twice as often as graduates. Kincaid (1961) reported that among non-European students in California, only 27 percent of the undergraduates had a grade average of "B" or higher compared with 78 percent of graduate foreign students.⁷⁴

As for the problems encountered by foreign students, undergraduate foreign students also seem to have more problems than graduates. Porter found that undergraduate students checked more problems in the Michigan International Student Problem Inventory than graduate students.⁷⁵ Siriboonma reported that undergraduate foreign students were less satisfied with working conditions, compensation, quality of education, recognition, and overall college experience than graduate students.⁷⁶ Lee et al. found that the perceived importance of needs and satisfaction was different in some aspects between undergraduate and graduate foreign students. On their needs regarding academic planning, university environment, and practical experience, undergraduates placed higher importance than graduates did, while graduates were more satisfied than undergraduates with the same needs. With regard to the needs for facilitating course work, financial needs,

⁷⁴Barbara J. Walton, "Research on Foreign Graduate Students," International Educational and Cultural Exchange 6 (Winter 1971): 19-20.

⁷⁵Porter, "The Development of an Inventory to Determine the Problems of Foreign Students," p. 160.

⁷⁶Siriboonma, "An Analysis of Student Satisfaction as Perceived by Foreign Students at Iowa State University."

and needs for activities with Americans, undergraduates placed higher importance than graduates, even though there were no differences as to satisfaction between the two groups. Therefore, Lee et al. concluded that, in general, graduate students tended to be more satisfied than undergraduates, while undergraduate students tended to feel stronger needs than graduates in certain issues.⁷⁷

Gezi's study on Arab students at California colleges and universities also found a far higher degree of general satisfaction among graduate foreign students than undergraduates. He commented that "since graduate students usually come to the U.S. with clear-cut 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. . . ."⁷⁸

More recently, Harfoush studied the adjustment problems and attitudes of United Arab Emirates (UAE) undergraduate students. The findings of this study were: (1) UAE undergraduate students came to the U.S. with a favorable image, (2) English language and getting used to food were found to be most difficult for UAE undergraduate

⁷⁷Lee et al., Needs of Foreign Students from Developing Nations at U.S. Colleges and Universities, p. 81.

⁷⁸Khalil I. Gezi, The Acculturation of Middle Eastern Arab Students in Selected American Colleges and Universities (New York: American Friends of the Middle East, 1959), p. 102.

students, and (3) there was no effective planning for preparation before coming to the U.S.⁷⁹

The Reference Group Theory

This study involves the reference group theory. The concept of reference group provides an explanation of how the undergraduate foreign students' perceptions of the campus environment become a comparison reference for the faculty's and student personnel staff's perceptions. The reference group concept, since the term was first introduced by Hyman, has been utilized with varying emphasis and meaning in the theoretical and empirical studies of all the social sciences in a variety of situations.⁸⁰ However, it can be noted that all discussions of reference groups involve some identifiable grouping to which an individual is related in some manner to the norms, and values shared in that group.⁸¹

It is found that the reference group serves as the point of reference for comparisons or contrasts when individuals make

⁷⁹Samira M. Harfoush, "A Study of Adjustment Problems and Attitudes of United Arab Emirates Undergraduate Students in the United States during the Fall of 1977," Dissertation Abstracts International, 39, 2085-A, 1978.

⁸⁰Herbert H. Hyman and Eleanor Singer, eds., Readings in Reference Group Theory and Research (New York: The Free Press, 1968), p. 7.

⁸¹Tamotsu Shibutani, "Reference Groups as Perspectives," in Readings in Reference Group Theory and Research, ed.: Herbert H. Hyman and Eleanor Singer (New York: The Free Press, 1968), pp. 103-104.

judgments about themselves. Hyman found that judgments of one's economic status shifted with changes in the group used as reference.⁸² Newcomb also disclosed in his famous Bennington College study that students' attitudes during the college years changed with shifts or resistance to shifts in total membership groups and one or more reference groups.⁸³ Kelley also emphasized the comparative function of reference groups as differentiated with the normative function of reference groups.⁸⁴

The concept of reference groups is extended to signify that groups with which an individual constitutes the frame of reference for perceptual perspective. Sherif speaks of reference groups as groups whose values and norms constitute the major anchorages in structuring one's perceptual field.⁸⁵ Merton and Rossi also speak of reference groups as a "social frame of reference" for

⁸²Herbert H. Hyman, "The Psychology of Status," in Readings in Reference Group Theory and Research, ed.: Herbert H. Hyman and Eleanor Singer (New York: The Free Press, 1968), pp. 147-165.

⁸³Theodore M. Newcomb, "Attitude Development as a Function of Reference Groups: The Bennington Study," in Readings in Reference Group Theory and Research, ed.: Herbert H. Hyman and Eleanor Singer (New York: The Free Press, 1968), pp. 374-386.

⁸⁴Harold H. Kelley, "Two Functions of Reference Groups," in Readings in Reference Group Theory and Research, ed.: Herbert H. Hyman and Eleanor Singer (New York: The Free Press, 1968), pp. 77-83.

⁸⁵Muzafer Sherif, "The Concept of Reference Groups in Human Relations," in Readings in Reference Group Theory and Research, ed.: Herbert H. Hyman and Eleanor Singer (New York: The Free Press, 1968), pp. 84-87.

interpretations.⁸⁶ Shibutani further identifies reference groups as those groups whose outlook is used by the actor as the frame of reference in the organization of his perceptual field.⁸⁷

Traditionally, culture refers to a perspective that is shared by those in a particular group. It consists of those "conventional understandings manifest in act and artifact, that characterize societies."⁸⁸ In his discussion of social control, Mead implies that an individual approaches his world from the standpoint of the culture of his group. Each perceives, thinks, forms judgments, and controls him/herself according to the frame of reference of the group in which he/she is participating.⁸⁹

All kinds of groupings, no matter what the size, composition, and structure, may become reference groups. But, of greatest importance for most people are those groups in which they participate directly (membership groups). These groups may contain a number of persons who stand in primary relationships or may assume the perspective attributed to some social category, a social class, an ethnic

⁸⁶Robert K. Merton and Alice K. Rossi, "Contributions to the Theory of Reference Group Behavior," in Readings in Reference Group Theory and Research, ed.: Herbert H. Hyman and Eleanor Singer (New York: The Free Press, 1968), pp. 31-36.

⁸⁷Shibutani, "Reference Groups as Perspectives," p. 104.

⁸⁸R. Redfield, The Folk Culture of Yucatan (Chicago: University of Chicago Press, 1941), p. 132.

⁸⁹G. H. Mead, Mind, Self, and Society (Chicago: University of Chicago Press, 1934), pp. 152-164.

group, those in a given community, or those concerned with some special interest.⁹⁰

In summary, a great number of foreign undergraduate students come to American colleges and universities to study every year. Their goals are basically educational. They strive to achieve their educational goals of intellectual and personal growth with the faculty and student personnel workers on American campuses. It seems obvious that the groups of teaching faculty and student personnel staff become significant reference groups for the foreign students. Then, how do these subgroups of institutions perceive the environment in which they try to achieve their goals? How much commonality of perception exists? In the following chapter, the study method used to answer these questions will be described in detail.

⁹⁰Shibutani, "Reference Groups as Persepctives," p. 107.

CHAPTER III

RESEARCH DESIGN AND PROCEDURE

The purpose of this study was to examine whether foreign undergraduate students and their subgroups differ from selected teaching faculty and student personnel staff in their environmental perceptions of the Michigan State University campus.

In this chapter, the method used to fulfill the research purpose was discussed in detail. More specifically, this chapter included sections on population and sample selection, instrumentation, data collection, and treatment and analysis of the data.

Population and Sample Selection

The target population for this study consisted of foreign undergraduate students, full-time undergraduate teaching faculty, and student personnel staff working at Michigan State University.

Prior to sampling selection and design, the researcher consulted with his doctoral committee members and research consultants at the College of Education, Michigan State University, to finalize the sampling procedures and size. Several meetings were held where discussions took place on the issues relating to the nature of this study and sampling selection and design. The following sampling procedure resulted from these meetings.

Selection of Foreign Undergraduate Students

The total population of foreign undergraduate students enrolled at Michigan State University for the Spring Term, 1982, as recorded at the Registrar's office, was 272. To put it more concretely, one hundred and three students were enrolled in the College of Engineering as their major field of study, thirty-five students were enrolled in the College of Business, eight students in the College of Human Ecology, eighteen students in the College of Agricultural and Natural Resources, eleven students in the College of Education, thirteen students in the College of Social Science, thirty-one students, including six premedical and preveterinary students, were enrolled in the College of Natural Science, nine students in the School of Medical Technology, twenty students in the College of Arts and Letters, eleven students in the College of Communication Arts and Science, and two students were enrolled in James Madison College. Eleven students had not yet chosen a major field of study. Since the total enrollment figure was considered to be relatively small, all of these students were invited to participate in this study.

Selection of Full-time Undergraduate Teaching Faculty

As mentioned above, the teaching faculty sample was selected from among full-time faculty members whose teaching responsibilities included teaching undergraduate students and who were employed at the school or colleges in which foreign undergraduate students were enrolled at the time of this study.

In this sampling procedure, full-time faculty members were defined as those whose ranks were assistant professor, associate professor, or professor who were employed at the school or colleges in which foreign undergraduate students were enrolled. Thus, all the full-time faculty members, as distinguished from part-time faculty members, were identified from the faculty roster in the Michigan State University Publication: 1981-82 Academic Programs.¹

Since there is no distinction between undergraduate and graduate faculty at Michigan State University, as a technique to identify undergraduate teaching faculty members, the Schedule Bulletin of Courses, which is published every term, was utilized. One academic year's course schedule books (Fall, 1981; Winter, 1982; and Spring, 1982) were examined by each department and college in order to identify the maximum number of faculty members who had teaching loads including undergraduate students. The academic courses at the 399 level and below in the schedule books were regarded as those for undergraduate students, and the instructors who were assigned to teach these courses were looked upon as the faculty members whose teaching responsibilities included teaching undergraduate students. If an instructor was not listed for a certain course in the schedule books, he/she was identified through direct visitation to the corresponding department.

Thus, the full-time undergraduate teaching faculty were determined to be those who were identified as undergraduate teaching

¹Michigan State University Publication: 1981-82 Academic Programs (East Lansing: University Publication Office, May 1981), pp. 58-92.

faculty members and at the same time who were identified as full-time teaching faculty members. As a result, it was found that there were 1,337 full-time faculty members whose teaching responsibilities included teaching undergraduate students in the colleges in which foreign undergraduate students were enrolled during the academic year of 1981-82.

Of the identified full-time undergraduate teaching faculty members, 10 percent, or 134 subjects, were randomly selected from each college for the faculty sample group of this study. More information about the invited faculty sample is presented in Actual Respondents, Chapter IV.

Selection of Student Personnel Staff

The sample group of student personnel staff was composed of all full-time, professional members working in the major, nonacademic services available to foreign students on the Michigan State University campus.² In detail, the participants in this group were from the following functional areas of service; the Student Life Department, Counseling Center, Financial Aids Office, Intramural Sports and Recreative Services, University Housing Programs, Olin Health

²Kajornsin reported in his thesis that the major nonacademic services available to foreign students at the M.S.U. campus were Counseling Center, Department of Public Safety, Financial Aids, Foreign Student Office, Health Services, Housing Services, Judicial Programs Office, Placement Services, and Recreation and Entertainment, etc. Samnao Kajornsin, "A Study of Foreign Graduate Students: Their Awareness of, Utilization of, and Attitude toward Selected Student Personnel Services and Other Services Available to Them at Michigan State University" (Ph.D. dissertation, Michigan State University, 1979), pp. 154-159.

Center, Placement Services, and Office for the Foreign Students and Scholars. The staff of the Department of Public Safety was excluded in the sample group because its function seemed not pertinent to the purpose of the study. The Vice and Assistant Vice President for Student Affairs and Services also were not invited to participate in the study. Organizationally, the positions of Vice and Assistant Vice President for Student Affairs and Services would be categorized as top administrative positions in comparison with the middle and first level administrative status of other student personnel participants, especially in a large institution such as M.S.U. This group, therefore, included 126 subjects in all. More detailed information about the invited sample will be presented in Actual Respondents, Chapter IV.

Instrumentation

The instrument used to collect data was the College and University Environment Scales, Second Edition (CUES II), developed by C. Robert Pace and published by Educational Testing Service (ETS). The CUES II consists of 100 items forming five basic scales of twenty items each and sixty experimental items forming two special subscales. In this study, the five basic scales were utilized in collecting data because the two subscales are not fully developed.

The five basic areas of the CUES II are practicality, community, awareness, propriety, and scholarship, in which the statements describe university life--features and facilities of the campus, rules and regulations, student life, extracurricular organizations,

and other aspects of the institutional environment which help to define the atmosphere or intellectual-social-cultural climate of the university as respondents perceive it.³ Respondents are asked to indicate whether each statement is generally True or False with reference to their university environment: True when they think a statement is generally characteristic, a condition which exists, an event which occurs or might occur, the way most people generally act or feel; or conversely, False when they think the statement is generally not characteristic of the university environment. Therefore, the test is a device for obtaining the respondents' description of the university environment.

In this study, the word "college," which is used in Pace's CUES II was changed to "university" in order to be more certain that respondents related their answers to the whole university and not just their college within the University. Directions for the instrument asked respondents to relate to Michigan State University.

The CUES Development

As mentioned, this study uses the second edition of the College and University Environment Scales, developed by C. Robert Pace in 1969. It is a shortened and improved version of the first edition published in 1963 under the same title.

This first edition of the CUES originally developed out of an earlier instrument developed by George Stern and Pace in 1958

³C. Robert Pace, College and University Environment Scales: Second Edition, Technical Manual (Princeton, N.J.: Educational Testing Service, 1968), p. 9.

entitled The College Characteristics Index (CCI). Theoretically, the CCI is based on Stern's need-press concept by which the environmental press of an institution should be understood in relation to the individual's needs.⁴ Stern states that "both needs and press are inferred from characteristic activities and events, the former from things that the individual typically does, and the latter from things that are typically done to him in some particular setting."⁵ In other words, it was hoped in the CCI that a personality test would measure personality needs which corresponded to a set of environmental demands. Therefore, the thirty environmental press scales of the CCI were developed, each paralleling with the thirty analogous needs scales of the Stern's Activities Index.

However, analysis of the results obtained from the CCI did not conform to the intended need-press parallelism. Pace states:

In other words, the dimensions along which environments differed from one another were not the same as the dimensions along which students, or student bodies, differed from one other.

The first edition of CUES, then, consisted of 150 of the 300 items in the CCI, selected because they successfully discriminated between environments and organized into five scales that reflected, from a factor analysis of 50 colleges and universities, the main dimensions along which the environments differed: Practicality, Community, Awareness, Propriety, and Scholarship.⁶

⁴W. Bruce Walsh, Theories of Person-Environment Interaction: Implications for the College Student (Iowa City, Iowa: The American College Testing Program, 1973), pp. 97-124.

⁵George G. Stern, "Characteristics of the Intellectual Climate in College Environment," Harvard Educational Review 33 (Winter 1963): 6.

⁶Pace, College and University Environment Scales, p. 9.

In 1967, Pace greatly modified the first version of the CUES with the same purposes as the original version. Some of the items from the first edition were eliminated, but the 100 most discriminating items were retained. The five basic scales were still used with the twenty most discriminating items in each scale. Items were up-dated to reflect changes in colleges over the previous few years. The new subscales were also developed: Campus Morale and Quality of Teaching and Faculty-Student Relationships.

The five basic scales of the CUES II, used in this study, are defined as follows in the Technical Manual:

Scale 1. Practicality.--The twenty items in this scale describe an environment characterized by enterprise, organization, material benefit, and social activities. There are both vocational and collegiate emphases. A kind of orderly supervision is evident in the administration and the classwork. As in many organized societies, there is also some personal benefit and prestige to be obtained by operating in the system-knowing the right people, being in the right clubs, becoming a leader, respecting one's superior, and so forth. The environment, though structured, is not repressive; it responds to entrepreneurial activities and is generally characterized by good fun and school spirit.

Scale 2. Community.--The items in this scale describe a friendly, cohesive, group-oriented campus. There is a feeling of group welfare and group loyalty that encompasses the college as a

whole. The atmosphere is congenial; the campus is community. Faculty members know their students, are interested in their problems, and go out of their way to be helpful. Student life is characterized by togetherness and sharing rather than by privacy and cool detachment.

Scale 3. Awareness.--The scale reflects a concern about and emphasis on three sorts of meaning--personal, poetic, and political. An emphasis on self-understanding, reflectiveness, and identity suggests the search for personal meaning. A wide range of opportunities for creative and appreciative relationships to painting, music, drama, poetry, sculpture, architecture, and the like suggest the search for poetic meaning. A concern about events around the world, the welfare of mankind, and the present and future condition of man suggests the search for political meaning and idealistic commitment. What seems to be evident in this sort of environment is a stress on awareness--an awareness of self, of society, of esthetic stimuli.

Scale 4. Propriety.--These items describe an environment that is polite and considerate. Caution and thoughtfulness are evident. Group standards of decorum are important. There is an absence of demonstrative, assertive, argumentative, risk-taking activities. In general, the campus atmosphere is mannerly, considerate, proper, and conventional.

Scale 5. Scholarship.--The items included in this scale describe a campus characterized by intellectuality and scholarship

discipline. The emphasis is on competitively high scholastic achievement and a serious interest in scholarship. The pursuit of knowledge and theories, scientific or philosophical, is carried on rigorously and vigorously. Intellectual speculation, an interest in ideas, knowledge for its own sake, and intellectual discipline--all these are characteristic of the environment.⁷

Validity

The validity data consist of correlations between CUES scores and various characteristics of students and institutions. The validity of the CUES II is assessed with the following key questions:

1. To what extent are the characteristics of students, programs, and campus atmosphere generally congruent with each other?
2. To what extent are the attitudes and behavior of students generally congruent with the atmosphere of their college?
3. To what extent are the dimensions of college environments identified by different studies and different methods, generally similar to those identified by CUES?

The correlations reported provide positive answers to these questions. The overall network of correlations between CUES scores and other data can be characterized as broadly supportive of associations one might reasonably expect. The conclusion is that CUES

⁷Pace, College and University Environment Scales, p. 11.

is supported by a good deal of concurrent validity, ranging from low .40s to high .60s. The CUES II Technical Manual contains a full discussion of the validity data.⁸

Reliability

In establishing reliability data for the CUES II, Pace reports reliability estimates based on Cronbach's coefficient alpha. This formula takes into account the sum of the variances on each item, rather than the average or mean; also each item is scored in exactly the same manner as the total scale is scored. Reliability coefficients for the basic five scales are as follows: Practicality, .89; Community, .92; Awareness, .94; Propriety, .89, Scholarship, .90. A complete discussion of the CUES reliability appears in the Technical Manual.⁹

Data Collection

Data were collected from the sample groups of foreign undergraduate students, undergraduate teaching faculty members, and student personnel workers during the Spring term of the 1981-82 academic year.

Of the student sample group, the students who lived on campus were invited to participate in this study by using the campus mail through the Office for Foreign Students and Scholars, and the students who lived off campus were invited to use the regular mail of the Post Office, M.S.U. A packet containing the researcher's

⁸Ibid., pp. 46-54.

⁹Ibid., pp. 36-45.

letter requesting the student's participation, the foreign student advisor's letter urging the student's participation, a copy of the CUES questionnaire, and a personal data sheet was mailed with a return envelope to the students. The nonrespondents to the first invitation were sent a follow-up letter with a second questionnaire and a personal data sheet. Again, the students who did not respond to either invitation were called by telephone and solicited to participate in the study. The response rate of the students is reflected in Table III-1.

TABLE III-1. -- Identified population, invited sample, and response rates of foreign undergraduate students, undergraduate teaching faculty, and student personnel staff

Group	Identified Population	Invited Sample	Number of Respondents	Percent of Respondents
Foreign undergraduate students	272	272	190	69.9
Undergraduate full-time teaching faculty	1,337	134	86	64.2
Student personnel staff	126	126	87	69.0

The faculty sample was sent a packet including a copy of the CUES questionnaire and a cover letter requesting their participation through the campus mail of the Office for Foreign Students and Scholars. In this packet, a letter from a foreign student advisor

was also included with a hope of getting higher response rate of the faculty members. A follow-up letter and a second copy of the questionnaire were mailed to the faculty members who did not respond to the initial invitation. Table III-1 indicates the response percentage of the sampled faculty members.

The sample of student personnel workers was also sent a copy of the CUES questionnaire, a cover letter, and a letter from the Assistant Vice President for Student Affairs and Services. It was hoped that the student personnel workers would be encouraged to participate in the study by the Assistant Vice President's letter. The nonrespondents to the first invitation were mailed a follow-up letter and a second copy of the questionnaire. The results are shown in Table III-1.

Treatment and Analysis of the Data

Prior to the process of analyzing the data, the research consultants at the College of Education, Michigan State University (MSU), were contacted to determine with the researcher the statistical procedures and types of test suitable for this study.

Scoring was done, not by what Pace describes in the Manual as the "66+/33-" percent method,¹⁰ but by the straighter, customary method. The number of items answered in the keyed direction by each respondent of the three main groups were counted. Thus, for each respondent the range of scores on any one scale of the five scales

¹⁰Ibid., pp. 12-13.

is from zero to 20, depending on the number of items on each scale responded to in the keyed direction.

Based on this scoring method, data collected for this study were first coded on the M.S.U. Data sheets. Coded responses were sent to the Scoring Office at the M.S.U. Computer Laboratory for key-punching. Then, an SPSS statistical package was used in analyzing the data.

The statistical techniques utilized for this study were descriptive statistics (mean and standard deviation), multivariate analysis of variance test (MANOVA), the Univariate F-test, and t-test.

To test the differences in perceptions among the three groups of undergraduate foreign students, undergraduate teaching faculty, and student personnel staff on the grand mean of the five scales, the multivariate analysis of variance tests were utilized. Also, the same procedure was used with the comparisons among the subgroups of foreign undergraduate students as identified on the basis of their demographic variables. In order to determine the differences among the comparing groups in the perceptions of each of the five scales, the univariate F-test was further employed. In addition, the t-test statistical procedure was utilized to compare between the subgroups of foreign undergraduate students, undergraduate teaching faculty, and student personnel staff with regard to the perceptions of the campus environment as measured by each of the five scales of the CUES II.

Each of the comparisons were statistically tested at 0.05 significance level.

Chapter IV will be an analysis of the data collected in this study.

CHAPTER IV

DATA ANALYSIS AND PRESENTATION

The primary purpose of the writer in this study was to examine whether foreign undergraduate students and their subgroups differ from their significant reference groups--undergraduate teaching faculty and student personnel staff--in their perceptions of the selected characteristics of the campus environment of Michigan State University.

This chapter consisted of two sections. In the first section, the actual respondents who participated in this study were described in order to make some judgment about the representativeness of the data-producing sample groups. Foreign undergraduate student respondents were described in terms of their distribution among the variables of age, gender, class level, academic areas of study, living arrangements, financial sources of support, self-rated ability in English, and types of home country. The invited teaching faculty members actually producing data were described in relation to their college affiliation, although they were not investigated on the basis of their minor variables for this study. Likewise, the respondents of student personnel staff actually producing data were presented in terms of the functional areas of their services.

The second section of this chapter was composed of four parts on the basis of the objectives of this study and was a

presentation of the test results of the hypotheses formed in this study. The first part was the examination of whether the three significant reference groups--foreign undergraduate students, undergraduate teaching faculty, and student personnel staff--differ from one another in their perceptions of the selected characteristics of the campus environment. The second part of this section consisted of comparisons of subgroups of foreign undergraduate students as identified on the basis of their personal variables. In the third and fourth parts of this section, undergraduate teaching faculty and student personnel staff were respectively compared with the subgroups of foreign undergraduate students.

To determine significant differences among foreign undergraduate students, undergraduate teaching faculty, and student personnel staff for all five environment scales, the multivariate analysis of variance tests were utilized. The Univariate F-tests were also employed to determine the scale(s) in which significant differences on perceptions of the campus environment occurred. Also, the same procedure was used for the comparisons of foreign undergraduate students' subgroups. In addition, the t-tests procedure was utilized to determine differences in the perceptions of the university environment between the subgroups of foreign undergraduate students, undergraduate teaching faculty, and student personnel staff.

The scales used for measuring the campus environment, as mentioned in Chapter II, were the five basic scales of the College and University Environment Scales, Second Edition (CUES II). The

five scales are practicality, scholarship, community, awareness, and propriety. These scales were described in detail in Chapter III.

Actual Respondents

Foreign Undergraduate Student Respondents

A personal data sheet was attached to the instrument used for this study in order to obtain some personal and demographic information about the foreign undergraduate student respondents (please see Appendix F). As mentioned in the previous chapter, there were 272 foreign undergraduate students enrolled at M.S.U. for the Spring term of 1982, and questionnaires were distributed to all of them. The number of returned responses totaled 197, or 72.4 percent. Seven responses, or 2.5 percent, of the total returns were found to be unusable, and therefore, were eliminated. The total number of completed and usable responses was 190, or 69.9 percent of the total number mailed.

Table IV-1 indicates that of the 190 foreign undergraduate students who responded and became the data-producing sample, the majority were members of the younger age group. The student respondents ranged in age from 18 through 38 with an average age of 21.3 (median 19.9; mode 19). Since they were academically seeking an undergraduate education, it is generally true that they tended to be in their earlier twenties. Of the total respondents, 84.2 percent were between the ages of 18 and 23 years.

TABLE IV-1.--Actual respondents of foreign undergraduate students by age categories

Age Group	Number of Respondents	Percent
18 - 23	160	84.2
24 - 38	<u>30</u>	<u>15.8</u>
TOTAL	190	100.0

Question on gender revealed that the majority of foreign undergraduate students involved in this study were male. Of the respondents, males outnumbered females by almost 100 percent, 125 to 65, as indicated in Table IV-2.

TABLE IV-2.--Actual respondents of foreign undergraduate students by gender

Sex	Number of Respondents	Percent
Male	125	65.8
Female	<u>65</u>	<u>34.2</u>
TOTAL	190	100.0

Table IV-3 illustrates a breakdown of the student respondents according to class level. The majority of the students who participated in this study were freshmen, followed by seniors, sophomores, and juniors.

TABLE IV-3.--Actual respondents of foreign undergraduate students by class level

Class Level	Number of Respondents	Percent
Freshmen	69	36.3
Sophomore	41	21.6
Junior	37	19.5
Senior	<u>43</u>	<u>22.6</u>
TOTAL	190	100.0

It can be assumed that students who identify themselves with specific academic fields will vary in their interaction within the educational environment, and thus, differ in their perceptions of the university environment. In this study, as seen in Table IV-4, five options were provided in order to permit the foreign student to identify the area of academics most closely representing their area of study. Of the respondents, the largest number, 91, identified themselves with engineering and physical sciences.

Subjects were also asked to indicate with whom they lived with the assumption that living arrangements of foreign students would influence forming of social relationships, and consequently, perceptions of the educational environment. The majority of the respondents, 40.5 percent, lived with U.S. students. The second group, 26.8 percent, of the foreign undergraduate students lived with home country students, and the third largest group, 13.7 percent,

TABLE IV-4.--Actual respondents of foreign undergraduate students
by academic areas of study categories

Academic Discipline Areas	Number of Respondents	Percent
Engineering/Physical Sci.	91	47.9
Behavioral/Social Sci.	25	13.2
Arts/Humanities	16	8.4
Life/Biological Sci.	13	6.8
Other	<u>45</u>	<u>23.7</u>
TOTAL	190	100.0

lived alone. Table IV-5 shows the distribution of the respondents according to living arrangements.

TABLE IV-5.--Actual respondents of foreign undergraduate students
by living arrangement categories (with whom they live)

Living Arrangement (with whom they live)	Number of Respondents	Percent
U.S. student(s)	77	40.5
Other foreign student(s)	11	5.8
Home country student(s)	51	26.8
Parents/spouse/child	16	8.4
Alone	26	13.7
Other	<u>9</u>	<u>4.7</u>
TOTAL	190	100.0

Most foreign undergraduate students enrolled at M.S.U. seemed to be primarily supported by their parents or relatives, or their home country governments. When indicating their primary financial source of support, more than half of the respondents, 53.7 percent, chose "parents/relatives." The second largest group, 31.6 percent, chose "home country government's scholarship." Table IV-6 indicates the distribution of the respondents' primary financial sources of support.

TABLE IV-6.--Actual respondents of foreign undergraduate students by sponsorship categories

Sponsorship	Number of Respondents	Percent
Working on and off campus	6	3.1
Parents/relatives	102	53.7
Home country government	60	31.6
M.S.U. scholarship	14	7.4
U.S. or international foundation	2	1.1
Other	<u>6</u>	<u>3.1</u>
TOTAL	190	100.0

In much of the published literature on foreign students studying in U.S. institutions of higher education, it has been generally accorded that the English ability of the foreign student is critically related to his/her academic life, as well as social life (see Chapter II, p. 42). In this investigation, thus, it was

questioned if the self-rated English ability of foreign students affected their perceptions of the campus environment. Table IV-7, below, indicates the distribution of foreign students' responses on their self-rated ability in English.

TABLE IV-7.--Actual respondents of foreign undergraduate students by self-rated English ability categories

English Ability	Number of Respondents	Percent
Good	100	57.9
Average	74	38.9
Poor	<u>6</u>	<u>3.2</u>
TOTAL	190	100.0

The student respondents who participated in this study represented 42 countries which were categorized into five major types. The World Bank classified all the countries of the world into five major types on the basis of economy and income, adult literacy rate, and number in tertiary education (see Chapter I, p. 8), as indicated in the categories of Table IV-8. Of the respondents, the largest numbers were from "middle-income countries" with 56.2 percent, followed by "high-income industrialized countries," and "capital-surplus oil exporters." This table shows the distribution of the respondents as to the different types of countries from which they came.

TABLE IV-8.--Actual respondents of foreign undergraduate students by home country type categories

Country Type	Number of Respondents	Percent
Low-income countries	10	5.2
Middle-income countries	107	56.3
High-income industrialized countries	45	23.7
Capital-surplus oil exporters	26	13.7
Centrally-planned economies	<u>2</u>	<u>1.1</u>
TOTAL	190	100.0

Undergraduate Teaching Faculty Respondents

As described in the previous chapter, 134 faculty members were randomly invited to participate in this study from among the identified full-time faculty members whose teaching responsibilities included teaching undergraduate students and who were employed at the colleges in which foreign undergraduate students were enrolled in the spring term of 1982. The questionnaire was mailed to them and the number of returned responses totaled 91, or 67.9 percent. However, five responses, or 3.7 percent of the total returns, were found to be unusable, and therefore, were eliminated. The total number of completed and usable responses was 86, or 64.2 percent of the total number mailed.

In this study, the invited faculty's perceptions of the campus environment were not analyzed on the basis of any other variables,

TABLE IV-9.--Faculty identified population, faculty invited sample, and faculty respondents by college affiliation

College Affiliation	Identified Population	Invited Sample (10% of Population)	Faculty Respondents	
			Respondents	% of Invited Sample
Agricultural and Natural Resources	141	14	10	71.4
Arts and Letters	334	34	23	67.6
Business	95	10	4	40.0
Communication Arts and Sciences	44	5	4	80.0
Education	82	8	6	75.0
Engineering	101	10	6	60.0
Human Ecology	50	5	3	60.0
Medical Technology	4	0	0	0.0
James Madison College	13	1	1	100.0
Natural Sciences	300	30	16	53.3
Social Sciences	173	17	13	76.5
TOTAL	1,337	134	86	

To make some judgment concerning the representativeness of the data-producing faculty sample, however, the invited faculty sample actually producing data was calculated in relation to college affiliation.

Table IV-9 indicates that of the eighty-six faculty members who participated in this study, ten were affiliated with the College of Agricultural and Natural Sciences, twenty-three were employed in the College of Arts and Letters, four in the College of Business, four in the College of Communication Arts and Science, six in the College of Education, six in the College of Engineering, three in the College of Human Ecology, one in James Madison College, sixteen in the College of Natural Science, and thirteen in the College of Social Science. In every college except one (College of Business), the data-producing respondents were greater than 50 percent of the invited faculty sample. The highest percentage of participation (100 percent) in terms of the invited faculty sample was in James Madison College, while the lowest percentage of participation (40 percent) in terms of the invited faculty sample was in the College of Business. Based on this information, it was considered that the data-producing faculty respondents were adequately distributed in representing each college.

Student Personnel Staff Respondents

As noted in Selection of Student Personnel Staff, Chapter III, 126 student personnel workers were identified as the qualified

subjects to be invited to participate in this study, and the questionnaire was mailed to all of them. The number of returned responses totaled 89, or 70.6 percent. Of these responses, however, two, or 1.6 percent, were found to be unusable. Therefore, the total number of completed and usable responses was 87, or 69.0 percent of the total number mailed.

In Table IV-10 the percentage of the invited student affairs personnel actually producing data was calculated for each functional area of service in order to make some judgment concerning the representativeness of the data-producing student personnel staff. In every area except the Foreign Student Office, the percentage of the invited student personnel staff sample producing data was more than 40 percent. The lowest percentage of participation was in the Office of Foreign Students, while the highest percentage of participation was among the personnel staff working in Placement Services. Based on these considerations, in general, it was considered that the responses of the student personnel staff were adequately representative of the invited student personnel staff sample.

Presentation of Research Results

Comparisons of the Total Group of Foreign Undergraduate Students with Undergraduate Teaching Faculty, and Student Personnel Staff

The first research objective of this study was to determine whether the total group of foreign undergraduate students' perceptions of the campus environment differ from those of the undergraduate

TABLE IV-10.--Student personnel staff sample and student personnel staff respondents by functional areas of service

Functional Area	Invited Sample	Number of Respondents	Percent of Respondents
Student Life Department	11	9	81.8
Counseling Center	29	19	65.5
Financial Aids Office	18	14	77.8
Intramural Sports and Recreation Services	7	5	71.4
University Housing Programs	41	29	70.7
Olin Health Center	10	4	40.0
Placement Services	8	7	87.5
Foreign Student Office	<u>2</u>	<u>0</u>	0.0
TOTAL	126	87	

teaching faculty and student personnel staff when measured by the five scales of the CUES II. Statistically, this objective was accomplished by using the multivariate analysis of variance and univariate F-test.

Hypothesis 1: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students, undergraduate teaching faculty, and student personnel staff are compared to one another.

Table IV-11 shows the number of respondents and the mean and standard deviation for the responses of each of the three reference groups on each of the five scales. Table IV-12 presents

TABLE IV-11.--Number, mean, and standard deviation of responses of foreign undergraduate students, undergraduate teaching faculty, and student personnel staff to the five environment scales

Scale	Group	Number	Mean	Standard Deviation
Practicality	Foreign Students	190	10.85	2.92
	Teaching Faculty	86	8.43	2.27
	Student Personnel Staff	87	9.16	2.40
Scholarship	Foreign Students	190	10.97	4.20
	Teaching Faculty	86	9.23	4.63
	Student Personnel Staff	87	9.38	4.77
Community	Foreign Students	190	9.58	3.41
	Teaching Faculty	86	9.73	3.29
	Student Personnel Staff	87	10.20	3.49
Awareness	Foreign Students	190	10.50	4.01
	Teaching Faculty	86	10.65	4.56
	Student Personnel Staff	87	10.21	4.28
Propriety	Foreign Students	190	7.62	2.77
	Teaching Faculty	86	7.66	3.32
	Student Personnel Staff	87	7.63	3.07

TABLE IV-12.--Wilk's multivariate analysis of variance on responses of foreign undergraduate students, undergraduate teaching faculty, and student personnel staff to the five environment scales

Source of Variance	Approx. F	Degrees of Freedom	p
Three Reference Groups	8.84236	10, 712	.00001*

*Significant at the .05 level.

the test results of the multivariate analysis of variance for the data in Table IV-11, and indicates that significant differences existed in the perceptions of the overall scales among foreign undergraduate students, undergraduate teaching faculty, and student personnel staff. The value of the overall F-test with degrees of freedom 10, 712 was 8.84236, and the value of p was ($p \leq .00001$). This indicates that there were significant differences among the respondents of the three reference groups.

In order to identify the group whose perceptions differed from foreign undergraduate students, the multivariate analysis of variance was applied, in turn, to two pairs of the three groups. That is, the multivariate analysis of variance was applied to the responses of: (1) foreign undergraduate students and undergraduate teaching faculty, and (2) foreign undergraduate students and student personnel staff.

Table IV-13 shows the test results of multivariate analysis of variance as applied to the responses of the two pairs of comparing

TABLE IV-13.--Wilk's multivariate analysis of variance on responses of foreign undergraduate students and undergraduate teaching faculty, and foreign undergraduate students and student personnel staff to the five environment scales

Source of Variance	Approx. F	Degrees of Freedom	p
Foreign Students vs. Teaching Faculty	9.25013	5, 356	.00001*
Foreign Students vs. Student Personnel Staff	9.36095	5, 356	.00001*

*Significant at the .05 level.

groups, and indicates that significant differences in the perceptions of the campus environment occurred in both pairs of groups. When the multivariate analysis of variance test was applied to the responses of foreign undergraduate students and undergraduate teaching faculty, the value of the overall F-test with degrees of freedom 5,356 was 9.25013, which was significant at ($p \leq .00001$). When foreign undergraduate students were compared with student personnel staff in regard to their perceptions of the campus environment, the value of the overall F-test with degrees of freedom 5, 356 was 9.36095, which was significant at ($p \leq .00001$).

Since the overall F-tests for foreign undergraduate students and undergraduate teaching faculty, and foreign undergraduate students and student personnel staff were found to be significant, the

Univariate F-test was employed to both comparing pairs of groups to identify in which scale(s) the differences occurred, respectively.

By testing the Univariate F-test at .01 (.05 level of significance ÷ five scales) level, Table IV-14 below indicates that significant differences existed only on one scale--practicality--between the foreign undergraduate students and teaching faculty in their preceptions of the campus environment. Foreign undergraduate students perceived the university environment as being more practical than did undergraduate teaching faculty.

TABLE IV-14.--Univariate F-test on responses of foreign undergraduate students and undergraduate teaching faculty to the five environment scales, with (1, 360) D.F.

Source of Variation	Hypothesis Mean Sq.	Error Mean Sq.	F	p
Practicality	234.68507	7.06306	33.22710	.00001*
Scholarship	100.37825	19.76012	5.07984	.02481
Community	.10503	11.56345	.00908	.92413
Awareness	3.88215	17.72586	.21901	.64008
Propriety	.11495	8.87890	.01295	.90947

*Significant at the .01 level.

Table IV-15 also shows the results of the Univariate F-test as applied to the responses of foreign undergraduate students and student personnel staff on each of the five scales of the CUES II, and indicates that significant differences occurred on two scales--

TABLE IV-15.--Univariate F-test on responses of foreign undergraduate student and student personnel staff to the five environment scales, with (1, 360) D.F.

Source of Variance	Hypothesis Mean Sq.	Error Mean Sq.	F	p
Practicality	170.78352	7.06306	24.17981	.00001*
Scholarship	150,69588	19.76012	7.62626	.00605*
Community	22.67753	11.56345	1.96114	.16225
Awareness	5.12667	17.72586	.28922	.59105
Propriety	.01604	8.87890	.00181	.96612

*Significant at the .01 level.

the practicality and scholarship scales. Foreign undergraduate students perceived the university environment as being more practical, scholarly, and academic than did student personnel staff. On the other scales--community, awareness, and propriety scales--of the CUES II, no significant differences were found when comparing foreign undergraduate students' perceptions with those of the student personnel staff in regard to the university environment.

Comparisons of the Subgroups of Foreign Undergraduate Students

The second objective of this study was to examine whether some selected demographic variables of foreign undergraduate students had an effect on their perceptions of the campus environment. To fulfill this objective, therefore, eight corresponding research hypotheses were established on the basis of the variables conceived

of as influencing the perceptions of foreign undergraduate students. These variables were age, gender, class level, academic areas of study, living arrangements, financial sources of support, self-rated ability in English, and type of country. In this section, the test results will be presented in the order of the established hypotheses.

Hypothesis 2-1: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when the ages of foreign undergraduate students are grouped into two categories: 18-23 and 24-38.

Table IV-16 shows the number of respondents and the mean and standard deviation for the responses of each age group of foreign undergraduate students on each of the five scales. With the data in Table IV-16, the multivariate analysis of variance tests were used to determine if there were significant differences in the perceptions of the university environment between the two age groups.

Table IV-17 shows the test results of multivariate analysis of variance for the responses of the two age groups of foreign undergraduate students and indicates that significant differences appeared in perceptions of the university environment as measured by the five scales of the CUES II. The value of the overall F-test with 5,184 degrees of freedom was 2.49034, which was significant at ($p \leq .03284$).

To identify in which scale(s) the differences occurred, therefore, the Univariate F-test was employed on the responses of the two age groups of foreign undergraduate students. As a result,

TABLE IV-16.--Number, mean, and standard deviation of responses of foreign undergraduate students by age categories to the five environment scales

Scale	Age Group	Number	Mean	Standard Deviation
Practicality	18-23	160	11.14	2.76
	24-38	30	9.33	3.29
Scholarship	18-23	160	11.01	4.12
	24-38	30	10.73	4.66
Community	18-23	160	9.82	3.31
	24-38	30	8.30	3.70
Awareness	18-23	160	10.63	3.81
	24-38	30	9.83	4.79
Propriety	18-23	160	7.59	2.75
	24-38	30	7.77	2.92

TABLE IV-17.--Wilk's multivariate analysis of variance on responses of foreign undergraduate students by age categories to the five environment scales

Source of Variance	Approx. F	Degrees of Freedom	p
Age Level	2.49034	5, 184	.03284*

*Significant at the .05 level.

as reported in Table IV-18, it was found that significant difference existed only on the practicality scale. The students in the 18-23 age group perceived the campus as being more practical than did the students in the 24-38 age group.

TABLE IV-18.--Univariate F-test on responses of foreign undergraduate students by age categories to the five environment scales with (1, 188) D.F.

Source of Variance	Hypothesis Mean Sq.	Error Mean Sq.	F	p
Practicality	83.37544	8.20780	10.15807	.00168*
Scholarship	2.46711	17.80997	.13852	.71017
Community	58.27204	11.36193	5.12871	.02467
Awareness	15.83333	16.07270	.98511	.73777
Propriety	.86853	7.72506	.11243	.73777

*Significant at the .01 level.

Hypothesis 2-2: There will be no significant differences in the perceptions of the selected characteristics of the campus environment between female and male foreign undergraduate students.

To test the above hypothesis, responses on the five scales were compared according to respondents' gender as an independent variable. The multivariate analysis of variance test, as reported in Table IV-19, reveals that there were no significant differences in the perceptions of responding female and male foreign undergraduate students with regard to the campus environment as measured by the five scales of the CUES II.

TABLE IV-19.--Wilk's multivariate analysis of variance on responses of foreign undergraduate students by gender to the five environment scales

Source of Variation	Approx. F	Degrees of Freedom	p*
Gender	1.26407	5, 184	.28132

*Tested at the .05 level.

Table IV-19 shows that the value of the overall F test for gender with degrees of freedom 1,184 was 1.26407, and the value of p was ($p \geq .28132$). This indicates that no significant difference existed between genders at the .05 level of confidence. Hypothesis 2-2 cannot be rejected on the basis of the results obtained.

Hypothesis 2-3: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students are compared on the basis of their class level.

This hypothesis is to answer the question of whether foreign undergraduate students' perceptions of the campus environment are different according to their class level--freshmen, sophomore, junior, and senior. Table IV-20 shows the number of respondents and the mean and standard deviation for the responses of each group of class level on each of the five scales.

As reported in Table IV-21, the multivariate analysis of variance was used to test the hypothesis and indicates that according to class level, foreign undergraduate students perceived the campus environment differently. The value of the overall F-test for class

TABLE IV-20.--Number, mean, and standard deviation of responses of foreign undergraduate students by class level to the five environment scales

Scale	Class Level	Number	Mean	Standard Deviation
Practicality	Freshmen	69	11.77	2.73
	Sophomore	41	11.07	2.88
	Junior	37	10.14	3.02
	Senior	43	9.79	2.73
Scholarship	Freshmen	69	11.87	3.94
	Sophomore	41	11.02	3.95
	Junior	37	11.19	4.78
	Senior	43	9.28	3.99
Community	Freshmen	69	10.45	3.22
	Sophomore	41	9.78	3.28
	Junior	37	9.22	4.10
	Senior	43	8.30	2.77
Awareness	Freshmen	69	11.35	3.63
	Sophomore	41	10.10	3.81
	Junior	37	10.76	4.19
	Senior	43	9.30	4.39
Propriety	Freshmen	69	7.77	2.62
	Sophomore	41	7.49	3.15
	Junior	37	7.46	2.39
	Senior	43	7.63	3.30

TABLE IV-21.--Wilk's multivariate analysis of variance on responses of foreign undergraduate students by class level to the five environment scales

Source of Variance	Approx. F	Degrees of Freedom	p
Class Level	1.78072	15, 502	.03441*

*Significant at the .05 level.

level, as an independent variable, with degrees of freedom 15, 502 was 1.78072, which was significant at ($p \leq .03441$).

In order to determine the nature of the significant differences in perception, therefore, the multivariate analysis of variance was applied, in turn, to two of the four groups in relation to the overall five scales of the CUES II. That is, multivariate analysis of variance was applied to the responses of: (1) freshmen and sophomores, (2) freshmen and juniors, (3) freshmen and seniors, (4) sophomores and juniors, (5) sophomores and seniors, and (6) juniors and seniors.

Table IV-22 shows the multivariate analysis of variance tests as applied to the responses of the six pairs of comparing class level groups of foreign undergraduate students, and indicates that significant differences in the perceptions of the campus environment occurred on the three pairs of comparing groups--freshmen and seniors, sophomores and seniors, and juniors and seniors. However, the evidence does not indicate any significant differences between freshmen and sophomores, freshmen and juniors, and sophomores and juniors.

TABLE IV-22.--Wilk's multivariate analysis of variance for six comparing pair groups by class level of foreign undergraduate students

Source of Variance	Approx. F	Degrees of Freedom	p
Freshmen and Sophomore	.39149	5, 182	.85424
Freshmen and Junior	1.00125	5, 182	.41849
Freshmen and Senior	4.00694	5, 182	.00179*
Sophomore and Junior	1.08871	5, 182	.36817
Sophomore and Senior	3.65538	5, 182	.00355*
Junior and Senior	3.11453	5, 182	.01009*

*Significant at the .05 level.

When the multivariate analysis of variance was applied to the responses of freshmen and senior foreign students, the value of the overall F-test with degrees of freedom 5,182 was 4.00694, which was significant at ($p \leq .00179$). When sophomores were compared with senior foreign students in terms of their responses on the five scales of the CUES II, as can be seen in Table IV-22, the value of the overall F-test with degrees of freedom 5, 182 was 3.65538, which was significant at ($p \leq .00355$). The value of the overall F-test for junior and senior foreign students' responses on the five scales was 3.11453 with degrees of freedom 5, 182, and the value of p was

($p \leq .01009$). This indicates that there were significant differences between the responses of junior and senior foreign undergraduate students in their perceptions of the campus environment.

With the test results of multivariate analysis of variance in Table IV-22, and to identify in which scale(s) the differences in perceptions occurred, the Univariate F-tests were respectively applied to each pair of comparing groups which showed significant differences.

Table IV-23 shows the results of the univariate F-test on the responses of freshmen and senior foreign undergraduate students to each of the five scales of the CUES II, and reveals that significant differences existed in four of the five scales--practicality, scholarship, community, and awareness. It was found that foreign freshmen students' perceptions were higher than foreign senior students' of practicality, scholarship, community, and awareness of the campus environment.

Table IV-24 shows the test results of the univariate analysis of variance on the responses of sophomore and senior foreign students to each of the five scales of the CUES II, and indicates that significant differences existed in three of the five scales--practicality, scholarship, and community. Foreign sophomore students' perceptions of the university environment were higher than those of senior foreign students on the practicality, scholarship, and community scale. However, evidence indicates that no significant differences appeared between sophomore and senior foreign students on the scales of awareness and propriety.

TABLE IV-23.--Univariate F-test on responses of freshmen and senior foreign undergraduate students to the five environment scales, with (1, 186) D.F.

Source of Variance	Hypothesis Mean Sq.	Error Mean Sq.	F	p
Practicality	103.58494	7.97049	12.99606	.00040*
Scholarship	177.77275	16.95230	10.48664	.00142*
Community	122.10777	11.10405	10.99624	.00110*
Awareness	110.84506	15.68356	7.06731	.00853*
Propriety	.52078	7.78371	.06691	.79618

*Significant at the .01 level.

TABLE IV-24.--Univariate F-test on responses of sophomore and senior foreign undergraduate students to the five environment scales, with (1, 186) D.F.

Source of Variance	Hypothesis Mean Sq.	Error Mean Sq.	F	p
Practicality	91.28824	7.97049	11.45328	.00087*
Scholarship	160.07153	16.95230	9.44246	.00244*
Community	111.33023	11.10450	10.02569	.00180*
Awareness	77.12673	15.68356	4.91768	.02779
Propriety	.03947	7.78371	.00507	.94331

*Significant at the .01 level.

Table IV.25 shows the test results of the univariate analysis of variance on the responses of junior and senior foreign students to each of the five scales of the CUES II, and reveals that significant differences occurred in three of the five scales at .01 (.05 level of significance ÷ five scales) level--the practicality, scholarship, and community scales. Foreign junior students' perceptions of the campus environment were higher than those of senior foreign students' on three scales, but not on two scales--awareness and propriety.

TABLE IV-25.--Univariate F-test on responses of junior and senior foreign undergraduate students to the five environment scales, with (1, 186) D.F.

Source of Variance	Hypothesis Mean Sq.	Error Mean Sq.	F	P
Practicality	62.67577	7.97049	7.86348	.00558*
Scholarship	158.61515	16.95230	9.35665	.00255*
Community	90.57936	11.10450	8.15700	.00478*
Awareness	79.72275	15.68356	5.08320	.02532
Propriety	.00816	7.78371	.00105	.97420

*Significant at the .01 level.

Hypothesis 2-4: There will no significant differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students are compared on the basis of their major academic areas of study.

This hypothesis is to answer the question of whether foreign undergraduate students' perceptions of the campus environment are different according to their academic areas of study: (1) Engineering/physical sciences, (2) Behavioral/social sciences, (3) Arts/humanities, (4) Life/biological sciences. To test the hypothesis, the responses of the students on the five scales were compared on the basis of self-reported areas of study by using the multivariate analysis of variance. However, as presented in Table IV-26, the evidence indicates that no significant differences existed in the perceptions of foreign undergraduate students who studied different areas of academics, as measured by the five scales of the CUES II.

TABLE IV-26.--Wilk's multivariate analysis of variance on responses of foreign undergraduate students by academic areas of study categories to the five environment scales

Source of Variance	Approx. F	Degrees of Freedom	p*
Academic Areas of Study	1.16091	20, 601	.27867

*Tested at the .05 level.

Table IV-26 shows that the value of the overall F-test for academic areas of study with degrees of freedom 20, 601 was 1.16091, which was not significant at ($p \geq .27867$). Based on the obtained results, therefore, Hypothesis 2-4 cannot be rejected.

Hypothesis 2-5: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students are compared on the basis of their living arrangements.

In this analysis, living arrangements of the students were measured in one way--with whom they lived--and was grouped as: (1) U.S. students, (2) Other foreign students, (3) Home country students, (4) Parents or relatives, (5) Alone, and (6) Other. It was assumed that foreign undergraduate students' perceptions of the campus environment might be different according to with whom they lived because students' social activities and involvement with the campus environment have been reported to be greatly related to with whom they lived.

To test the above hypothesis, the multivariate analysis of variance was used, and the results indicated that there were no significant differences in the perceptions of the students who had different living arrangements with regard to the campus environment. Table IV-27 shows that the value of the overall F-test for living arrangements with degrees of freedom, 25, 670 was 1.04631, and the value of p was ($p \geq .40241$). With .05 level of confidence, this indicates that there were no significant differences among the students who had different living arrangements in the perceptions of the campus environment. Hypothesis 2-5 is unable to be rejected with the evidence available.

Hypothesis 2-6: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students are compared on the basis of their financial sponsorship.

TABLE IV-27.--Wilk's multivariate analysis of variance on responses of foreign undergraduate students by living arrangement categories to the five environment scales

Source of Variance	Approx. F	Degrees of Freedom	p*
Living Arrangements	1.04631	25, 670	.40241

*Tested at the .05 level.

In this investigation, foreign undergraduate students were divided into six sponsorship categories by their primary source of support: (1) working on and off campus, (2) parents or relatives, (3) home country government scholarship, (4) M.S.U. scholarship, (5) scholarship from foundation or organization, and (6) other source.

As noted earlier in this chapter, most of the foreign undergraduate students enrolled at M.S.U. were primarily supported by their parents or relatives, and secondly by their home country governments. The number of students who supported themselves (six students, 3.1 percent) and who were supported by foundations (two students, 1.1 percent) was very small. Table IV-28 shows the number of respondents and the mean and standard deviation of the responses of the students by their sponsorship categories.

Table IV-29 shows that among the sponsorship categories of the foreign undergraduate students, there were significant differences in the perceptions of the campus environment as measured by the five

TABLE IV-28.--Number, mean, and standard deviation on responses of foreign undergraduate students by sponsorship categories to the five environment scales

Scale	Sponsorship Categories	Number	Mean	Standard Deviation
Practicality	Working	6	10.67	1.51
	Parents/relatives	102	10.69	3.04
	Home country gov't	60	11.40	2.73
	M.S.U. scholarship	14	11.71	2.30
	Foundation	2	9.00	2.83
	Other	6	7.00	2.89
Scholarship	Working	6	8.50	3.39
	Parents/relatives	102	10.71	4.33
	Home country gov't	60	12.05	3.91
	M.S.U. scholarship	14	10.86	3.80
	Foundation	2	8.50	3.54
	Other	6	8.12	5.08
Community	Working	6	11.83	2.71
	Parents/relatives	102	9.08	3.24
	Home country gov't	60	9.75	3.70
	M.S.U. scholarship	14	11.57	2.82
	Foundation	2	11.00	2.83
	Other	6	9.00	2.37
Awareness	Working	6	11.67	3.98
	Parents/relatives	102	10.13	4.19
	Home country gov't	60	11.17	3.87
	M.S.U. scholarship	14	10.29	3.05
	Foundation	2	10.50	3.54
	Other	6	9.50	4.81
Propriety	Working	6	8.33	1.21
	Parents/relatives	102	7.12	2.71
	Home country gov't	60	8.18	2.67
	M.S.U. scholarship	14	7.35	2.79
	Foundation	2	12.50	.70
	Other	6	8.67	3.93

TABLE IV-29.--Wilk's multivariate analysis of variance on responses of foreign undergraduate students by sponsorship categories to the five environment scales

Source of Variance	Approx. F	Degrees of Freedom	p
Sponsorship	2.16839	25, 670	.00089*

*Significant at the .05 level.

scales of the CUES II. The multivariate analysis of variance test indicates that the value of the overall F-test for sponsorship categories with degrees of freedom 25, 670 was 2.16839, which was significant at ($p \leq .00089$).

Since the overall F-test for sponsorship categories was significant, the multivariate analysis of variance test was applied to two of the three groups, in turn, in order to determine the nature of the significant differences in perception. That is, multivariate analysis of variance was applied to the responses of the students who were sponsored by: (1) parents/relatives and home country government, (2) parents/relatives and M.S.U. scholarship, and (3) home country government and M.S.U. scholarship. The student groups whose sponsorships were "working on and off campus," "foundation or organization," and "other source" were discarded because the sample sizes of these groups were too small on which to run the multivariate analysis of variance.

Table IV-30 indicates that when the foreign undergraduate students who were supported by their parents/relatives were compared with the students sponsored by their home country government, the value of the overall F-test with degrees of freedom 5, 169 was 2.01426, and the value of p was ($p \geq .07904$). Also, the value of the overall F-test for the students sponsored by their parents/relatives and by M.S.U. scholarship was 1.76887 with degrees of freedom 5, 169, which indicates no significant differences at ($p \geq .12181$). Table IV-30 shows that the value of the overall F-test for the students sponsored by their home country government and by M.S.U. scholarship was 1.86120 with degrees of freedom 5, 169, which indicates no significant differences between the two compared groups at ($p \geq .10366$). In other words, no significant differences in perceptions statistically appeared when each of the above three pairs of comparing sponsorship groups were tested. This was due to the fact that the means of the three compared groups were very close as shown in Table IV-28. If other contrasts had been chosen, the overall MANOVA F-tests might be explained. Hypothesis 2-6 could not be rejected with the evidence provided.

As reviewed in Chapter II, much of the published literature agreed that the English ability of foreign students is one of the most critical factors affecting the student's campus life academically and socially. Based on such literature review, it was questioned how foreign undergraduate students' English ability affects their perceptions of the campus environment in which they manage their educational life. The following hypothesis is to answer the above question.

TABLE IV-30.--Wilk's multivariate analysis of variance for three comparing pair groups by sponsorship categories of foreign undergraduate students

Source of Variance	Approx. F	Degrees of Freedom	p*
Parents/relatives vs. Home country government	2.01426	5, 169	.07904
Parents/relatives vs. M.S.U. scholarship	1.76887	5, 169	.12181
Home country government vs. M.S.U. Scholarship	1.86120	5, 169	.10366

*Tested at the .05 level.

Hypothesis 2-7: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students are compared on the basis of their self-rated ability in English.

Table IV-31 shows the number of respondents and the mean and standard deviation of the responses of each group of foreign undergraduate students who self-rated their English ability as "good," "average," and "poor" on each of the five scales.

Table IV-32 shows the test result of the multivariate analysis of variance for the three groups of foreign undergraduate students who were categorized by their self-rated ability in English, and indicates that there were significant differences in the perceptions of the university environment. The value of the overall

TABLE IV-31.--Number, mean, and standard deviation on responses of foreign undergraduate students by self-rated English ability categories to the five environment scales

Scale	Self-rated Ability in English	Number	Mean	Standard Deviation
Practicality	Good	110	10.61	2.71
	Average	74	11.24	3.26
	Poor	6	10.50	2.43
Scholarship	Good	110	10.16	4.54
	Average	74	12.05	3.50
	Poor	6	12.33	2.66
Community	Good	110	9.49	3.30
	Average	74	9.66	3.62
	Poor	6	10.12	2.99
Awareness	Good	110	10.59	4.14
	Average	74	10.27	3.94
	Poor	6	11.67	2.25
Propriety	Good	110	7.02	2.90
	Average	74	8.41	2.35
	Poor	6	8.83	2.86

TABLE IV-32.--Wilk's multivariate analysis of variance on responses of foreign undergraduate students by self-rated English ability categories to the five environment scales

Source of Variance	Approx. F	Degrees of Freedom	p
Self-rated ability in English	2.56716	10, 366	.00520*

*Significant at the .05 level.

F-test for the categories of English ability of foreign undergraduate students was 2.56716 with degrees of freedom 10, 366, which was significant at ($p \leq .00520$).

Since the overall F-test for English ability categories was significant, and to determine where the significant differences in perceptions existed, the multivariate analysis of variance test was applied again to two of the categories of foreign undergraduate students: those who rated their English as "good" and those who rated their English as "average." The students' group whose English ability was rated as "poor" was discarded because the sample size (6) of this group was too small on which to run the multivariate analysis of variance.

Table IV-33 shows the test results of multivariate analysis of variance as applied to the responses of the two comparing English ability groups, and indicates that significant differences in the perceptions of the university environment occurred between these two

TABLE IV-33.--Wilk's multivariate analysis of variance on responses of "good" and "average" English ability foreign undergraduate students to the five environment scales

Source of Variance	Approx. F	Degrees of Freedom	p
Good and Average Ability in English	4.79889	5, 178	.00039*

*Significant at the .05 level.

groups. As can be seen in Table IV-33, the value of the overall F-test for "good" and "average" ability foreign students in English was 4.79889 with degrees of freedom 5, 178, which was significant at ($p \leq .00039$).

With the above test results of the multivariate analysis of variance, the Univariate F-test was employed to identify in which scale(s) of the five scales the significant differences occurred between the two groups of "good" and "average" English ability students. By testing the Univariate F-test at .01 (.05 level of significance ÷ five scales) level, Table IV-34 indicates that significant differences in perception of the university environment occurred on two scales--scholarship and propriety scales--between the two groups of foreign undergraduate students who had different English ability. The foreign undergraduate students who rated themselves as having "average" English ability perceived the university environment as being more scholarly and academic than did the foreign students who rated themselves as having "good" English ability. Likewise,

TABLE IV-34.--Univariate F-test on responses of "good" and "average" English ability foreign undergraduate students to the five environment scales, with (1, 182) D.F.

Source of Variance	Hypothesis Mean Sq.	Error Mean Sq.	F	p
Practicality	17.79073	8.58139	2.07318	.15168
Scholarship	158.09645	17.19142	9.19624	.00278*
Community	1.29743	11.79146	.11003	.74049
Awareness	4.54819	16.47904	.27600	.59998
Propriety	85.13331	7.22968	11.77533	.00074*

*Significant at the .01 level.

"average" ability students in English perceived the university environment as being more proper, mannerly, and considerate than did the "good" ability students in English. On the other three of the five scales of the CUES II, according to the evidence of Table IV-34, there were no significant differences in the perceptions of the university environment between the two groups of "good" and "average" English ability students.

Hypothesis 2-8: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when foreign undergraduate students are compared on the basis of their home country types.

In this investigation, foreign undergraduate students' home country types were categorized on the basis of the World Bank's criteria published in 1980: (1) low-income countries, (2) middle-income countries, (3) high-income industrialized countries,

TABLE IV-35.--Number, mean, and standard deviation of responses of foreign undergraduate students by home country type categories to the five environment scales

Scale	Type of Country	Number	Mean	Standard Deviation
Practicality	Low-income countries	10	10.40	1.17
	Middle-income countries	107	11.47	2.85
	High-income industrialized country	45	9.44	3.07
	Capital-surplus oil exporters	26	10.85	2.69
	Centrally-planned economics	2	12.00	2.83
Scholarship	Low-income countries	10	10.30	2.91
	Middle-income countries	107	11.62	4.06
	High-income industrialized country	45	9.29	4.61
	Capital-surplus oil exporters	26	11.81	3.53
	Centrally-planned economics	2	6.50	4.95
Community	Low-income countries	10	6.50	4.95
	Middle-income countries	107	9.60	3.86
	High-income industrialized country	45	9.69	3.43
	Capital-surplus oil exporters	26	9.08	3.03
	Centrally-planned economics	2	9.00	1.41
Awareness	Low-income countries	10	11.00	3.46
	Middle-income countries	107	10.90	3.69
	High-income industrialized country	45	9.53	4.36
	Capital-surplus oil exporters	26	10.42	4.79
	Centrally-planned economics	2	9.50	3.54
Propriety	Low-income countries	10	5.90	2.23
	Middle-income countries	107	7.79	2.84
	High-income industrialized countries	45	7.58	3.03
	Capital-surplus oil exporters	26	7.73	2.09
	Centrally-planned economics	2	6.50	.71

(4) capital-surplus oil exporters, and (5) centrally-planned economies. Table IV-35 shows the number of respondents and the mean and standard deviation of the responses of foreign undergraduate students from different types of countries on each of the five scales of the CUES II.

The above hypothesis was first tested by the multivariate analysis of variance in order to determine if there were significant differences on the perceptions of all the five scales of the CUES II among the foreign undergraduate students from different types of countries. Table IV-36 shows that the value of the overall F-test for the students' responses from different types of countries was 1.99720 with degrees of freedom 20, 601, which was significant at ($p \leq .00621$).

TABLE IV-36.--Wilk's multivariate analysis of variance on responses of foreign undergraduate students by home country type categories to the five environment scales

Sources of Variance	Approx. F	Degrees of Freedom	p
Type of Country	1.99720	20, 601	.00621*

*Significant at the .05 level.

Since the overall F-test for the home country type of foreign undergraduate students was significant, and to determine where the significant differences in perception existed, the multivariate

analysis of variance was applied, in turn, to two of the four groups. That is, multivariate analysis of variance was applied to the responses of foreign undergraduate students from: (1) low-income countries and middle-income countries, (2) low-income countries and high-income industrialized countries, (3) low-income countries and capital-surplus oil exporters, (4) middle-income countries and high-income industrialized countries, (5) middle-income countries and capital-surplus oil exporters, and (6) high-income industrialized countries and capital-surplus oil exporters. In these comparisons, the group of foreign undergraduate students from centrally-planned economics was discarded because the sample size (2) was too small on which to run the multivariate analysis of variance.

Table IV-37 shows the multivariate analysis of variance tests as applied to the responses of the six pairs of the comparing country type groups of foreign undergraduate students and indicates that significant differences in the perceptions of the university environment occurred only in three pairs of comparing groups--low-income countries and middle-income countries, low-income countries and high-income industrialized countries, and middle-income countries and high-income industrialized countries. No significant differences in the perceptions of the campus environment, as can be seen in Table IV-37, were found between the responses of foreign undergraduate students from low-income countries and capital-surplus oil exporters, middle-income countries and capital-surplus oil exporters, and high-income industrialized countries and capital-surplus oil exporters.

TABLE IV-37.--Wilk's multivariate analysis of variance for six
comparing pair groups by home country type categories
of foreign undergraduate students

Source of Variance	Approx. F	Degrees of Freedom	p
Low-income country vs. Middle-income country	3.73948	5, 180	.00303*
Low-income country vs. High-income country	2.63403	5, 180	.02517*
Low-income country vs. Capital-surplus oil exporters	1.10913	5, 180	.35716
Middle-income country vs. High-income country	5.64312	5, 180	.00007*
Middle-income country vs. Capital-surplus oil exporters	.35400	5, 180	.87912
High-income country vs. Capital-surplus oil exporters	.58879	5, 180	.70857

*Significant at the .05 level.

The multivariate analysis of variance as applied to the responses of foreign undergraduate students from low-income countries and middle-income countries indicates that the value of the overall F-test with degrees of freedom 5, 180 was 3.73948, which was significant at ($p \leq .00303$). Also, the multivariate analysis of variance as applied to the responses of foreign undergraduate students from low-income countries and high-income industrialized countries reveals that the value of the overall F-test with degrees of freedom 5, 180 was 2.63403, which was significant at ($p \leq .02517$). The multivariate analysis of variance as employed to the responses of foreign undergraduate students from middle-income countries and high-income industrialized countries further shows that the value of the overall F-test with degrees of freedom 5, 180 was 5.64312, which was significant at ($p \leq .00007$).

With the test results of the multivariate analysis of variance, and to identify on which scale(s) the differences occurred, the Univariate F-tests were employed to each pair of the comparing groups in which significant differences in the perceptions of the university environment appeared. When the univariate F-test was applied to the responses of foreign undergraduate students from low-income and middle-income countries, as reported in Table IV-38 below, significant differences existed only on one scale--practicality. The foreign undergraduate students from middle-income countries perceived the campus environment as being more practical than did the foreign students from low-income countries.

TABLE IV-38.--Univariate F-test on responses of foreign undergraduate students from low-income and middle-income countries to the five environment scales, with (1, 184) D.F.

Source of Variance	Hypothesis Mean Sq.	Error Mean Sq.	F	p
Practicality	97.58960	7.97571	12.23585	.00059*
Scholarship	89.66241	16.71018	5.36574	.02164
Community	1.52823	11.86836	.12876	.72013
Awareness	37.10956	16.09465	2.30571	.13062
Propriety	6.15170	7.69048	.79991	.37229

*Significant at the .01 level.

When the univariate F-test was applied to the responses of foreign undergraduate students from low-income and high-income industrialized countries, Table IV-39 indicates that no significant differences occurred statistically on each scale of the CUES II. However, by comparing actual means reported in Table IV-35, the foreign undergraduate students from low-income countries seemed to perceive practicality, scholarship, and awareness scales somewhat higher than did the foreign undergraduate students from high-income industrialized countries. On the contrary, on the propriety scale, the foreign undergraduate students' from high-income industrialized countries perceptions were somewhat higher than the foreign students' from low-income countries. The community scale was perceived in much the same way by both groups of foreign undergraduate students.

TABLE IV-39.--Univariate F-test on responses of foreign undergraduate students from low-income and high-income industrialized countries to the five environment scales, with (1, 184) D.F.

Source of Variance	Hypothesis Mean Sq.	Error Mean Sq.	F	p*
Practicality	32.65432	7.97571	4.09422	.04448
Scholarship	88.20000	16.71018	5.27882	.02272
Community	4.35556	11.86836	.36699	.54540
Awareness	22.05000	16.09465	1.37002	.24332
Propriety	2.52840	7.69048	.32877	.56708

*Tested at the .01 level.

Table IV-40 shows the results of the univariate F-test as applied to the responses of foreign undergraduate students from middle-income and high-income industrialized countries on each of the five scales of the CUES II, and indicates that there were significant differences on two scales--the practicality and scholarship scales. The foreign undergraduate students from middle-income countries perceived the university environment as being more practical than did the foreign students from high-income industrialized countries. Also, the foreign undergraduate students from middle-income countries perceived the campus environment as being more scholarly and academic than did the foreign students from high-income industrialized countries. On the other scales, both groups of foreign undergraduate students perceived in much the same ways.

TABLE IV-40.--Univariate F-test of responses of foreign undergraduate students from middle-income and high-income industrialized countries to the five environment scales, with (1, 184) D.F.

Source of Variance	Hypothesis Mean Sq.	Error Mean Sq.	F	p
Practicality	115.29047	7.97571	14.45519	.00020*
Scholarship	176.46293	16.71018	10.56021	.00137*
Community	.63721	11.86836	.05369	.81702
Awareness	56.50600	16.09465	3.51086	.06255
Propriety	.14720	7.69048	.01914	.89011

*Significant at the .01 level.

Comparisons of Undergraduate Teaching Faculty with the Subgroups of Foreign Undergraduate Students

The third research objectives of this study was to identify specific subgroup(s) of foreign undergraduate students from which undergraduate teaching faculty differ in their perceptions of the campus environment. To fulfill this objective, eight corresponding null hypotheses were formed on the basis of the student's age, gender, class level, academic areas of study, living arrangements, financial sources of support, self-rated ability in English, and types of home country. Statistically, as mentioned in Chapter III, this objective was accomplished through the use of the t-test for grand mean scores of the comparing groups. In the following section, the test results will be presented in the order of the established hypotheses.

Hypothesis 3-1: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the two age groups of foreign undergraduate students (18-23 and 24-38).

Table IV-41 shows the test results indicating that teaching faculty members' perceptions of the university environment were statistically different from those of foreign undergraduate students' who were age 18-23 on the practicality and scholarship scales, and from those of foreign undergraduate students who were age 24-38 on the community scale. In other words, interestingly enough, younger foreign undergraduate students (age 18-23) perceived the university environment as being significantly more practical, and scholarly than did the total undergraduate teaching faculty members. But, undergraduate teaching faculty members perceived the campus environment as being significantly more friendly and cohesive than did older foreign undergraduate students. For other comparisons, the evidence does not support a rejection of the null hypothesis.

Hypothesis 3-2: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with female and male foreign undergraduate students.

Table IV-42 shows the test results of comparing undergraduate teaching faculty, female foreign students, and male foreign students on each of the five scales of the CUES II. As can be seen in Table IV-42, both female and male foreign undergraduate students perceived the university environment as being significantly more practical than did the total undergraduate teaching faculty members. Likewise,

TABLE IV-41.--T-tests on comparisons between the undergraduate teaching faculty and foreign undergraduate students by age categories

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Faculty	86	8.43			
	vs					
	Age 18-23	160	11.14	7.78	244	.000*
	Age 24-38	30	9.33	1.66	114	.100
Scholarship	Faculty	86	9.23			
	vs					
	Age 18-23	160	11.01	3.09	244	.002*
	Age 24-38	30	10.73	1.53	114	.129
Community	Faculty	86	9.73			
	vs					
	Age 18-23	160	9.82	.20	244	.845
	Age 24-38	30	8.30	-1.99	114	.049*
Awareness	Faculty	86	10.65			
	vs					
	Age 18-23	160	10.63	- .05	244	.962
	Age 24-38	30	9.83	- .84	114	.405
Propriety	Faculty	86	7.67			
	vs					
	Age 18-23	160	7.59	- .19	244	.849
	Age 24-38	30	7.77	.15	114	.879

*Significant at the 0.05 level.

TABLE IV-42.--T-tests on comparisons between the undergraduate teaching faculty and female and male foreign undergraduate students

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Faculty	86	8.43			
	vs					
	Female	65	10.51	4.75	149	.000*
	Male	125	11.03	7.12	209	.000*
Scholarship	Faculty	86	9.23			
	vs					
	Female	65	11.51	3.10	149	.002*
	Male	125	10.69	2.38	209	.018*
Community	Faculty	86	9.73			
	vs					
	Female	65	9.37	-.67	149	.502
	Male	125	9.69	-.09	209	.926
Awareness	Faculty	86	10.65			
	vs					
	Female	65	10.92	.38	149	.708
	Male	125	10.28	-.63	209	.528
Propriety	Faculty	86	7.67			
	vs					
	Female	65	7.77	.22	149	.827
	Male	125	7.54	-.29	209	.771

*Significant at the 0.05 level.

both female and male foreign undergraduate students perceived the campus environment as being significantly more scholarly and academic than did the undergraduate teaching faculty members. On the other scales of community, awareness, and propriety, the evidence does not support a rejection of the null hypothesis.

Hypothesis 3-3: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the class level categories of foreign undergraduate students.

To test the above hypothesis, t-tests were run for the responses of each pair of the comparing groups on each of the five scales, and the results were reported in Table IV-43. According to the table, significant differences existed between undergraduate teaching faculty and all the groups of freshmen, sophomores, juniors, and senior foreign students on the practicality scale. In other words, every group of freshmen, sophomores, juniors, and senior foreign students viewed the university environment as being more procedural and practical than did teaching faculty members.

Table IV-43 also indicates that undergraduate teaching faculty had significant differences from freshmen, sophomore, and junior foreign students except senior foreign students in their perceptions of the academic or intellectual environment of the university. Interestingly enough, freshmen, sophomore, and junior foreign students' perceptions were higher than those of undergraduate teaching faculty on the scholarship scale, but senior foreign students' perceptions were very similar to those of the teaching faculty.

TABLE IV-43.--T-tests on comparisons between the undergraduate teaching faculty and foreign undergraduate students by class level

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Faculty	86	8.43			
	vs					
	Freshmen	69	11.77	8.30	153	.000*
	Sophomore	41	11.07	5.60	125	.000*
	Junior	37	10.14	3.44	121	.001*
	Senior	43	9.80	2.99	127	.003*
Scholarship	Faculty	86	9.23			
	vs					
	Freshmen	69	11.87	3.77	153	.000*
	Sophomore	41	11.02	2.14	125	.035*
	Junior	37	11.19	2.13	121	.035*
	Senior	43	9.28	.06	127	.955
Community	Faculty	86	9.73			
	vs					
	Freshmen	69	10.45	1.36	153	.176
	Sophomore	41	9.79	.08	125	.939
	Junior	37	9.22	-.74	121	.461
	Senior	43	8.30	-2.45	127	.016*
Awareness	Faculty	86	10.66			
	vs					
	Freshmen	69	11.35	1.03	153	.303
	Sophomore	41	10.10	-.67	125	.502
	Junior	37	10.76	.12	121	.904
	Senior	43	9.30	-1.60	127	.111
Propriety	Faculty	86	7.66			
	vs					
	Freshmen	69	7.77	.22	153	.830
	Sophomore	41	7.49	-.28	125	.778
	Junior	37	7.46	-.34	121	.737
	Senior	43	7.63	-.06	127	.954

*Significant at the 0.05 level.

In viewing the university atmosphere as friendly, cohesive, and group oriented, there were no significant differences between undergraduate teaching faculty members and each group of freshmen, sophomore, and junior foreign students. But, in the comparison of the undergraduate teaching faculty with senior foreign students, the former perceived the campus environment as being more friendly, cohesive, and group oriented than did the latter. On the other scales--awareness and propriety--the evidence does not support a rejection of null hypothesis.

Hypothesis 3-4: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the academic areas of study categories of foreign undergraduate students.

In this investigation, foreign undergraduate students were divided into four major areas of study groups: (1) Engineering/physical sciences, (2) Behavioral/social sciences, (3) Arts/humanities, and (4) Life/biological sciences.

Table IV-44 shows the results of t-tests for the responses of the comparing groups on each of the five scales of the CUES II, and indicates that undergraduate teaching faculty perceived the campus environment as being significantly less procedural and practical than did the foreign undergraduate students who were majoring in engineering/physical sciences, behavioral/social sciences, and life/biological sciences. But no significant differences existed between the teaching faculty and foreign undergraduate arts/humanities majors with regard to their perceptions on the practicality scale.

TABLE IV-44.--T-tests on comparisons between the undergraduate teaching faculty and foreign undergraduate students by academic areas of study categories

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Faculty	86	8.43			
	vs					
	Eng./physi sci.	91	11.35	7.62	175	.000*
	Behav./soc. sci.	25	10.48	3.70	109	.000*
	Arts/humanities	16	9.06	.94	100	.349
	Life/biol. sci.	13	10.31	2.65	97	.009*
Scholarship	Other	45				
	Faculty	86	9.23			
	vs					
	Eng./phy. sci.	91	11.45	3.47	175	.001*
	Behav./soc. sci.	25	10.76	1.43	109	.156
	Arts/humanities	16	8.75	-.38	100	.702
Community	Life/biol. sci.	13	11.54	1.71	97	.091
	Other	45				
	Faculty	86	9.73			
	vs					
	Eng./phy. sci.	91	9.84	.21	175	.837
	Behav./soc. sci.	25	9.12	-.78	109	.438
Awareness	Arts/humanities	16	8.63	-1.26	100	.210
	Life/biol. sci.	13	8.46	-1.33	97	.188
	Other	45				
	Faculty	86	10.65			
	vs					
	Eng./phy. sci.	91	10.78	.20	175	.843
Propriety	Behav./soc. sci.	25	10.80	.15	109	.884
	Arts/humanities	16	9.81	-.70	100	.484
	Life/biol. sci.	13	10.69	.03	97	.975
	Other	45				
	Faculty	86	7.66			
	vs					
Propriety	Eng./phy. sci.	91	7.79	.29	175	.772
	Behav./soc. sci.	25	8.00	.44	109	.661
	Arts/humanities	16	7.19	-.54	100	.593
	Life/biol. sci.	13	6.38	-1.34	97	.184
	Other	45				

*Significant at the 0.05 level.

In perceiving the scholarly or intellectual aspects of the campus environment, as can be seen in Table IV-44, significant differences existed between undergraduate teaching faculty and foreign undergraduates majoring in engineering/physical sciences. The teaching faculty's perceptions were lower than the foreign students' who were studying engineering/physical sciences. For the other comparison groups and scales, the evidences do not support a rejection of the null hypothesis.

Hypothesis 3-5: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the living arrangements of foreign undergraduate students.

In this investigation, foreign undergraduate students' living arrangements were divided into five categories on the basis of with whom they lived: (1) U.S. students, (2) Other foreign students, (3) Home country students, (4) Parents/relatives, or (5) Alone.

According to the test results reported in Table IV-45, undergraduate teaching faculty members showed significant differences from every group of foreign undergraduate students who were living with U.S. students, other foreign students, home country students, parents/relatives, and alone with regard to the perceptions of the practicality scale of the CUES II. On the whole, every comparing group of foreign undergraduate students perceived the campus environment as being more practical than did the teaching faculty members.

On the scholarship scale, undergraduate teaching faculty members were found to have significantly different perceptions from

TABLE IV-45.--T-tests on comparison between the undergraduate teaching faculty and foreign undergraduate students by living arrangement categories (with whom they live)

Scale	Mean	Number	Mean	T Value	D.F.	p
Practicality	Faculty	86	8.43			
	vs					
	U.S. Student	77	10.88	6.06	161	.000*
	Other Foreign Stu.	11	10.82	3.14	95	.002*
	Home Country Stu.	51	11.24	6.42	135	.000*
	Parents/Relatives	16	10.31	2.95	100	.004*
	Alone	26	10.69	4.05	110	.000*
Scholarship	Other	9				
	Faculty	86	9.23			
	vs					
	U.S. Student	77	10.27	1.46	161	.147
	Other Foreign Stu.	11	11.00	1.22	95	.226
	Home Country Stu.	51	12.00	3.56	135	.001*
	Parents/Relatives	16	11.69	1.99	100	.049*
Community	Alone	26	10.69	1.43	110	.155
	Other	9				
	Faculty	86	9.73			
	vs					
	U.S. Student	77	9.36	-.75	161	.456
	Other Foreign Stu.	11	10.73	.96	95	.340
	Home Country Stu.	51	10.57	1.44	135	.153
Awareness	Parents/Relatives	16	8.75	-1.06	100	.294
	Alone	26	8.85	-1.16	110	.327
	Other	9				
	Faculty	86	10.65			
	vs					
	U.S. Student	77	10.29	-.52	161	.603
	Other Foreign Stu.	11	10.09	-.38	95	.702
Propriety	Home Country Stu.	51	11.12	.64	135	.524
	Parents/Relatives	16	11.69	.86	100	.391
	Alone	26	9.65	-.98	110	.327
	Other	9				
	Faculty	86	7.66			
	vs					
	U.S. Student	77	7.17	-1.01	161	.315
	Other Foreign Stu.	11	7.36	-.29	95	.771
	Home Country Stu.	51	8.27	1.14	135	.255
	Parents/Relatives	16	8.63	1.08	100	.285
	Alone	26	7.03	-.87	110	.387
	Other	9				

*Significant at the 0.05 level.

the foreign undergraduate students who were living with home country students, and from those who were living with parents or relatives. The teaching faculty members perceived the campus environment as being less scholarly and academic than did the foreign students who were living with home country students and parents/relatives. However, undergraduate teaching faculty members did not show any significant differences from the other living arrangement groups on the perceptions of the intellectual and academic aspects of the university.

On the other scales--community, awareness, and propriety, no significant differences existed between undergraduate teaching faculty members and all the living arrangement groups of foreign undergraduate students. Thus, the null hypothesis cannot be rejected with the evidence available.

Hypothesis 3-6: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the sponsorship categories of foreign undergraduate students.

In this analysis, the sponsorships for the students were described as being provided by: (1) working on and off campus, (2) parents/relatives, (3) home country government, (4) M.S.U. scholarship, (5) foundations, or (6) other. But, the foreign undergraduate student groups supported by working, foundations, and other sources were discarded and not compared with the teaching faculty group because the groups' sample sizes were too small.

Table IV-46 indicates that undergraduate teaching faculty members' perceptions on the procedural and practical aspects of the

TABLE IV-46.--T-tests on comparisons between the undergraduate teaching faculty and foreign undergraduate students by sponsorship categories

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Faculty	86	8.45			
	vs					
	Working	6				
	Parents/relatives	102	10.69	5.71	186	.000*
	Home country govt.	60	11.40	7.15	144	.000*
	M.S.U. scholarship	14	11.71	5.01	98	.000*
	Foundation	2				
Scholarship	Other	6				
	Faculty	86	9.23			
	vs					
	Working	6				
	Parents/relatives	102	10.71	2.26	186	.025*
	Home country govt.	60	12.05	3.85	144	.000*
	M.S.U. scholarship	14	10.86	1.25	98	.216
Community	Foundation	2				
	Other	6				
	Faculty	86	9.73			
	vs					
	Working	6				
	Parents/relatives	102	9.07	-1.36	186	.176
	Home country govt.	60	9.75	.03	144	.976
Awareness	M.S.U. scholarship	14	11.57	1.97	98	.051
	Foundation	2				
	Other	6				
	Faculty	86	10.65			
	vs					
	Working	6				
	Parents/relatives	102	10.13	-.82	186	.413
Propriety	Home country govt.	60	11.17	.71	144	.476
	M.S.U. scholarship	14	10.29	-.29	98	.773
	Foundation	2				
	Other	6				
	Faculty	86	7.66			
	vs					
	Working	6				
	Parents/relatives	102	7.12	-1.24	186	.216
	Home country govt.	60	8.18	1.01	144	.315
	M.S.U. scholarship	14	7.36	-.33	98	.745
	Foundation	2				
	Other	6				

*Significant at the 0.05 level.

campus differed significantly from those of the foreign students sponsored by parents/relatives, home country government, and M.S.U. scholarship. That is, the teaching faculty members viewed the campus climate as being less practical than did the three comparing foreign students' groups.

On the academic and scholarly aspects of the university, Table IV-46 shows that undergraduate teaching faculty members perceived significantly less than the foreign student groups sponsored by parents or relatives, and their home country government. However, the evidence indicates that no significant differences existed between the groups of teaching faculty and M.S.U. scholarship sponsored foreign students.

Also, Table IV-46 shows that there were no significant differences between the comparing groups on the scales of community, awareness, and propriety of the CUES II. Hypothesis 3-6, thus, can not be rejected on these scales.

Hypothesis 3-7: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the English ability categories of foreign undergraduate students.

Table IV-47 shows the results of the comparisons between undergraduate teaching faculty and foreign undergraduate students who rated themselves as having "good" and "average" English ability. The foreign students who evaluated themselves as having "poor" English ability were discarded and not compared to the undergraduate teaching faculty because the sample size (6) was too small.

TABLE IV-47.--T-tests on comparisons between the undergraduate teaching faculty and foreign undergraduate students by English ability categories

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Faculty	86	8.43			
	vs					
	Good	110	10.61	5.99	194	.000*
	Average	74	11.24	6.44	158	.000*
	Poor	6				
Scholarship	Faculty	86	9.23			
	vs					
	Good	110	10.16	1.41	194	.159
	Average	74	12.05	4.29	158	.000*
	Poor	6				
Community	Faculty	86	9.73			
	vs					
	Good	110	9.49	-.51	194	.611
	Average	74	9.66	-.13	158	.898
	Poor	6				
Awareness	Faculty	86	10.65			
	vs					
	Good	110	10.59	-.10	194	.923
	Average	74	10.27	-.56	158	.576
	Poor	6				
Propriety	Faculty	86	7.66			
	vs					
	Good	110	7.02	-1.45	194	.149
	Average	74	8.41	1.61	158	.109
	Poor	6				

*Significant at the .05 level.

The results shown in Table IV-47 indicate that when the undergraduate teaching faculty was compared with both groups of English-ability foreign students, the faculty members perceived the campus as being significantly less practical than did both groups of foreign undergraduate students. Also, the faculty members viewed the campus environment as significantly less academic and scholarly than the "average" English ability foreign students' group. But, no significant differences existed between the faculty members and "good" English ability foreign students on the scholarship scale of the CUES II. On the three scales--community, awareness, and propriety--of the CUES II, the hypothesis cannot be rejected with the evidence available.

Hypothesis 3-8: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing undergraduate teaching faculty with the country type categories of foreign undergraduate students.

As mentioned in Chapter I, foreign undergraduate students' home countries were divided into five categories on the basis of the World Bank's classification: (1) Low-income countries, (2) Middle-income countries, (3) High-income industrialized countries, (4) Capital-surplus oil exporters, and (5) Centrally-planned economics.

Table IV-48 shows the test results of the comparisons between undergraduate teaching faculty and undergraduate foreign students from low-income countries, middle-income countries, high-income industrialized countries, and capital-surplus oil exporters. However, the foreign students from centrally-planned economics were

TABLE IV-48.--T-tests on comparisons between the undergraduate teaching faculty and foreign undergraduate students by home country type categories

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Faculty vs	86	8.43			
	Low-income countries	10	10.40	2.69	94	.008*
	Middle-income countries	107	11.47	8.03	191	.000*
	High-income industrialized country	45	9.44	2.15	129	.034*
	Capital-surplus oil exporters	26	10.85	4.55	110	.000*
	Centrally-planned economies	2				
Scholarship	Faculty vs	86	9.23			
	Low-income countries	10	10.30	.71	94	.479
	Middle-income countries	107	11.62	3.81	191	.000*
	High-income industrialized country	45	9.29	.07	129	.947
	Capital-surplus oil exporters	26	11.81	2.61	110	.010*
	Centrally-planned economies	2				
Community	Faculty vs	86	9.73			
	Low-income countries	10	9.60	-.12	94	.906
	Middle-income countries	107	9.66	-.14	191	.889
	High-income industrialized countries	45	9.69	-.07	129	.943
	Capital-surplus oil exporters	26	9.08	-.91	110	.367
	Centrally-planned economies	2				

TABLE IV-48.--Continued

Scale	Group	Number	Mean	T Value	D.F.	p
Aware- ness	Faculty vs	86	10.65			
	Low-income countries	10	11.00	.23	94	.816
	Middle-income countries	107	10.90	.41	191	.679
	High-income indus- trialized country	45	9.53	-1.35	129	.179
	Capital-surplus oil exporters	26	10.42	-.22	110	.826
	Centrally-planned economies	2				
Pro- priety	Faculty vs	86	7.66			
	Low-income countries	10	5.90	-1.63	94	.106
	Middle-income country	107	7.79	.28	191	.783
	High-income indus- trialized country	45	7.58	-.14	129	.886
	Capital-surplus oil exporters	26	7.73	.10	110	.922
	Centrally-planned econmies	2				

*Significant at the 0.05 level.

discarded and not compared with the undergraduate teaching faculty members because the sample size (2) was extremely small.

In perceiving the practical aspects of the campus environment, as can be seen in Table IV-48, undergraduate teaching faculty members showed significant differences from all the comparing groups of foreign undergraduate students as categorized by their home country types. In general, undergraduate teaching faculty members viewed the campus environment as being less practical than did the comparing groups of foreign undergraduate students.

Table IV-48 also indicates that undergraduate teaching faculty members had significant differences from the foreign undergraduate students from middle-income and capital-surplus oil exporting countries in their perceptions of the academic or intellectual aspects of the campus environment. But, no significant differences existed between the faculty members and low-income country students and high-income country students.

On the community, awareness, and propriety scales, as disclosed in Table IV-48, the null hypothesis cannot be rejected.

Comparisons of Student Personnel Staff with the Subgroups of For- eign Undergraduate Students

The fourth objective of the study was to compare the student personnel staff with each subgroup of foreign undergraduate students as categorized by their demographic variables with regard to their perceptions of the campus environment. Eight corresponding null hypotheses were stated on the basis of foreign undergraduate students'

personal demographic variables — age, gender, class level, academic areas of study, living arrangements, financial sources of support, self-rated ability in English, and types of home country. The test results for the established hypothesis are presented in the following part.

Hypothesis 4-1: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the age groups of foreign undergraduate students: 18-23 and 24-38.

On the practical aspects of the university climate, as revealed in Table IV-49, student personnel workers' perceptions were less than foreign undergraduate students who were between the ages of 18 and 23, but no significant differences existed between student personnel workers and foreign students who were between the ages of 24 and 38. Also, the same phenomenon were found between the student personnel workers and foreign undergraduate students who were between the ages of 18 and 23, and those who were between the ages of 24 and 38 on the perceptions of the scholarly and academic atmosphere of the university.

Table IV-49 also indicates that student personnel staff members perceived the campus environment as being significantly more friendly and cohesive than did older foreign undergraduate students, but in a much similar way to younger foreign undergraduate students. However, no significant differences existed between the groups when compared on the awareness and propriety scales of the CUES II. On these scales, thus, the null hypothesis cannot be rejected.

TABLE IV-49.--T-tests on comparisons between the student personnel staff and foreign graduate students by age categories

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Student Personnel Staff	87	9.16			
	vs					
	Age 18-23	160	11.14	5.62	245	.000*
	Age 24-38	30	9.33	.31	115	.759
Scholarship	Student Personnel Staff	87	9.38			
	vs					
	Age 18-23	160	11.01	2.81	245	.005*
	Age 24-38	30	10.73	1.35	115	.180
Community	Student Personnel Staff	87	10.20			
	vs					
	Age 18-23	160	9.81	-.84	245	.403
	Age 24-38	30	8.30	-2.53	115	.013*
Awareness	Student Personnel Staff	87	10.21			
	vs					
	Age 18-23	160	10.63	.78	245	.434
	Age 24-38	30	9.83	-.40	115	.690
Propriety	Student Personnel Staff	87	7.63			
	vs					
	Age 18-23	160	7.59	-.12	245	.907
	Age 24-38	30	7.77	.21	115	.834

*Significant at the 0.05 level.

Hypothesis 4-2: There will be significant differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with female and male foreign undergraduate students.

As can be seen in Table IV-50, student personnel staff members perceived the campus environment as being significantly less procedural and practical than did both female and male foreign undergraduate students. Also, the same trends of differences occurred on the perceptions of the academic or intellectual aspects of the university atmosphere between the student personnel staff and female and male foreign undergraduate students.

However, Table IV-50 shows no significant differences between the student personnel staff and both female and male foreign undergraduate students on the community, awareness, and propriety scales. Thus, the evidence does not support a rejection of the null hypothesis.

Hypothesis 4-3: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the class level categories of foreign undergraduate students.

Table IV-51 shows the results of t-tests on the responses of the comparing groups to each of the five scales, and indicates that significant differences occurred on the perceptions of the practical aspects of the university environment between the student personnel staff members and freshmen and sophomore foreign students, but not between the student personnel staff members and junior and senior foreign students.

TABLE IV-50.--T-tests on comparisons between the student personnel staff and female and male foreign undergraduate students

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Student Personnel Staff	87	9.16			
	vs					
	Female	65	10.51	3.02	150	.003*
	Male	125	11.03	5.06	210	.000*
Scholarship	Student Personnel Staff	87	9.38			
	vs					
	Female	65	11.51	2.85	150	.005*
	Male	125	10.69	2.12	210	.035*
Community	Student Personnel Staff	87	10.20			
	vs					
	Female	65	9.40	-1.48	150	.141
	Male	125	9.69	-1.04	210	.298
Awareness	Student Personnel Staff	87	10.21			
	vs					
	Female	65	10.92	1.03	150	.305
	Male	125	10.28	.13	210	.898
Propriety	Student Personnel Staff	87	7.63			
	vs					
	Female	65	7.77	.30	150	.766
	Male	125	7.54	-.23	210	.818

*Significant at the 0.05 level.

TABLE IV-51.--T-tests on comparisons between the student personnel staff and foreign undergraduate students by class level

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Student Personnel Staff	87	9.16			
	vs					
	Freshmen	69	11.77	6.34	154	.000*
	Sophomore	41	11.07	3.94	126	.000*
	Junior	37	10.14	1.91	122	.058
	Senior	43	9.80	1.35	128	.181
Scholarship	Student Personnel Staff	87	9.38			
	vs					
	Freshmen	69	11.87	3.49	154	.001*
	Sophomore	41	11.02	1.92	126	.057
	Junior	37	11.20	1.93	122	.056
	Senior	43	9.28	-.12	128	.905
Community	Student Personnel Staff	87	10.20			
	vs					
	Freshmen	69	10.45	.47	154	.641
	Sophomore	41	9.78	-.64	126	.524
	Junior	37	9.22	-1.35	122	.178
	Senior	43	8.30	-3.10	128	.002*
Awareness	Student Personnel Staff	87	10.21			
	vs					
	Freshmen	69	11.35	1.77	154	.080
	Sophomore	41	10.10	-.14	126	.889
	Junior	37	10.76	.66	122	.512
	Senior	43	9.30	-1.12	128	.263
Propriety	Student Personnel Staff	87	7.63			
	vs					
	Freshmen	69	7.77	.29	154	.770
	Sophomore	41	7.49	-.25	126	.806
	Junior	37	7.46	-.31	122	.761
	Senior	43	7.63	-.01	128	.994

*Significant at the 0.05 level.

Table IV-51 also reveals that student personnel staff members' perceptions of the scholarly and academic aspects of the university differed significantly from those of freshmen foreign students. But, the results show that no significant differences existed between the student personnel staff and each group of sophomore, junior, and senior foreign students in relation to their perceptions of the scholarly and academic environment of the university.

On the community scale, as can be seen in Table IV-51, the student personnel staff perceived it as significantly more friendly and cohesive than did senior foreign students. But, it was also indicated that no significant differences existed between the student personnel staff and freshmen, sophomore, and junior foreign students in their perceptions of the friendly and cohesive aspects of the university environment.

On the two other scales--awareness and propriety--of the CUES II, there were no significant differences between the compared groups as reported in Table IV-51 above. The null hypothesis is not rejected with the evidence available.

Hypothesis 4-4: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the academic areas of study categories of foreign undergraduate students.

In Table IV-52 comparisons were made between student personnel workers and each group of foreign undergraduate students who majored in engineering/physical sciences, behavioral/social sciences, arts/humanities, and life/biological sciences.

TABLE IV-52.--T-tests on comparisons between the student personnel staff and foreign undergraduate students by academic areas of study categories

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Student Personnel Staff	87	9.16			
	vs					
	Eng./physi. sci.	91	11.35	5.62	176	.000*
	Behav./soc. sci.	25	10.48	2.30	110	.023*
	Arts/humanities	16	9.06	-.14	101	.888
	Life/biol. sci.	13	10.31	1.55	98	.124
Scholarship	Student Personnel Staff	87	9.38			
	vs					
	Eng./physi. sci.	91	11.45	3.19	176	.002*
	Behav./soc. sci.	25	10.76	1.26	110	.210
	Arts/humanities	16	8.75	-.49	101	.627
	Life/biol. sci.	13	11.54	1.56	98	.123
Community	Student Personnel Staff	87	10.20			
	vs					
	Eng./physi. sci.	91	9.83	-.71	176	.482
	Behav./soc. sci.	25	9.12	-1.31	110	.192
	Arts/humanities	16	8.63	-1.70	101	.093
	Life/biol. sci.	13	8.46	-1.71	98	.090
Awareness	Student Personnel Staff	87	10.21			
	vs					
	Eng./physi. sci.	91	10.78	.92	176	.361
	Behav./soc. sci.	25	10.80	.61	110	.542
	Arts/humanities	16	9.81	-.35	101	.727
	Life/biol. sci.	13	10.69	.39	98	.698
Propriety	Student Personnel Staff	87	7.63			
	vs					
	Eng./physi. sci.	91	7.79	.38	176	.707
	Behav./soc. sci.	25	8.00	.51	110	.612
	Arts/humanities	16	7.19	-.54	101	.592
	Life/biol. sci.	13	6.38	-1.40	98	.164
Propriety	Student Personnel Staff	87	7.63			
	vs					
	Eng./physi. sci.	91	7.79	.38	176	.707
	Behav./soc. sci.	25	8.00	.51	110	.612
	Arts/humanities	16	7.19	-.54	101	.592
	Life/biol. sci.	13	6.38	-1.40	98	.164

*Significant at the 0.05 level.

The results reported in Table IV-52 show that significant differences existed between student personnel workers and engineering/physical sciences and behavioral/social sciences majoring foreign undergraduate students in relation to their perceptions of the practical and procedural environment of the university. But, no significant differences occurred between the student personnel workers and foreign undergraduate students who majored in arts/humanities and life/biological sciences in their perceptions of the practicality scale.

In perceiving the scholarly and academic aspects of the university environment, as can be seen in Table IV-52, the student personnel staff showed significant differences from only foreign undergraduate students majoring in engineering/physical sciences. Engineering/physical sciences foreign undergraduate students perceived the campus as being more intellectual and scholarly than did the student personnel staff.

On the other scales--community, awareness, and propriety--of the CUES II, the student personnel staff views were very similar to each of the comparing groups of foreign undergraduate students, which indicate no rejection of the null hypothesis.

Hypothesis 4-5: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the living arrangement categories of foreign undergraduate students.

Table IV-53 shows the results of comparing student personnel staff with the five living arrangements groups of foreign undergraduate

TABLE IV-53.--T-tests on comparisons between the student personnel staff and undergraduate students by living arrangement categories (with whom they live)

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Student Personnel Staff	87	9.16			
	vs					
	U.S. student	77	10.88	4.18	163	.000*
	Other foreign student	11	10.82	2.09	96	.039*
	Home country student	51	11.24	4.63	136	.000*
	Parents/relatives	16	10.31	1.73	101	.086
	Alone	26	10.69	2.65	111	.009*
Scholarship	Student Personnel Staff	87	9.38			
	vs					
	U.S. student	77	10.27	1.23	162	.219
	Other foreign student	11	11.00	1.09	96	.280
	Home country student	51	12.00	3.31	136	.001*
	Parents/relatives	16	11.69	1.82	101	.071
	Alone	26	10.69	1.26	111	.212
Community	Student Personnel Staff	87	10.20			
	vs					
	U.S. student	77	9.36	-1.63	162	.105
	Other foreign student	11	10.73	.49	96	.628
	Home country student	51	10.57	.62	136	.537
	Parents/relatives	16	8.75	-1.48	101	.141
	Alone	26	8.85	-1.69	101	.093
Awareness	Student Personnel Staff	87	10.21			
	vs					
	U.S. student	77	10.29	.12	162	.908
	Other foreign student	11	10.09	-.08	96	.933
	Home country student	51	11.12	1.31	136	.192
	Parents/relatives	16	11.69	1.30	101	.196
	Alone	26	9.65	-.57	111	.567
Propriety	Student Personnel Staff	87	7.63			
	vs					
	U.S. student	77	7.12	-.99	162	.323
	Other foreign student	11	7.36	-.28	96	.778
	Home country student	51	8.24	1.27	136	.205
	Parents/relatives	16	8.63	1.19	101	.238
	Alone	26	7.04	-.88	111	.381
Propriety	Student Personnel Staff	87	7.63			
	vs					
	U.S. student	77	7.12	-.99	162	.323
	Other foreign student	11	7.36	-.28	96	.778
	Home country student	51	8.24	1.27	136	.205
	Parents/relatives	16	8.63	1.19	101	.238
	Alone	26	7.04	-.88	111	.381
Propriety	Student Personnel Staff	87	7.63			
	vs					
	U.S. student	77	7.12	-.99	162	.323
	Other foreign student	11	7.36	-.28	96	.778
	Home country student	51	8.24	1.27	136	.205
	Parents/relatives	16	8.63	1.19	101	.238
	Alone	26	7.04	-.88	111	.381

*Significant at the 0.05 level.

students on each of the five scales. The results indicate that significant differences existed between most of the compared groups, except for the comparison between student personnel staff and foreign undergraduate students who lived with parents or relatives. In general, most subgroups of foreign undergraduate students, except one subgroup of students who lived with parents or relatives, perceived the campus as being more practical than did the student personnel staff.

In perceptions of the intellectual or academic aspects of the campus environment, as can be seen in Table IV-53, significant differences appeared only between the student personnel staff and foreign undergraduate students who lived with home country students. No significant differences occurred in the other compared groups on the scholarship scale. The evidence reported in Table IV-53 also shows that no significant differences existed between the compared groups in relation to their perceptions on the community, awareness, and propriety scales of the CUES II. On these scales, thus, the null hypothesis cannot be rejected.

Hypothesis 4-6: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the sponsorship categories of foreign undergraduate students.

In this investigation, the sponsorship for the foreign students were described as : (1) working on and off campus, (2) parents/relatives, (3) home country government, (4) M.S.U. scholarship,

(5) foundations, (6) other. But, the groups of foreign students who were supported by working, foundations, and other sources were discarded and not compared with the student personnel staff because the sample size of these groups was too small.

The results reported in Table IV-54 indicate that the student personnel staff perceived the campus as being significantly less practical than did the foreign undergraduate students who were supported by parents/relatives, home country government, and M.S.U. scholarship. Also, student personnel staff viewed the campus as being significantly less academic and scholarly than did the foreign students supported by parents or relatives and home country government. However, no significant differences existed in the perceptions of the academic and scholarly environment of the campus between the student personnel staff and foreign undergraduate students supported by M.S.U. scholarship.

According to Table IV-54, however, no significant differences appeared on the three scales--community, awareness, and propriety--of the CUES II when comparing the student personnel staff with the foreign undergraduate students who have different sponsorships. On these scales, the evidence does not support a rejection of the null hypothesis.

Hypothesis 4-7: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the English ability categories of foreign undergraduate students.

Table IV-55 shows the results of comparing the student personnel staff with the two English ability groups of foreign

TABLE IV-54.--T-tests on comparisons between the student personnel staff and foreign undergraduate students by sponsorship categories

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Student Personnel Staff	87	9.16			
	vs					
	Working	6				
	Parents/relatives	102	10.69	3.81	187	.000*
	Home country government	60	11.40	5.26	145	.000*
	M.S.U. scholarship	14	11.71	3.72	99	.000*
	Foundation	2				
Scholarship	Student Personnel Staff	87	9.38			
	vs					
	Working	6				
	Parents/relatives	102	10.71	2.01	187	.046*
	Home country government	60	12.05	3.58	145	.000*
	M.S.U. scholarship	14	10.86	1.10	99	.273
	Foundation	2				
Community	Student Personnel Staff	87	10.20			
	vs					
	Working	6				
	Parents/relatives	102	9.08	-2.26	187	.898
	Home country government	60	9.75	-.74	145	.459
	M.S.U. scholarship	14	11.57	1.40	99	.164
	Foundation	2				
Awareness	Student Personnel Staff	87	10.21			
	vs					
	Working	6				
	Parents/relatives	102	10.13	-.13	187	.898
	Home country government	60	11.12	1.39	145	.167
	M.S.U. scholarship	14	10.29	.07	99	.947
	Foundation	2				
Propriety	Student Personnel Staff	87	7.63			
	vs					
	Working	6				
	Parents/relatives	102	7.12	-1.22	187	.222
	Home country government	60	8.13	1.13	145	.262
	M.S.U. scholarship	14	7.36	-.31	99	.754
	Foundation	2				
	Other	6				

*Significant at the 0.05 level.

TABLE IV-55.--T-tests on comparisons between the student personnel staff and foreign undergraduate students by English ability categories

Scale	Group	Num- ber	Mean	T Value	D.F.	p
Practicality	Student Personnel Staff	87	9.16			
	vs					
	Good	110	10.61	3.92	195	.000*
	Average	74	11.25	4.69	159	.000*
	Poor	6				
Scholarship	Student Personnel Staff	87	9.38			
	vs					
	Good	110	10.16	1.18	195	.240
	Average	74	12.05	3.99	159	.000*
	Poor	6				
Community	Student Personnel Staff	87	10.20			
	vs					
	Good	110	9.50	-1.45	195	.149
	Average	74	9.67	- .95	159	.344
	Poor	6				
Awareness	Student Personnel Staff	87	10.21			
	vs					
	Good	110	10.59	.64	195	.525
	Average	74	10.27	.10	159	.923
	Poor	6				
Propriety	Student Personnel Staff	87	7.63			
	vs					
	Good	110	7.02	-1.44	195	.152
	Average	74	8.40	1.77	159	.078
	Poor	6				

*Significant at the 0.05 level

undergraduate students on each of the five scales of the CUES II. The two English ability groups of the students are the "good" English ability group and the "average" English ability group. The group of foreign undergraduate students who evaluated themselves as having "poor" English ability was discarded and not compared with the student personnel staff because the sample size was extremely small.

Comparing the student personnel staff with the "good" and the "average" English ability group of foreign students respectively, the student personnel staff perceived the campus as being significantly less practical than did both the groups of foreign undergraduate students. Also, comparing the student personnel staff with both the English ability groups of foreign students, the student personnel staff viewed the campus environment as being significantly less academic and scholarly than did the "average" English ability students. But, no significant differences existed between the student personnel staff and the "good" English ability student group on the scholarship scale.

The results shown in Table IV-55 indicate that no significant differences existed on the three scales--community, awareness, and propriety--of the CUES II between the student personnel staff and both the English ability groups of foreign students. On these scales, thus, the evidence does not support a rejection of the null hypothesis.

Hypothesis 4-8: There will be no significant differences in the perceptions of the selected characteristics of the campus environment when comparing student personnel staff with the country type categories of foreign undergraduate students.

Foreign undergraduate students' home countries were divided into five categories on the basis of the World Bank's classification: (1) Low-income countries, (2) Middle-income countries, (3) High-income industrialized countries, (4) Capital-surplus oil exporters, (5) Centrally-planned economics. In this analysis, however, the group of students from centrally-planned economics was discarded because the sample size (2) was extremely small.

Table IV-56 shows the test results of the comparisons between the student personnel staff and the country type groups of foreign undergraduate students. In perceiving the practical aspects of the campus, the student personnel staff showed significant differences from the foreign students who were from middle-income countries and who were from capital-surplus oil exporters. But, as can be seen in Table IV-56, no significant differences appeared on the practicality scale when comparing the student personnel staff with the students from low-income countries and high-income countries.

On the academic and scholarly aspects of the university, as reported in Table IV-56, student personnel staff perceptions differed significantly from those of middle-income country students and capital-surplus oil exporters, but did not differ significantly from those of low-income countries students and high-income industrialized countries students. Also, Table IV-56 indicates that no significant differences existed on the community, awareness, and propriety scales of the CUES II when comparing student personnel staff with the country type groups of foreign undergraduate students. On these scales, the null hypothesis cannot be rejected.

TABLE IV-56.--T-tests on comparisons between the student personnel staff and foreign undergraduate students by home country type categories

Scale	Group	Number	Mean	T Value	D.F.	p
Practicality	Student Personnel Staff vs	87	9.16			
	Low-income countries	10	10.40	1.61	95	.111
	Middle-income countries	107	11.47	6.01	192	.000*
	Industrialized countries	45	9.44	.59	130	.559
	Capital-surplus oil exporters	26	10.85	3.06	111	.003*
	Centrally-Planned economies	2				
Scholarship	Student Personnel Staff vs	87	9.38			
	Low-income countries	10	10.30	.60	95	.553
	Middle-income countries	107	11.62	3.53	192	.001*
	Industrialized countries	45	9.29	-.10	130	.917
	Capital-surplus oil exporters	26	11.81	2.40	111	.018*
	Centrally-planned economies	2				
Community	Student Personnel Staff vs	87	10.20			
	Low-income countries	10	9.60	-.51	95	.614
	Middle-income countries	107	9.67	-1.05	192	.294
	Industrialized countries	45	9.69	1.04	130	.396
	Capital-surplus oil exporters	26	9.08	-1.48	111	.143
	Centrally-planned economies	2				

TABLE IV-56.--Continued

Scale	Group	Num- ber	Mean	T Value	D.F.	p
Aware- ness	Student Personnel Staff	87	10.21			
	vs					
	Low-income countries	10	11.00	.56	95	.574
	Middle-income countries	107	10.90	1.21	192	.229
	Industrialized countries	45	9.53	-.85	130	.396
	Capital-surplus oil exporters	26	10.42	.22	111	.827
Pro- priety	Centrally-planned economies	2				
	Student Personnel Staff	87	7.63			
	vs					
	Low-income countries	10	5.90	-1.73	95	.087
	Middle-income countries	107	7.79	.36	192	.720
	Industrialized countries	45	7.58	-.10	130	.923
	Capital-surplus oil exporters	26	7.73	.15	111	.878
	Centrally-planned economies	2				

*Significant at the 0.05 level.

To summarize the findings of this study, the most significant differences in perceptions of the university environment between the compared groups were on the practicality and scholarship scales, while the least differences were on the community, awareness, and propriety scales. Although there were some subgroups exhibiting no differences in perceptions, most of the foreign undergraduate students tended to view the campus as being more practical than did the faculty and student personnel staff. Likewise, a majority of the students tended to perceive the university environment as being more academic and scholarly than did the faculty and student personnel staff.

While there were two subgroups exhibiting significant differences in perceptions on the community scale, most of the foreign undergraduate students were in close agreement with the faculty and student personnel staff in their perceptions of community, awareness, and propriety dimensions of the university climate.

Finally, it was found that the campus environment was perceived somewhat differently between the students' subgroups as identified on the basis of the variables of class level, country type, English ability, and age. The foreign undergraduate students' perceptions of the campus climate seemed to be primarily affected by the above four variables.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter includes a summary of the purpose of the study, method utilized, and collected findings. Conclusions are stated on the basis of the results obtained in this study. Finally, recommendations for application and further research are suggested.

Summary of Purpose and Method

Purpose

This analytical-descriptive study was designed to examine whether foreign undergraduate students (and their various subgroups) differ from their teaching faculty and student personnel staff in their perceptions of the Michigan State University campus environment, and to determine whether foreign undergraduate students' perceptions differ between the identified subgroups on the basis of their personal variables.

Four comparative frameworks of objectives, in which twenty-five hypotheses were included, were provided to fulfill the purposes of the study:

1. Comparisons of the total group of foreign undergraduate students with the undergraduate teaching faculty and student personnel staff.

2. Comparisons of the subgroups of foreign undergraduate students.
3. Comparisons of the undergraduate teaching faculty with the subgroups of foreign undergraduate students.
4. Comparisons of the student personnel staff with the subgroups of foreign undergraduate students.

Design

The environmental perceptions of the three groups were measured with the five basic scales of the second edition of the College and University Environment Scales (CUES II). These scales were practicality, scholarship, community, awareness, and propriety. In addition, the perceptions of foreign undergraduate students were analyzed on the basis of their personal demographic variables of age, sex, class level, academic areas of study, living arrangement (with whom they live), financial sponsorship, self-rated English ability, and home country type.

Sampling

A total of 272 foreign undergraduate students enrolled at M.S.U. in the Spring Term of 1982 were invited to participate in this study.

The teaching faculty sample was selected from among full-time faculty members whose teaching responsibilities included teaching undergraduate students and who had been employed at the school and colleges in which foreign undergraduate students were enrolled at the time of this study. Full-time faculty members were defined

as those whose ranks were assistant professor, associate professor, or professor. The faculty members teaching undergraduate students were defined as those who were assigned to teach the academic courses of the 399 level and below. Thus, full-time undergraduate teaching faculty members were determined to be those who were identified as full-time faculty members and undergraduate teaching faculty members using the faculty roster in the Michigan State University Publication: 1981-82 Academic Programs and the course schedule books (Fall, 1981; Winter, 1982; and Spring, 1982). Of the 1,337 full-time undergraduate teaching faculty members identified, 10 percent, or 134 faculty members, were proportionately selected at random from each college.

All full-time professional members of the student personnel staff, with the exception of the Vice and Assistant Vice President for Student Affairs and Services, and the staff members working in the Department of Public Safety, were asked to participate in the study. This group included 126 subjects in all.

Data Collection

Data for this study were collected during the Spring Term of 1982. Of the 272 foreign undergraduate students sampled, 190, or 69.9 percent, returned a completed and usable questionnaire. Of the 134 undergraduate teaching faculty sampled, eighty-six, or 64.2 percent, responded. Of the 126 members of the student personnel staff sampled, eighty-seven, or 69.0 percent, responded.

Analysis

Scoring for the collected data was done by counting the number of items each respondent answered in the keyed direction. Then, the multivariate and univariate analysis of variance tests were utilized to determine the differences in the perceptions of the three groups on the five environment scales. The same procedure was also used with the comparisons between the subgroups of foreign undergraduate students. In comparisons of the subgroups of foreign undergraduate students with the total groups of teaching faculty and student personnel staff, the t-test was employed on the basis of the group means. Each of the comparisons were tested at 0.05 significance level.

Summary of Findings

The major findings of this study are summarized in the order of the four stated frameworks of comparisons.

Comparisons of the Total Group of Foreign Undergraduate Students with Undergraduate Teaching Faculty and Student Personnel Staff

1. There were significant differences in the perceptions of some dimensions of the campus environment between the total groups of foreign undergraduate students and the faculty, and student personnel staff:

- a. Perceptions of the students were higher than those of the faculty on the practicality scale.

- b. Perceptions of the students were higher than those of the student personnel staff on the practicality and scholarship scales.

2. No significant differences existed on the community, awareness, and propriety scales between the total group of foreign undergraduate students and the faculty, and student personnel staff.

Comparisons of the Subgroups of
Foreign Undergraduate Students

1. There were significant differences in the perceptions of some aspects of the campus environment between the subgroups of foreign undergraduate students, based on their personal variables:

- a. Perceptions of the 18-23 age group were higher than those of the 24-38 age group on the practicality scale.
- b. Perceptions of freshmen, sophomores, and juniors were all higher than those of seniors on the practicality, scholarship, and community scales, but on the awareness scale only freshmen perceived higher than did seniors.
- c. Perceptions of "average" English ability students were higher than those of "good" ability students on the scholarship and propriety scales.
- d. Perceptions of middle-income country students were higher than those of low-income and high-income industrialized country students on the

practicality scale, but on the perceptions of the scholarship scale middle-income country students were higher than high-income industrialized country students only.

2. There were no significant differences in the perceptions of the campus environment between and/or among the subgroups of the students:

- a. Female and male groups
- b. Freshman, sophomores, and juniors in class level.
- c. Five groups classified by "with whom they live"--U.S. students, other foreign students, home country students, parents/relatives, and alone.
- d. Four groups classified by academic areas of study--engineering/physical sciences, behavioral/social sciences, arts/humanities, and life/biological sciences.
- f. Three groups classified by financial sponsorship--parents, home country government, and M.S.U. scholarship.
- g. Capital-surplus oil exporters students, and low-income, middle-income, and high-income industrialized country students, as classified according to country type.

Comparisons of Undergraduate Teaching Faculty with the Subgroups of Foreign Undergraduate Students

1. There were significant differences in the perceptions of some aspects of the university environment between the subgroups of foreign undergraduate students and their teaching faculty.

Compared with the total faculty's perceptions:

- a. Perceptions of the 18-23 age group students were higher on the practicality and scholarship scales. But, the 24-38 age group students' perceptions were lower on the community scale.
- b. Female and male students' perceptions were higher on the practicality and scholarship scales.
- c. Perceptions of freshmen, sophomores, juniors, and seniors, classified by class level, were higher on the practicality scale, and freshmen, sophomores, and juniors' perceptions were also higher on the scholarship scale. On the community scale, however, seniors' perceptions were lower.
- d. Perceptions of engineering/physical science, behavioral/social science, and life/biological science majors, as classified by academic areas of study, were higher on the practicality scale, but on the scholarship scale the perceptions of engineering/physical science majors were higher.

- e. Perceptions of the students who lived with U.S. students, other foreign students, home country students, parents/relatives, and alone, categorized by their living arrangements, were all higher on the practicality scale, but on the scholarship scale the perceptions of those who lived with home country students and parents/relatives were higher.
- f. Perceptions of the students who were supported by parents, home country government, and M.S.U. scholarship were higher on the practicality scale, but on the scholarship scale the perceptions of the students who were supported by parents and home country government were higher.
- g. Perceptions of the "good" and "average" ability students in English were all higher on the practicality scale, but on the scholarship scale the perceptions of "average" ability students were higher.
- h. Perceptions of low-income, middle-income, high-income industrialized countries, and capital-surplus oil exporters' students were all higher on the practicality scale, but on the scholarship scale the perceptions of middle-income countries and capital-surplus oil exporters' students were higher.

2. There were no significant differences in the perceptions of any of the campus environment, as measured by the five scales, between the teaching faculty and arts/humanities majors, classified according to academic areas of study.

Comparisons of Student Personnel
Staff with the Subgroups of For-
eign Undergraduate Students

1. There were significant differences in the perceptions of some aspects of the university environment between the subgroups of foreign undergraduate students and student personnel staff. Compared with the perceptions of the total student personnel staff:

- a. The 18-23 age group students' perceptions were higher on the practicality and scholarship scales. On the community scale, however, the 24-34 age group students' perceptions were lower.
- b. Female and male students' perceptions were higher on the practicality and scholarship scales.
- c. Freshmen and sophomores' perceptions were higher on the practicality scale, and freshmen's perceptions were higher on the scholarship scale. On the community scale, the student personnel staff's perceptions were higher than those of seniors'.
- d. Perceptions of engineering/physical sciences and behavioral/social sciences majors were higher on the practicality scale, but on the scholarship

scale, only engineering/physical science majors' perceptions were higher.

- e. Perceptions of the students who lived with U.S. students, home country students, other country students, and alone, except the students who lived with parents/relatives, were higher on the practicality scale, but on the scholarship scale, only the students' perceptions who lived with home country students were higher.
- f. Perceptions of the students who were supported by parents, home country government, and M.S.U. scholarship were higher on the practicality scale, but on the scholarship scale, only the perceptions of the students supported by parents and home country government were higher.
- g. Perceptions of the "good" and "average" ability students in English were all higher on the practicality scale, but on the scholarship scale only the perceptions of "average" ability students were higher.
- h. Perceptions of middle-income countries' and capital-surplus oil exporters' students were higher on the practicality and scholarship scales.

2. There were no significant differences in the perceptions of the campus environment, as measured by the five environment scales, between:

- a. The student personnel staff and juniors, classified by class level.
- b. The student personnel staff and each of arts/humanities majors and life/biological sciences majors, as classified according to academic areas of study.
- c. The student personnel staff and the students who lived with parents/relatives.
- d. The student personnel staff and each of the student groups from low-income countries and high-income industrialized countries, as classified according to country type.

Conclusions

The findings of the study led to the following conclusions:

1. Between the foreign undergraduate students and their teaching faculty, the most significant differences of perceptions of the campus environment are on practicality and scholarship dimensions, while the least significant differences are on community, awareness, and propriety dimensions.
 - a. Foreign undergraduate students tend to view the campus as being more practical, procedural, and bureaucratic than do their teaching faculty.
 - b. A majority of foreign undergraduate students tend to regard the campus as being more academic and scholarly than do their teaching faculty.

Especially, such differences in perceptions are notable from the younger age students, lower class students, engineering/physical science majors, average English-ability students, the students supported by parents and home country government, the students who live with parents/relatives and home country students, and the students from middle-income countries and capital-surplus oil exporters.

- c. While there are two subgroups exhibiting significant differences, a majority of foreign undergraduate students tend to share much the similar views with their teaching faculty on community dimension of the campus, which suggests an environment that is friendly, cohesive, group-oriented, and supportive.
- d. When dealing with the awareness dimension, which describes the personal, poetic, and political environment, and the propriety dimension, which suggests a polite and considerate environment, foreign undergraduate students and their teaching faculty are in much agreement in their view of these aspects of the campus climate.

2. Between the foreign undergraduate students and student personnel staff, the most significant differences of perceptions of the campus environment are on practicality and scholarship

dimensions, while the least differences are on community, awareness, and propriety dimensions.

- a. Foreign undergraduate students tend to view the campus as being more practical, procedural, and bureaucratic than do the student personnel staff.
- b. Foreign undergraduate students tend to regard the campus as being more academic and scholarly than do the student personnel staff. Especially, such differences in perceptions are notable from the younger students, freshmen, engineering/physical science majors, the students with average English ability, the students supported by parents on their home country governments, the students who live with home country students, and the students from middle-income countries and capital-surplus oil exporters.
- c. While there are two subgroups exhibiting significant differences, a majority of foreign undergraduate students tend to share a much similar view to the student personnel staff on community dimension of the campus environment.
- d. When dealing with awareness and propriety dimensions of the campus environment, foreign undergraduate students are in close agreement with the student personnel staff.

3. Of the eight variables for foreign undergraduate students, the prime variables affecting the students' different perceptions of the campus environment are:

- a. Class level
- b. Student's home country type
- c. English ability
- d. Age

Recommendations

This study has several limitations. The first is that the sample size (especially for the undergraduate teaching faculty) is small for generalization of the findings of this study. The second major limitation is that it is restricted to only five dimensions of the complex university environment.

With this in mind, however, the findings and the conclusions of this study imply some recommendations to be applied. The results of the study also point to a need for an extension of research in certain related areas. In this section, therefore, the following recommendations are offered.

Recommendations for Application

1. It is recommended that the findings of the study be made available to appropriate administrative officials for their review. Basically, this kind of study contains value in information gathered for institutional self-evaluation. Do foreign undergraduate students' perceptions of the university coincide with the university's stated

aims and objectives in admitting them? Do the various policies and programs provided by the university for foreign undergraduate students meet their educational needs in terms of their preceptions of the campus environment? These data need to be fully discussed on the part of administrative officials who make policies and decisions for foreign undergraduate students, because their efforts are directed toward assisting in the implementation of university-wide objectives, policies, and programs which could maximize the benefits of foreign undergraduate students, as well as the institution.

2. The findings of this study indicate that the most significant differences in perceptions of the campus environment are on practicality and scholarship aspects, while the least differences are on community, awareness, and propriety aspects of the university. Although any of the five environmental dimensions is important for the foreign undergraduate students' educational development and growth, limited resources should be directed toward areas with the widest differences in perceptions when developing programs and services for the students, because more students would be helped if programs and services for the students designed with more emphases on practicality and scholarship dimensions rather than with community, awareness, and propriety dimensions. For example, the content of orientation programs and services could be structured with more weight on practicality and scholarship aspects in terms of the intended objectives of the university in admitting foreign undergraduate students.

3. The findings of this study also reveal that particular subgroups of foreign undergraduate students perceive the campus environment differently from their teaching faculty and student personnel staff. These findings could then be used by the university staff at M.S.U. to design programs and services differently for different types of foreign undergraduate students. Based on these results, for example, emphasis might be given to involving the students from middle-income countries and capital-surplus oil exporters in programs and services designed to deal with scholarship dimensions of the university climate.

4. The data of this study could have the potential benefits for foreign undergraduate students, as well as the university staff in understanding and communicating one another. It is also hoped that the data of this study could be utilized for the education of student personnel workers who are going to work for and with foreign undergraduate students.

Recommendations for Further Study

Based on information obtained in the course of this study, the following subjects are recommended for further study:

1. According to the findings of this study, the most significant differences of the perceptions of the campus environment occur on practicality and scholarship dimensions, while the least differences occur on community, awareness, and propriety dimensions. A study to determine the causes of these differences needs to be undertaken.

2. A study is needed to compare the perceptions of graduate foreign students, faculty, and student personnel staff in relation to the university environment. It is assumed that foreign graduate students' perceptions of the campus environment are different from those of foreign undergraduate students.

3. In order to determine whether foreign undergraduate (or graduate) students' perceptions of the campus environment differ from institution to institution, a study is needed to compare the perceptions of foreign undergraduate (or graduate) students enrolled at different institutions.

4. It would be useful to compare the environmental perceptions of campus between the foreign undergraduate (or graduate) students and American students.

APPENDICES

APPENDIX A

INITIAL COVER LETTER OF THE RESEARCHER



April 20, 1982


Dear

My name is Hyung Kim and I am a graduate student of College of Education, MSU. Being approved by the doctoral committee and supported by the Foreign Student Office, I am presently working on my dissertation. The thesis is intended to find out whether undergraduate foreign students and university staff including faculty members at MSU perceive the selected aspects of campus characteristics in a similar way or dissimilar way in the hope that the results may provide them with some useful information for communicating more effectively.

I am now writing this letter to invite you to participate in the research by completing the enclosed questionnaire. It is estimated that around 15 minutes are needed to complete this questionnaire. All the data collected will be treated with the strictest confidentiality and individual names are not required. The data will be only coded for statistical analysis and the number on the questionnaire is also for coding only.

May I now take this opportunity to thank you in advance for your kind cooperation and will look forward to receiving the questionnaire back from you soon. Your help is essential and will be most appreciated. If you would like to know the results of this study, please leave your name and address when you return the questionnaire to me.

Sincerely,


Hyung K. Kim

Enclosure: Questionnaire

APPENDIX B

MEMO TO THE INVITED FOREIGN UNDERGRADUATE STUDENTS
FROM FOREIGN STUDENT ADVISOR



April 22, 1982

Dear Student:

I hope you will find time in your busy schedule to respond to Hyung Kim's survey. We hope his results will give us more information that will in the future improve communication between M.S.U faculty, staff and undergraduate students from other countries.

Your name and address only appear on this envelope and we continue to maintain this information as privileged material.

Sincerely,

A handwritten signature in cursive script, appearing to read "August G. Benson".

August G. Benson, Director
Office for Foreign Students and Scholars

A handwritten signature in cursive script, appearing to read "Margaret A. Miller".

Margaret A. Miller
Foreign Student Counselor

MAM/scm

Enclosure

APPENDIX C

MEMO TO THE INVITED UNDERGRADUATE TEACHING FACULTY
FROM FOREIGN STUDENT ADVISOR



April 29, 1982

Dear Faculty:

I hope you will find time in your busy schedule to respond to Hyung Kim's survey. We hope his results will give us more information that can be used in special programming or as information that will improve our awareness of communication problems between M.S.U. faculty, staff and undergraduate students from other countries.

Sincerely,

August G. Benson, Director
Office for Foreign Students and Scholars

Margaret A. Miller
Foreign Student Counselor

MAM/scm

APPENDIX D

MEMO TO THE INVITED STUDENT PERSONNEL STAFF FROM
ASSISTANT VICE PRESIDENT FOR
STUDENT AFFAIRS AND SERVICES

MICHIGAN STATE UNIVERSITY

DIVISION OF STUDENT AFFAIRS AND SERVICES
STUDENT LIFE
STUDENT SERVICES BUILDING

EAST LANSING • MICHIGAN • 48824

May 6, 1982

TO: Selected Student Affairs and Services Staff Members
FROM: James D. Studer, Assistant Vice President *99A*
for Student Affairs and Services
SUBJECT: Help with Dissertation

Attached is a request from Hyung Kim asking that you complete a questionnaire about certain campus characteristics and the environment. Mr. Kim is seeking information about our campus environment and what effect it has on undergraduate foreign students.

I urge you to take 15 minutes of your time to complete the instrument. When his study is finished, Mr. Kim will be sharing the results with us. We hope that the results will be useful to us in our work with foreign students.

Thank you for your cooperation.

JDS/lw

Enc.

APPENDIX E

FOLLOW-UP LETTER OF THE RESEARCHER

MICHIGAN STATE UNIVERSITY

COLLEGE OF EDUCATION
DEPARTMENT OF ADMINISTRATION AND HIGHER EDUCATION
ERICKSON HALL

EAST LANSING • MICHIGAN • 48824

May , 1982

Dear

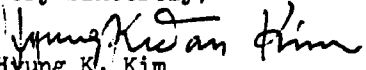
On April 20, 1982 I sent you a questionnaire, College and University Environment Scale, along with my covering letter and Foreign Student Office Director's covering letter, and a stamped, self-addressed envelope. I had hoped that most of these questionnaires would be returned to me before May 8, 1982.

I am happy that a number of the questionnaires have already been returned to me. However, all the questionnaires have not been returned. If you have forgotten to mail in yours, this is just a reminder to do so, since your response is crucial for the successful completion of the study. It is critically important that these questionnaires be returned shortly. This would facilitate my completing the dissertation and also allow me to return my country, Korea at the earliest possible date.

I realize that you are very busy at this time. However, may I impose upon your good graces and request you to spare a distressed brother in academia by taking a few minutes of your valuable time right now to complete and return the questionnaire to me.

I really do appreciate your cooperation and participation in this study. If you have already sent the questionnaire in the mail, please kindly ignore this letter and questionnaire, accept my apology.

Very Sincerely,


Hyung K. Kim
1110 E. University Village
East Lansing, Mi. 48823

Enclosure: Questionnaire

APPENDIX F

PERSONAL DATA FORM FOR FOREIGN
UNDERGRADUATE STUDENTS

PERSONAL DATA FORM FOR UNDERGRADUATE FOREIGN STUDENTS

Please answer the following items necessary for the statistical processing.

1. What is your age? ____ years.
2. What is your sex? Circle one. 1. Female 2. Male
3. What is your present academic status? Circle one.
1. Freshman 2. Sophomore 3. Junior 4. Senior
4. Please identify your area of study. Circle one.
1. Engineering/physical sciences 2. Behavioral/social sciences
3. Arts/humanities 4. Life/biological sciences
5. Other
5. Whom do you live with? Circle one.
1. U.S. student(s) 2. Other foreign student(s)
3. Home country student(s) 4. Parents/spouse (children)
5. Alone 6. Others
6. Please indicate your primary financial source now. Circle one.
1. Working on and off campus 2. Parents and relatives
3. Home country government or organization 4. MSU scholarship
5. U.S. or international organization/foundation 6. Others
7. How would you describe your ability in English? Please circle one.
1. Good 2. Average 3. Poor
8. Please identify your home country. Due to the limited space, the list includes only those countries with large numbers of students at M.S.U. Circle one number.

1. Malaysia	5. Turkey	9. Tunisia	14. Canada
2. Japan	6. Iran	10. Venezuela	15. England
3. India	7. Saudi Arabia	11. Ecuador	16. Finland
4. Sri Lanka	8. Nigeria	12. Colombia	17. Other
		13. Mexico	

Please specify

APPENDIX G

QUESTIONNAIRE

COLLEGE AND UNIVERSITY ENVIRONMENT SCALES

(From College and University Environment Scales. 2nd edition. Copyright ©1978 by C. Robert Pace. All rights reserved. Reproduced by permission of Educational Testing Service, the publisher.)

DIRECTIONS: You are asked to react whether you think each of the numbered statements is generally True (more nearly true than false) or False (more nearly false than true) as applied to the MSU campus. Please Circle T or F on the left of each statement. This questionnaire is more like an opinion poll. Therefore, please do not skip any items, even though you may not think about yourself in exactly the way the question is stated.

- T F 1. Students almost always wait to be called on before speaking in class.
- T F 2. The big college events draw a lot of student enthusiasm and support.
- T F 3. There is a recognized group of student leaders on this campus.
- T F 4. Frequent tests are given in most courses.
- F F 5. Students take a great deal of pride in their personal appearance.
- T F 6. Education here tends to make students more practical and realistic.
- T F 7. The professors regularly check up on the students to make sure that assignments are being carried out properly and on time.
- T F 8. It's important socially here to be in the right club or group.
- T F 9. Student pep rallies, parades, dances, carnivals, or demonstrations occur very rarely.

- T F 10. Anyone who knows the right people in the faculty or administration can get a better break here.
- T F 11. The professors really push the students' capacities to the limit.
- T F 12. Most of the professors are dedicated scholars in their fields.
- T F 13. Most courses require intensive study and preparation out of class.
- T F 14. Students set high standards of achievement for themselves.
- T F 15. Class discussions are typically vigorous and intense.
- T F 16. A lecture by an outstanding scientist would be poorly attended.
- T F 17. Careful reasoning and clear logic are valued most highly in grading student papers, reports, or discussions.
- T F 18. It is fairly easy to pass most courses without working very hard.
- T F 19. The school is outstanding for the emphasis and support it gives to pure scholarship and basic research.
- T F 20. Standards set by the professors are not particularly hard to achieve.
- T F 21. It is easy to take clear notes in most courses.
- T F 22. The school helps everyone get acquainted.
- T F 23. Students often run errands or do other personal services for the faculty.
- T F 24. The history and traditions of the college are strongly emphasized.
- T F 25. The professors go out of their way to help you.
- T F 26. There is a great deal of borrowing and sharing among the students.
- T F 27. When students run a project or put on a show everybody knows about it.

- T F 28. Many upperclassmen play an active role in helping new students adjust to campus life.
- T F 29. Students exert considerable pressure on one another to live up to the expected codes of conduct.
- T F 30. Graduation is a pretty matter-of-fact, unemotional event.
- T F 31. Channels for expressing students' complaints are really accessible.
- T F 32. Students are encouraged to take an active part in social reforms or political programs.
- T F 33. Students are actively concerned about national and international affairs.
- T F 34. There are a good many colorful and controversial figures on the faculty.
- T F 35. There is considerable interest in the analysis of value systems, and the relativity of societies and ethics.
- T F 36. Public debates are held frequently.
- T F 37. A controversial speaker always stirs up a lot of student discussion.
- T F 38. There are many facilities and opportunities for individual creative activity.
- T F 39. There is a lot of interest here in poetry, music, painting, sculpture, architecture, etc.
- T F 40. Concerts and art exhibits always draw big crowds of students.
- T F 41. Students ask permission before deviating from common policies or practices.
- T F 42. Most student rooms are pretty messy.
- T F 43. People here are always trying to win an argument.
- T F 44. Drinking and late parties are generally tolerated, despite regulations.
- T F 45. Students occasionally plot some sort of escapade or rebellion.
- T F 46. Many students drive sports cars.

- T F 47. Students frequently do things on the spur of the moment.
- T F 48. Student publications never lampoon dignified people or institutions.
- T F 49. The person who is always trying to "help out" is likely to be regarded as a nuisance.
- T F 50. Students are conscientious about taking good care of school property.
- T F 51. The important people at this school expect others to show proper respect for them.
- T F 52. Student elections generate a lot of intense campaigning and strong feeling.
- T F 53. Everyone has a lot of fun at this school.
- T F 54. In many classes students have an assigned seat.
- T F 55. Student organizations are closely supervised to guard against mistakes.
- T F 56. Many students try to pattern themselves after people they admire.
- T F 57. New fads and phrases are continually springing up among the students.
- T F 58. Students must have a written excuse for absence from class.
- T F 59. The college offers many really practical courses such as typing, report writing, etc.
- T F 60. Student rooms are more likely to be decorated with pennants and pin-ups than with paintings, carvings, mobiles, etc.
- T F 61. Most of the professors are very thorough teachers and really probe into the fundamentals of their subjects.
- T F 62. Most courses are real intellectual challenges.
- T F 63. Students put a lot of energy into everything they do in class and out.
- T F 64. Course offerings and faculty in the natural sciences are outstanding.
- T F 65. Courses, examinations, and readings are frequently revised.

- T F 66. Personality, pull, and bluff get students through many courses.
- T F 67. There is very little studying here over the weekends.
- T F 68. There is a lot of interest in the philosophy and methods of science.
- T F 69. People around here seem to thrive on difficulty--the tougher things get, the harder they work.
- T F 70. Students are very serious and purposeful about their work.
- T F 71. This school has a reputation for being very friendly.
- T F 72. All undergraduates must live in university approved housing.
- T F 73. Instructors clearly explain the goals and purposes of their courses.
- T F 74. Students have many opportunities to develop skill in organizing and directing the work of others.
- T F 75. Most of the faculty are not interested in students' personal problems.
- T F 76. Students quickly learn what is done and not done on this campus.
- T F 77. It's easy to get a group together for card games, singing, going to the movies, etc.
- T F 78. Students commonly share their problems.
- T F 79. Faculty members rarely or never call students by their first names.
- T F 80. There is a lot of group spirit.
- T F 81. Students are encouraged to criticize administrative policies and teaching practices.
- T F 82. The expression of strong personal belief or conviction is pretty rare around here.
- T F 83. Many students here develop a strong sense of responsibility about their role in contemporary social and political life.

- T F 84. There are a number of prominent faculty members who play a significant role in national or local politics.
- T F 85. There would be a capacity audience for a lecture by an outstanding philosopher or theologian.
- T F 86. Course offerings and faculty in social sciences are outstanding.
- T F 87. Many famous people are brought to the campus for lectures, concerts, student discussions, etc.
- T F 88. The school offers many opportunities for students to understand and criticize important works of art, music, and drama.
- T F 89. Special museums or collections are important possessions of the college.
- T F 90. Modern art and music get little attention here.
- T F 91. Students are expected to report any violations of rules and regulations.
- T F 92. Student parties are colorful and lively.
- T F 93. There always seem to be a lot of little quarrels going on.
- T F 94. Students rarely get drunk and disorderly.
- T F 95. Most students show a good deal of caution and self-control in their behavior.
- T F 96. Bermuda shorts, pin-up pictures, etc., are common on this campus.
- T F 97. Students pay little attention to rules and regulations.
- T F 98. Dormitory raids, water fights, and other student pranks would be unthinkable.
- T F 99. Many students seem to expect other people to adapt to them rather than trying to adapt themselves to others.
- T F 100. Rough games and contact sports are an important part of intramural athletics.

THANK YOU VERY MUCH FOR YOUR COOPERATION.

APPENDIX H

MEAN SCORES AND STANDARD DEVIATIONS FOR EACH ITEM OF THE
FIVE SCALES BY FOREIGN UNDERGRADUATE STUDENTS,
UNDERGRADUATE TEACHING FACULTY, AND
STUDENT PERSONNEL STAFF

TABLE H-1.--Mean scores and standard deviations for each item of the five scales by foreign undergraduate students (N = 190), selected undergraduate teaching faculty (N = 86), and student personnel staff (N = 87)

Scale	Item No.	Foreign Students		Teaching Faculty		Personnel Staff	
		X	S.D.	X	S.D.	X	S.D.
Practi- cality	1	.484	.501	.605	.492	.483	.503
	2	.732	.444	.581	.496	.621	.488
	3	.353	.479	.244	.432	.379	.488
	4	.816	.389	.361	.483	.345	.478
	5	.574	.496	.395	.492	.598	.493
	6	.711	.455	.733	.445	.644	.482
	7	.411	.493	.349	.479	.149	.359
	8	.490	.501	.198	.401	.299	.460
	9	.526	.501	.442	.500	.368	.485
	10	.526	.501	.361	.483	.678	.470
	51	.605	.490	.709	.457	.851	.359
	52	.300	.460	.093	.292	.046	.211
	53	.595	.492	.419	.496	.517	.503
	54	.200	.401	.116	.323	.149	.359
	55	.384	.488	.093	.299	.195	.399
	56	.690	.464	.744	.439	.839	.370
	57	.753	.433	.826	.382	.920	.274
	58	.179	.384	.023	.152	.046	.211
	59	.758	.430	.454	.501	.414	.495
	60	.769	.423	.686	.467	.621	.488

Table H-1.--Continued

Scale	Item No.	Foreign Students		Teaching Faculty		Personnel Staff	
		\bar{X}	S.D.	\bar{X}	S.D.	\bar{X}	S.D.
Scholarship	11	.400	.491	.174	.382	.172	.380
	12	.700	.460	.756	.432	.667	.474
	13	.747	.436	.454	.501	.529	.502
	14	.595	.492	.267	.445	.448	.500
	15	.226	.420	.209	.409	.149	.359
	16	.695	.462	.593	.494	.529	.502
	17	.690	.464	.791	.409	.609	.491
	18	.637	.482	.395	.492	.460	.501
	19	.474	.501	.326	.471	.425	.497
	20	.426	.496	.384	.489	.322	.470
	61	.626	.485	.686	.467	.575	.497
	62	.626	.485	.337	.476	.414	.495
	63	.495	.501	.209	.409	.379	.488
	64	.500	.501	.651	.479	.678	.470
	65	.626	.486	.640	.483	.517	.503
	66	.542	.500	.803	.401	.552	.500
	67	.421	.495	.593	.494	.724	.450
	68	.432	.497	.221	.417	.310	.465
	69	.568	.497	.244	.432	.333	.474
	70	.542	.500	.500	.503	.586	.495

Table H-1.--Continued

Scale	Item No.	Foreign Students		Teaching Faculty		Personnel Staff	
		\bar{X}	S.D.	\bar{X}	S.D.	\bar{X}	S.D.
Community	21	.447	.499	.663	.476	.770	.423
	22	.416	.494	.267	.445	.368	.485
	23	.215	.413	.023	.152	.058	.234
	24	.311	.464	.186	.391	.299	.460
	25	.453	.499	.651	.479	.414	.495
	26	.532	.500	.593	.494	.552	.500
	27	.216	.413	.116	.322	.149	.359
	28	.311	.464	.209	.409	.391	.491
	29	.395	.490	.395	.492	.310	.465
	30	.605	.490	.465	.502	.517	.503
	71	.647	.479	.861	.349	.839	.370
	72	.268	.445	.058	.235	.126	.334
	73	.742	.439	.756	.432	.701	.460
	74	.511	.501	.349	.479	.494	.503
	75	.400	.491	.547	.501	.506	.503
	76	.700	.460	.698	.462	.782	.416
	77	.642	.481	.849	.360	.897	.306
	78	.490	.501	.733	.445	.759	.430
	79	.679	.468	.837	.371	.805	.399
	80	.600	.491	.477	.502	.460	.501

Table H-1.--Continued

Scale	Item No.	Foreign Students		Teaching Faculty		Personnel Staff	
		\bar{X}	S.D.	\bar{X}	S.D.	\bar{X}	S.D.
Awareness	31	.547	.499	.814	.391	.724	.450
	32	.405	.492	.419	.496	.437	.499
	33	.347	.477	.349	.479	.322	.470
	34	.637	.482	.593	.494	.529	.502
	35	.474	.501	.395	.492	.310	.465
	36	.368	.484	.244	.432	.172	.380
	37	.526	.501	.372	.486	.414	.495
	38	.721	.450	.826	.382	.851	.359
	39	.495	.501	.314	.467	.425	.497
	40	.526	.501	.279	.451	.345	.478
	81	.563	.497	.593	.494	.494	.503
	82	.611	.489	.721	.451	.816	.390
	83	.516	.501	.419	.496	.333	.474
	84	.447	.499	.674	.471	.506	.503
	85	.537	.500	.349	.479	.264	.444
	86	.474	.501	.395	.492	.517	.503
	87	.621	.486	.733	.445	.782	.416
	88	.442	.498	.616	.489	.460	.501
	89	.711	.455	.837	.371	.759	.430
	90	.532	.500	.709	.457	.747	.437

Table H-1.--Continued

Scale	Item No.	Foreign Students		Teaching Faculty		Personnel Staff	
		\bar{X}	S.D.	\bar{X}	S.D.	\bar{X}	S.D.
Propriety	41	.337	.474	.244	.432	.103	.306
	42	.432	.497	.395	.492	.655	.478
	43	.380	.486	.686	.467	.633	.485
	44	.216	.413	.093	.292	.161	.370
	45	.442	.498	.419	.496	.460	.501
	46	.700	.460	.756	.432	.782	.416
	47	.269	.444	.140	.349	.046	.211
	48	.321	.468	.070	.256	.069	.255
	49	.611	.489	.616	.489	.713	.455
	50	.411	.493	.302	.462	.377	.485
	91	.537	.500	.221	.417	.483	.503
	92	.279	.450	.198	.401	.195	.399
	93	.474	.501	.709	.457	.448	.500
	94	.158	.366	.314	.467	.138	.347
	95	.521	.501	.698	.462	.644	.482
	96	.211	.409	.279	.451	.264	.444
	97	.453	.499	.721	.451	.782	.416
	98	.279	.450	.058	.235	.023	.151
	99	.279	.450	.384	.489	.345	.478
	100	.311	.464	.361	.483	.322	.470

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