

A STUDY OF THE DIFFERENTIAL EFFECTS OF LENGTH OF
TIME IN THE UNITED STATES ON FOREIGN GRADUATE
AND UNDERGRADUATE STUDENTS WITH REGARD TO
THE NUMBER, SEVERITY, AND CATEGORY
GROUPINGS OF PROBLEMS HE
EXPERIENCES

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CHAPTER I

DEVELOPMENT OF THE PROBLEM

Need for the Study

This portion of the paper will develop the need for this study under the following topics: (1) the need to understand the characteristics of the foreign student population studying in the United States; (2) the need for counseling information; and (3) the need to have more information about how the length of time in the United States affects the kinds of problems foreign students experience while studying in the United States.

There are now more than eighty-five thousand students studying in the United States. They are broadly scattered among the two thousand universities and colleges; however, there are more than one-half of the foreign student population in the United States studying at only forty-seven colleges and universities, and each of these enrolls more than four hundred foreign students (Open Doors 25, 1966).

Oklahoma State University is among the forty-seven colleges and universities that enroll more than four hundred foreign students. The foreign students, from one hundred fifty-eight different countries, are classified in the following way: Undergraduate students comprise 46 per cent of the total U. S. foreign student population, graduate students make up 44 per cent of the population, 78 per cent of the student

population are males, and only 22 per cent are females. It is interesting to note that the average length of stay in the United States for the foreign student is increasing. The latest information on this matter indicates that about 23 per cent of the students stay less than one year, 30 per cent stay one or more years, 18 per cent stay two or more years, and a rather large group (29 per cent) stay more than three years in the United States. Two-thirds of the foreign student population choose majors in one of three areas. With regard to majors one finds that 22 per cent of the students choose engineering, 20 per cent of the students choose humanities, and 18 per cent of the students choose sciences as their field of study in the United States. As of 1966, 63 per cent of the foreign students are sponsored in their studies in the United States, and 37 per cent of the students are self-supporting; this is a great rise in the direction of sponsored students over the past years. Lastly, it is well to note that by 1970 it is estimated that three-quarters of all foreign students studying in the United States will be from Asia (Open Doors 25, 1966).

In short, what this means is that the typical foreign student does not exist. No longer is the foreign student the cultivated youth from the wealthy Western European family who comes on his own financial resources for his own special purposes. Increasingly, the foreign student will be from relatively underdeveloped areas, and he will come on resources other than, or in addition to, those of his own family and will be seen as a student fulfilling the objectives of whoever or whatever provides those resources: the United States college or university, his own government, the United States government, private agencies, or a combination (Open Doors 25, 1966).

It is the writer's feeling that the American institutions of higher learning will have to employ greater variety, imagination, and flexibility in dealing with foreign students. The needs and problems of a sophisticated graduate student from India in the field of physics are different from those of a freshman from China who barely speaks English. The needs of foreign students vary from devising appropriate curricula to providing adequate help in finding housing. Therefore, it becomes quite important that the needs and problems of foreign students be known and understood by the university in which they study.

Current research indicates that the foreign student studying in the United States experiences a variety of personal problems with which he must learn to cope. These problems group themselves into academic problems, social problems, language problems, health problems, cultural problems, and housing problems (Sellitz and Christ, 1963; Ho, 1966; Cieslar, 1955; McConn, 1964; Morgan, 1964; Daws, 1962; Beals and Humphrey, 1957; Scott, 1956; Forstat, 1951; Porter, 1962; Hadwen, 1964; Lambert and Bressler, 1956).

Although a great deal is known about the kinds of problems the foreign student experiences while studying in the United States, little attention is given to the kinds of problems the foreign student experiences in the various periods of his sojourn in the United States. For example, the foreign student counselor may find it helpful to have information concerning the kinds of problems the new student faces that are different from the kinds of problems the experienced student encounters. The foreign student adviser or counselor could use such information to plan various personnel programs to meet the needs of new students as well as those of experienced students. This study attempts to provide

more information about the kinds of problems the foreign student experiences at various stages of his stay in the United States so that more personalized personnel programs can be developed to meet the needs of the student regardless of his length of stay in the United States.

Several research studies suggest that the foreign student experiences personal problems in a U-curve fashion. The U-curve theory suggests that when the foreign student population is divided into three broad time groupings of one to ten months, eleven to twenty-one months, and twenty-two or more, the newer student will have fewer problems than the middle group and the third group will have about the same number of problems as the first group. So when this is plotted on a graph ranking number of problems in an increasing order, it will look like a U. (Sewell and Davidsen, 1961; Lysgaard, 1954; Morri, 1960; Porter, 1965; Wilkening, 1965; Hadwen, 1964). However, the writer, after two years of experience in counseling foreign students, did not observe this as being a common trend. The writer's counseling case load was much more heavily loaded with the new students than with the more experienced students. In support of the writer's experience are several pieces of research that suggest that problems of foreign students do not gradually increase as they stay longer, hitting a peak of problems between eleven and twenty-one months and then again gradually reducing until once again problems are at a low after about two years plus in the United States (Hadwen, 1964; Gezi, 1965; Zajonc, 1952; Wilkening, 1956; Sellitz and Christ, 1963).

This study will investigate the concept that foreign students' problems increase over a period of time until a certain point and then begin to decrease. Information of this nature will enable the counselor

to better understand where to invest his time, and thus to more adequately meet the needs of the foreign student.

Statement of the Problem

The problem to be investigated concerns itself with the study of foreign students' problems over periods of time. The length of stay in the United States has been divided into three time periods, which are: (1) one to ten months; (2) eleven to twenty-one months; and (3) twenty-two months plus. These time periods closely represent a large body of research that suggests foreign students do indeed go through three distinct time periods while studying in the United States (Sewell and Davidsen, 1961; Dubois, 1956; Lysgaard, 1954; Morris, 1960; Hadwin, 1964; Long, 1955).

In the main, the study is an investigation of how problems of foreign students in Group I (1-10 mo.) differ from or are like the problems of foreign students in Group II (11-21 mo.) and of Group III (22 mo. plus). Groups II and III will be studied in a like manner. Graduate students will be analyzed separately, with respect to Groups I, II, and III, from undergraduate students. There will also be a comparison of the problems of graduate students with the problems of undergraduate students.

The following paragraphs present a brief discussion of the concept of how foreign students' attitudes change over a period of time, and attempt to show a relationship between studies of attitude and student problems. Numerous pieces of research have suggested that the foreign student in the United States goes through three critical periods in his stay here, and these periods constitute what is commonly known as

the U-curve (Dubois, 1956). The first time period is the period of time from one to ten months, and in this time period the foreign student reacts much as does a tourist. Although a steady attitude change is occurring, it is in this period that he finds almost everything interesting, new, and wonderful. It is also in this time period that he finds many favorable things to say concerning the United States and its people. In the eleven to twenty-one month time period, the foreign student has had a definite change in attitude toward the United States, for it is in this period that he becomes highly critical of this country. There have been many reasons advanced to explain this change in attitude. Probably the most widely accepted reason concerns an explanation in terms of the foreign student coming to grips with the real problem of adjusting to a new environment and having to cope with the problems of this new environment (Dubois, 1956). One also finds in this eleven to twenty-one month period that he begins to lose some identity with his own country, and it may be that in order to protect himself against absorption into the American culture, he must find fault with it and strike out against it (Dubois, 1956). These views tend to be highly speculative and a great deal of hard data is not available to substantiate them, but they are put forth in much of the research as characteristic of these various phases. The last phase is the pre-departure phase, which constitutes the twenty-two-month-or-more period; and it is during this phase that the foreign student again assumes a more favorable attitude toward the United States. He may never quite recapture the same enthusiasm that he had when he first arrived, though one will note that his criticisms are fewer and not quite as harsh as before (Dubois, 1956; Coelho, 1958; Sewell and

Davidson, 1961; Morris, 1960).

It is the basic assumption of this study that all foreign students go through three distinct time phases with regard to adjustment to the United States. There are a number of research studies to support this contention; however, since they are all reported in more detail in the review of the literature, the details of these studies will not be discussed at this time. Nevertheless, it would be appropriate to list and mention the kinds of students that the researchers used in their studies. Dubois (1956) used all nationalities in her study, and she found that the students definitely went through four distinct phases with regard to attitude change toward the United States. Coelho (1958) made a study of Indian students who were studying in the United States and found that they went through a U-curve type adjustment. Beals (1957) studied Mexican students and found that they, too, went through three distinct phases with regard to attitude change toward the United States. Scott (1956) studied Swedish students and found that they went through a U-curve; Sewell and Davidson (1961) studied Scandinavian students and found that they went through a U-curve; Lysgaard (1954) studied Norwegian students and found that they went through three distinct time periods with regard to attitude change. Sellitz studied all nationalities and found that they went through a U-curve type adjustment. Morris (1960) used all nationalities in his study and found that they went through three distinct time periods with regard to attitude change toward the United States.

Some research, mostly aligned with the study at hand, was done by Sewell and Davidson (1961), Lysgaard (1954), Morris (1960), Porter (1965), and Hadwin (1964), which suggests that not only do the foreign

student's attitudes toward the United States change over a period of time, but that also personal problems progress in a U-curve type fashion over this same period of time. That is to say, their research suggests in general that in Time Phase 1 the students will have fewer problems than in Time Phase 2, in which they will have more problems, and that in Time Phase 3 they will once again have fewer problems. So this study will add information to this concept of problem change over time. This study will elicit, for example, information to determine if there is any significant difference between groups with respect to numbers, kinds, and severity of problems.

Limitations of Study

This paper will have the following limitations:

The study deals only with unmarried males who are grouped into graduate and undergraduate categories, and this grouping provides only for a gross type age grouping. The population deals with only those students that are enrolled in Oklahoma State University; therefore, to generalize to other colleges would be inappropriate.

The instrument used is a rather new instrument (Porter, 1965) and as yet its reliability and validity have not been fully established. In addition, the instrument is somewhat insensitive to the intensity of the problems of the individual in that it can determine only if one has a severe or non-severe problem. It is at present not usable as a predictor of future behavior; however, older, more reliable tests do not exist in regard to determining problems of foreign students (Buros, 1965).

Clarification of Terms

1. Problems - Refers to problems of foreign students that are commonly associated with housing, social, food, academic, and recreational problems.
2. Severe Problems - Likewise refers to problems commonly associated with housing, social, food, academic, and recreational problems; however, the term indicates a deeper or more severe concern in these areas.
3. Attitude Toward USA - Refers to a belief held about the United States not necessarily supported by facts.
4. Graduate Group - Consists of students that have progressed beyond the B.A. or B.S. Degree, and includes special students waiting to get into graduate school.
5. Undergraduate Group - Consists of students who have not as yet attained a B.A. or B.S. Degree, and also consists of students from the two-year Technical Institute.
6. Problem Categories - There are eleven problem categories that will be investigated:
 - a. Admission-Selection Problems
 - b. Orientation Service Problems
 - c. Academic Record Problems
 - d. Social-Personal Problems
 - e. Living-Dining Problems
 - f. Health Service Problems
 - g. Religious Service Problems
 - h. English Language Problems
 - i. Student Activities Problems
 - j. Financial Aid Problems
 - k. Placement Service Problems
7. U-Curve - A term used to convey the concept that foreign students' attitude toward the United States moves from an initial good to

a poor and then back to a good attitude over a sufficient time period.

8. Time Periods - This refers to time period groupings which are arbitrarily chosen on a ten-month time schedule, with the exception of the last time group, which extends beyond a ten-month period. This time grouping is based primarily upon similar time period groupings used in other research studies concerning the U-Curve.

Hypotheses

1. With regard to numbers of non-severe problems, there will be no significant increase in the number of non-severe problems experienced by undergraduate or graduate students over the three time periods (i.e., Group I, 1-10 mo.; Group II, 11-21 mo.; Group III, 22 mo. plus).
 - a. Group I (1-10 mo.) will not be significantly different from Group II (11-21 mo.) with regard to the number of non-severe problems experienced.
 - b. Group III (22 mo. plus) will not be significantly different from Group I (1-10 mo.) with regard to the number of non-severe problems experienced.
 - c. Group III (22 mo. plus) will not be significantly different from Group II (11-21 mo.) with regard to the number of non-severe problems experienced.
2. With regard to severe problems, there will be no significant increase in the number of severe problems experienced by undergraduate or graduate students over the various time groupings (i.e., Group I, 1-10 mo.; Group II, 11-21 mo.; Group III, 22 mo. plus).
 - a. Group I (1-10 mo.) will not be significantly different from

Group II (11-21 mo.) with regard to the number of severe problems experienced.

- b. Group III (22 mo. plus) will not be significantly different from Group I (1-10 mo.) with regard to the number of severe problems experienced.
- c. Group III (22 mo. plus) will not be significantly different from Group II (11-21 mo.) with regard to the number of severe problems experienced.

3. There will be no significant difference in category groupings of problems between the time groupings for graduate students regarding either the eleven non-severe problem categories or the eleven severe problem categories.

- a. The problem category groupings in graduate Group I will not differ significantly from the problem category grouping of graduate Group II.
- b. The problem category groupings for graduate Group III will not differ significantly from the problem category grouping of graduate Group I.
- c. The problem category groupings for graduate Group III will not differ significantly from the problem category grouping of graduate Group II.

4. There will be no significant difference in category groupings of problems between the time groupings for undergraduate students with regard to either the eleven non-severe problem categories or the eleven severe categories.

- a. The problem category groupings in undergraduate Group I will not differ significantly from the problem category groupings of undergraduate Group II.
- b. The problem category groupings for undergraduate Group III will not differ significantly from the problem category groupings of undergraduate Group I.
- c. The problem category groupings for undergraduate Group III will not differ significantly from the problem category groupings of Group II.

5. There will be no significant difference found between undergraduate

and graduate students in the number of problems checked in either the non-severe problem or severe problem categories.

- a. No difference between undergraduate Group I and graduate Group I.
 - b. No difference between undergraduate Group II and graduate Group II.
 - c. No difference between undergraduate Group III and graduate Group III.
6. There will be no significant difference in category groupings of problems between the graduate groups and the undergraduate groups with regard to either the non-severe problem category groupings or the severe category groupings.
- a. The problem category groupings in graduate Group I will not differ significantly from the problem category groupings of undergraduate Group I.
 - b. The problem category groupings in graduate Group II will not differ significantly from the problem category groupings of undergraduate Group II.
 - c. The problem category groupings in graduate Group III will not differ significantly from the problem category groupings of undergraduate Group III.
7. With regard to all students (graduate and undergraduate) there will be no significant correlation between the total number of non-severe problems checked and the total number of severe problems checked.

CHAPTER II

A SELECTED REVIEW OF THE LITERATURE

Introduction

This chapter is a selected review of the literature that deals with foreign students in general and the problem under study specifically. The literature is reviewed under the following topics: Problems of Foreign Students, General Background and Nature of the Foreign Student, and Differential Effects of Time on Foreign Student Behavior and Attitudes.

It is the opinion of the writer that to deal adequately in this area, one should have a basic understanding of the kinds of problems that are common to foreign students studying in the United States. Further, one needs to understand, in general, about who the foreign student is, and what his background and his nature are like. Lastly, the attention of the reader is drawn to the fact that much of the current foreign student literature is related to the foreign student's length of stay in the United States. It is felt by some researchers that the variable of time is significantly related to many aspects of the foreign student's sojourn in the United States.

Literature Related to Problems of Foreign Students

The study by Porter (1962) is perhaps the most significant of the

studies reviewed, in view of the fact that much of the present study relates directly to Porter's work. Porter developed the inventory that is being used in this present study to determine the kinds of problems that foreign students experience.

Porter attempted to determine the following:

If the problems of foreign students which are reported in the literature could be generalized to the problems of foreign students in Michigan State University, and determining if the problems of these students vary among certain classifications of foreign students.

This study called for the development of an instrument that would successfully distinguish foreign student problems from American student problems. The theoretical basis for this test is that foreign student problems can be categorized under twelve student personnel service programs. These problems are as follows: (1) Selection and Administration; (2) Orientation; (3) Living and Dining; (4) Student Aid; (5) Health Services; (6) Religious Services; (7) Student Activities; (8) Student Conduct; (9) Remedial Services; (10) Academic Records; (11) Placement Services; and (12) Counseling Services.

Much of Porter's study was given over to the establishment of useful validity and reliability for this inventory. However, in addition to establishing the validity and reliability of the instrument, he found also that there existed a significant difference in the number of problems checked by undergraduate students as compared to the number of problems checked by graduate students. Undergraduate students checked more problems than graduate students, and undergraduate students' concerns were primarily in the "Academic Records" area.

He found no significant difference in scores of students twenty-

six or older from scores of students twenty-five or younger. He found that for students twenty-five or younger the primary area of concern was in Living and Dining. For the older students, the greatest expressed concern was in the area of English Language.

He found that for the total group the mean number of problems checked was 15.06. As for categories, it was his finding that the category of English Language caused the most concern, and the area of Academic Records caused the most serious concern. It was also Porter's finding that students who speak the English language as their first language checked significantly fewer problems than the students who speak the English language as a second language.

Porter found a high correlation (.78) between the number of severe problems checked and the number of non-severe problems checked. An even higher correlation (.84) was found between severe problems and non-severe problems with respect to category divisions.

Lastly, it was his finding that there was no significant difference between the number of problems that married students checked versus the number of problems that single students checked.

Wilkening (1965) did a study that concerned itself with the adjustment of foreign students studying extension education at several selected land grant institutions.

The stated purpose of this study was to determine the appropriateness of programs available in Agriculture Extension for foreign students. The writer also attempted to identify personal and academic adjustment problems encountered by these students. Eighty foreign graduate students studying in this field at Michigan State University, University of Missouri, University of Wisconsin, Kansas State Univer-

sity, and Cornell University were used in this study. His method of collecting the data consisted of a questionnaire and an interview with these students. This sample consisted of seventy-two men and eight women.

One finding especially relevant to the study at hand is concerned with personal adjustment and certain other variables. He found a high degree of association between the respondents' personal adjustment scores and (1) length of time in the U.S.; (2) contact with Americans prior to coming to the U.S.; (3) satisfaction with preparation for study experience; (4) satisfaction with housing; and (5) attitude toward the extension study programs.

He found that homesickness was a problem for three-fourths of these students when they first arrived in the United States. Apparently the student's having a wife and family with him does not affect his adjustment for the better nor does it prevent homesickness.

It was Wilkening's finding that difficulty with the educational system was the major problem for the foreign student in extension classes, as compared to the language problem for foreign students in other departments.

Hill (1966) completed a study that concerned itself with identifying problems of students from Indonesia, Thailand, Pakistan, and India. A secondary purpose was to determine if any of their problems were specific to either sex. In this study, he analyzed these students with respect to six problem areas, which were as follows: (1) Academic; (2) Financial; (3) Housing; (4) Religion; (5) Personal; and (6) Social.

In general, Hill concluded that these students had trouble with

the financial and academic categories, and indicated that they had some trouble with housing; but they had no trouble with religion and very little trouble with the social category.

Language was reported as the most troublesome of the problems, and 11.5% of the students listed it as such. The next most troublesome area was in making American friends, and 5.1% of the students listed it as troublesome.

In concluding his study, Hill indicated that the areas in which the Indonesian, Thai, Indian, and Pakistani students experienced the most difficulties were in the academic (20%+), personal (20%+), and financial (20%+) areas; academic problems were the greatest. In all other areas less than twenty per cent indicated problems.

The academic problems were due because of a lack of proficiency with the English language. To a lesser extent, those with problems of this type had difficulty adjusting to American educational methods. Women had more academic trouble than men. In general, the Thai students experienced the most problems, and their greatest concern was with the English language. The other nationalities did not have marked differences with respect to the problem area. That is to say, Hill could not determine from the results of his study that any one group had problems that were unique to that one group and different from all other groups.

In a study of the early stages of foreign student adjustment, Hadwen (1964) studied fifty-six students from a participant-observer viewpoint, using primarily the interview technique as the source of data collection.

It was his conclusion that the English language is the number one

problem, and writing English was seen as being very difficult. These fifty-six students, of all nationalities, tended to over-evaluate their English ability in the beginning of their sojourn in the United States.

He found that some of the more serious problems centered around private social matters in dating, finding American friends, being lonely, and experiencing homesickness, although ranking high was the problem of a lack of recreational time away from their studies.

Problem areas of most concern by rank are as follows: (1) the physical environment (climate and housing); (2) private social environment (dating and making friends); and (3) public social environment (recreation and communication).

In a study of the problems that Swedish students face while studying in the United States, Scott (1956) stated that Swedish students do not come to the United States primarily to learn something that they could not learn at home, but that their reasons tended to be quite personal.

One of the problems they faced here was in the lack of freedom to take whatever course they felt was needed. They also did not like the paternalism of the U.S. educational system.

Forstat (1951) undertook the study of adjustment problems of one hundred eighty-two international students from six geographical areas who were studying at Purdue University. The sample constituted a 90 per cent return from a non-randomized population.

The purpose of the study was to determine the specific areas in which foreign students encounter difficulties. She also investigated whether or not a correlation existed between length of stay in the United States and the number of problems the students encountered.

This particular item will be dealt with under another topic to be discussed later.

To obtain her data, Forstat used a revised version of the questionnaire prepared by Petersen and Neumeyer.

Problem areas receiving the highest scores were dating, finances, English language, housing, academic systems, and food.

She also found that the mean scores for graduate students and undergraduate students with regard to numbers of problems differed significantly at the .01 level.

With regard to country of origin and problems, she found that for China, Venezuela, and Turkey, in eight of the ten top problems there were significant differences between these groups; but she did not find a significant difference for students from Norway, India, or Canada.

Petersen and Neumeyer (1948) studied the problems of foreign students. The data for this study was obtained from a questionnaire mailed to three hundred eighty-five foreign students attending several different California colleges and universities. They received a return of one hundred forty-one, which is thirty-seven per cent of the total. The questionnaire consisted of background questions, a checklist of twenty-eight problems, and a series of questions designed to discover the reaction of students to their experiences.

The results indicated that the problems of first magnitude concerned themselves with living problems and lack of adequate counseling in this area. The second area of concern was with financing their education, and also rating high on the list were problems with housing.

Beals and Humphrey (1957) studied a corps of ten Mexican students

at the University of California at Los Angeles in 1952 and 1953. They also supplemented their study with a non-random sample of forty-two other Mexican students from other colleges and universities in the United States. The purpose of the study was to investigate students' attitudes toward selected aspects of American life and culture.

They found that the greatest initial adjustment problem of these students was linguistic. Most of the students under study stated that they had undergone unpleasant or inconvenient experiences early in their visit to the United States.

The Mexican students felt that their greatest area of difficulty was with the opposite sex, especially with respect to dating patterns and casual affectional responses.

Tanenhaus and Roth (1962) conducted a survey of foreign students at New York University. In general, a portion of the survey reported in their article concerned academic problems, personal problems, and non-student roles.

They found that the foreign student was happy with his subjects and his studies and felt that to get an American college degree was of paramount importance.

With regard to personal problems, most foreign students expressed the feeling that their greatest problems centered around financial matters. They felt that they did not have proper information about the real situation in the United States concerning the cost of living. They suggested that the University bear the responsibility of more of their support, and they felt that a short-term loan fund would be helpful. Most of the students expressed the desire to have more social contacts with Americans.

Lastly, the greatest majority of the foreign students felt that they were unofficial ambassadors of their respective country and that it was their duty to tell the Americans about their country.

Professor Cook (1964) wrote of his experiences as a Fulbright Scholar teaching in an Indian university. His primary purpose in writing this article was to inform other professional persons in education about some of the problems Indian students would be likely to encounter while studying in the United States.

He discussed the differences in the Indian and the American education systems with regard to examinations, pace of work, homework, professor-student interaction, classroom discussion, research, and contact with the opposite sex.

Cook suggested three areas in which foreign student advisers, administrative officers, and deans could help Indian students studying in the United States. These areas were listed as follows:

(1) Admission and evaluation of credentials were important. It was very important for the Indian student to be very well acquainted with the English language before coming to the United States. He suggested to admission officers that the evaluation standards must vary according to the adequacy of the Indian education in any particular area of India.

(2) Orientation to America and to college life was important. He stressed the idea that the officials of the university need to help the Indian student with American English and to help him understand how to take objective examinations.

(3) Throughout the Indian student's stay in the United States, he would need guidance and advice. He needs to be understood and,

at times, needs to be helped to adjust to new situations.

In an article by Sasnett (1962), a report was made on a ten-thousand-mile trip to visit other colleges and universities, in order to talk to them about foreign student problems.

The author found that most campuses had certain common institutional problems, such as admissions, pre-arrival health forms, evaluation of credentials, and financial aid for foreign students. In addition to these problems, Sasnett noted that students had difficulty in these areas:

- (a) Finding suitable housing;
- (b) Lack of proper diet;
- (c) Lack of social contact with Americans;
- (d) Impersonal relationship with professors (on a large campus);
- (e) Foreign students finding adequate food;
- (f) Lack of pre-arrival information about campus life and procedures; and,
- (g) Academic adjustment.

In a study by Sellitz and Christ (1963), it was found that Asian students reported a higher incidence of problems in adjustment than Europeans. Problem areas included language, problems with academic work, diet, and homesickness.

General Background and Nature of the Foreign Student

Sellitz and Christ (1963) utilized a sample of three hundred forty-eight foreign students in thirty-five colleges and universities to make a study of foreign students' associations with members of the

host country, beliefs and feelings about the host culture, and adjustment to academic and non-academic situations in the host country.

They found that interaction with Americans was significantly aided by the nationality of the foreign student, the interaction potential of a particular living arrangement, and the interaction potential of other arrangements. It was their finding that there was more foreign student-American student contact in small colleges and universities and less of this type of contact in large universities. And there was scant contact in the metropolitan university. They also found that differences in college communities led to differences in foreign student interaction with American students. This study indicated that Europeans were more likely to be found in high interaction potential situations than were non-European students, and those students who interacted more favorably with Americans generally were more favorable toward the United States than those students who did not have interpersonal contact with American students.

In a study by Shattuck (1964), it was determined that there was a negative relationship between adaptation to the U.S. culture and perceived national status loss. That is, if the foreign student felt that Americans held his country in low esteem he did not adapt well.

He also found that there was a positive relationship between adaptation to the U.S. culture and interaction with professors and graduate students, i.e., the more interaction with professors and graduate students, the better the foreign student adapted to the U.S. culture.

Foreign students from the more highly developed nations appeared

to be more sensitive to the evaluation of Americans than were their less affluent neighbors.

The more the foreign student understood the expectations that the host country held for him, the less defensive he was about his own country.

In a study by Morris (1960), entitled "The Two Way Mirror", he reported on a study conducted at the University of California in Los Angeles. This study consisted of three hundred sixty-four foreign students, which represented 87 per cent of the foreign student population at U.C.L.A. He used the interview method to obtain his data.

Morris related various kinds of status factors to indices of adjustment, with the major emphasis being placed on the independent variable of national status. It was his finding that those students that perceived a loss in national status were less favorable in their evaluation of the United States. Several groups were found to be more favorable to the United States. They were the following: (1) those who were in the United States for the first time; (2) those whose appearance was more foreign; (3) those who perceived little difference in the status of their own country and that of the United States; and (4) those who experienced no language difficulty.

Subjective national status was negatively correlated with the favorableness of attitude toward the United States. That is, students who rated their own country low tended to be more favorable to the United States. Those students who perceived a loss of status tended to be unfavorable to the United States.

A study of dietary patterns of foreign students was conducted by Ho (1966). This article was a condensation of Miss Ho's Ph.D.

dissertation, and it reported on dietary problems of one hundred twenty Oriental subjects. By and large, her subjects came primarily from India, China, Japan, and Korea.

Her primary objective was to measure the dietary changes from home to the host country and to evaluate factors involved in dietary change. The adaptation scale ranged from 0 (no adaptation to American food) to 4 (much adaptation to American food).

In general, adaptation was related only to amount of money spent on food and nationality of the four major groups. Adaptation scores were greater for students spending more than \$10 per week for food. Some of the factors were positively related to the adaptation of the nationality group, such as: (1) age; (2) length of residence; (3) participation in extracurricular activities; (4) difficulty with spoken English; (5) eating at home rather than out; and (6) previous cooking experience.

An interesting study by Sewell and Davidsen (1961) involved forty Scandinavian students who were studying at the University of Wisconsin in 1952-53. In the study, the authors isolated more than two hundred variables believed to be important to the Scandinavian students' adjustment. The following were found to be especially significant to their adjustment to the United States; (1) background characteristics; (2) liberal-conservative orientations; (3) plan for study; (4) preconceptions and expectations; (5) arrival experiences; (6) sub-cultural experiences; and (7) attitude toward the American culture.

An index of effect was developed to determine the extent to which a student was working out a harmonious adjustment to life and

culture here. From this, they determined the student's attitude toward the United States. The authors were able to classify and type the students in the following manner:

- (1) Detached Observers - Those with no desire to become emotionally involved in life in the U.S. culture.
- (2) The Promoters - Those who attempted to sell their home country to Americans; that is, to convince Americans that Scandinavia is a really great area.
- (3) The Enthusiastic Participants - Those who sought to gain the most out of their visit because it was to be so brief.
- (4) The Settlers - Those who saw their visit as an opportunity to settle in a new land. They were alienated from their home culture.

A panel discussion (Panel Discussion, 1963) devoted to the discussion of the topic of "Post Admission Adjustment Problems of Foreign Students" was held for college admission officers in 1962. The panel consisted of Mr. Donald J. Shank, Miss Marita Houlihan, Mr. Homer Higbee, and Mr. Robert Porter. Each panel member made a short speech, and the following paragraphs are reviews of their speeches.

Mr. Shank spoke about new directions in foreign student programs. He made an appeal to colleges and universities which enroll foreign students to develop curricular programs to meet the needs of the students. He felt, for example, that students from Nigeria had different academic needs than did those students from Germany.

Miss Houlihan wrote about the growing role of the U.S. government in foreign student education. The Federal Government plans to begin

or improve programs to counsel and screen prospective students in their home countries. It also plans to become active in helping foreign students improve their English, in orientating them to the United States and the educational system, and in helping them improve hospitality to the student while studying in the United States, in assisting colleges to devise new curricula to meet the needs of the students from particular areas, and in providing increased support funds and part-time employment for foreign students.

Mr. Higbee discussed the academic needs of foreign students and some unresolved dilemmas facing American higher education. It was his feeling that colleges and universities should exercise flexibility in designing curricula for foreign students. However, these curricula must be based on known facts about the individual student's country of origin, educational system, and sources of financial support.

Mr. Porter wrote about the post-admission problems of adjustment of foreign students. Speaking from the point of view of a Foreign Student Adviser, he felt that the main problem of the foreign student lies in the area of communication, a problem which involves not only knowledge of English but also communication of feelings and attitudes. The second general problem was that of academic adjustment. The third general problem was called "social-personal problems." Another area of concern was in the orientation of the foreign student, which included not only the initial contact but also the pre-departure orientation.

Homer and Zimmerman (1963) wrote an article that was concerned with the problems of the first three days of the student's experience

in the United States. The authors found that many foreign students, even after a year of study here, complained that they were not coming into close contact with American students. It was the authors' feeling that the first twenty-four to seventy-two hours in the United States are crucial, in that this period sets the stage for future contacts with American students. This article was a report of some of the programs established in the Philadelphia area to help students in these areas.

In an article by McConn (1964) one finds a review of the literature since 1959 concerning the problems in advising foreign students. McConn found that the bulk of the literature can be classified under eight categories, which are as follows:

(1) International Educational Exchange and International Relations. The university's efforts to educate the foreign student have been found to be quite helpful to the United States' foreign policy. However, the university's primary role is to educate and not to participate in foreign policy making.

(2) Selection and Admission Policies and Practices. The evaluation of the foreign country's academic transcript is difficult at best; but with the newly emerging nations coming to the forefront, proper evaluation for them becomes almost impossible. It was recommended that students be selected on their potential to profit from U.S. education. This would necessitate a review board to screen the applicants in their home country.

(3) Orientation and Adjustment. There are three phases of orientation to the U.S. college. Phase One is in the student's country, where he should receive basic instruction as to what one

should do and expect on the college campus. Phase Two involves acquainting the newly arrived student with the school's academic, cultural, and social life. Phase Three involves preparing the student for departure back to his home country.

(4) Language Proficiency. The main emphasis was to predict the foreign student's potential to learn English, and not based on how much he already knows. This implied that the university will teach him English on his arrival.

(5) Finances. More literature is suggesting that the university devote more of its budget to the financial support of the foreign student.

(6) Curricular Resources. Colleges should develop a curriculum for foreign students that would help them take their place in the affairs of their country.

(7) Cooperation Among Institutions.

(8) The Role of the Foreign Student Adviser in the National Association of Foreign Student Advisers. More emphasis was being put on employing professional persons to coordinate the international programs on the college campus.

Quigley (1965) wrote an article suggesting that the community must be expected to do more than serve a hot meal to new foreign students. He felt that the university or college must draw the community into the learning process, that they could do more than be hospitable. He suggested that they be actively drawn in as an educational agent.

Garza (1965) made an appeal for universities to understand the foreign student's cultural, social and political background, and to

provide him with an environment in which he could develop his intellectual and human capabilities. The university should also help him to realize his potential leadership abilities in his own country.

In a study by Morgan (1964), one hundred forty-six Nigerian students were studied with respect to their adjustment to American colleges. This was an exploratory and descriptive study based on a questionnaire sent to four hundred Nigerian students. He received a return from a non-randomized sample of forty-three per cent of his population. His sample consisted of one hundred thirty-eight males and eight females.

In his thesis, Morgan discussed the history of Nigeria and the secondary school problems faced by the subjects. Using a Guttman Scale, he investigated the students' hierarchy of academic values, and he found that the subjects had a high regard for their Nigerian school training, with little regard for known facts of limited educational facilities in Nigeria. They tended to compare themselves favorably with American and European whites in this respect.

Evidence suggested that the Nigerian students assimilated much of the U.S. culture and, in fact, identified with the United States. The writer attributed much of this tendency to identify with the United States to the students' Christian training in missionary schools. These missionary schools tend to teach only Western ideas.

In the author's words, Dawes (1962) reported:

The purposes of this book are to mark the tenth anniversary of the U.S. Educational Foundation in India, to present a close look at the philosophy and workings of its program, and to awaken an increased knowledge and interest in what is taking place in India and the United States under the Fulbright educational exchange.

More specifically, Mr. Dawes recorded the problems that Indian Fulbright Scholars experienced while studying in the United States. The Indian, coming basically from the British educational system, was often perplexed with our system of self-contained course units, course grades, student participation in the classroom, the seminar system, objective exams, program selection, and emphasis upon independent thinking. The Indian also found our cold climate (northern sections) very hard to get used to. He was also overwhelmed by the speed of American life. To the newcomer, "rush" was the order of the day. One aspect of the American culture really bothered the Indian, namely, that American friendliness did not go much deeper than cordiality. He felt that deep friendships were not formed. Of deep concern to the Indian student was our discrimination against Negroes in restaurants, hotels, busses, and schools. Lastly, the Indian student was usually well impressed with the dignity of labor in the United States.

Differential Effects of Time on Foreign Student Behavior and Attitude

Many of the current studies now being done involve the effects of time on various aspects of the foreign student's sojourn in the United States. Much of the early literature in this field of study has dealt with the differential effects of time on the attitude of foreign students. These studies are often called U-curve studies or findings, because it appears that the attitudes of foreign students drop from an initial high to a low point and then rise to another high point before leaving the United States, and this, when plotted

out on a graph, usually looks similar to a "U". The first portion of this section is devoted to studies dealing, either in part or in entirety, with the concept of the U-curve.

Cora DuBois (1956) probably has given the most widely accepted description of the dynamics involved in the various stages or phases of the U-curve. Her writings were based on empirical observations derived from an intimate knowledge of numerous foreign students. Her writings suggested that the foreign student goes through at least four distinct changes in attitude during his sojourn in the United States. She described Phase One as the "Spectator Phase", which lasted from one to four months. In this phase, the foreign student was much like a tourist, observing all of the interesting things going on around him. Phase Two was called the "Involvement Stage", which lasted from four to nine months. In this phase, the foreign student began to interact with his environment, and he had to begin to adapt and adjust to life here. This phase seemed to be the beginning of his problems. He probably found it difficult to cope with these new interactions, which brought on frustration, and he at this time perhaps also began to fear the loss of his distinct nationality. In this interaction period, he feared being absorbed into our culture and thus Americanized, so he reacted to this social frustration by becoming very critical of the United States. In Phase Three, which lasted from nine to eighteen months, one observed that he was beginning to come to terms with these frustrations and gradually was becoming able to work them out. Miss DuBois called this phase the "Coming to Terms Phase". The student then entered Phase Four, which was called the "Pre-departure Phase", in which he felt

more at ease. It was in this phase that it was noted that his attitude had again changed, in that he now found less fault with the United States. This entire process has been commonly called the "U-curve."

Coelho (1958) made a study, the main purpose of which was to examine how increasing length of exposure to a foreign educational experience affected the foreign student's perception of his host culture. Coelho based his conclusions upon standardized interviews and essays from sixty Indian students. He found that the Indian student's perception and emotional attitude toward the host country occurred in four phases. These phases paralleled the U-shaped curve often found in studies of cross-cultural education. In Phase One, which lasted about one week, the newly arrived students saw themselves as cultural ambassadors and were anxious to set the uninformed American straight. This quickly passed into Phase Two, which lasted from three to nine months, where he found he must cope with and adapt to a new social environment. It was in this phase that he became threatened and began to be quite critical of the United States.

In Phase Three, which lasted from eighteen to thirty-six months, the student became better acculturated and his perspective became broadly national, rather than provincial, in scope. He felt free to examine both host country and home country, and with much less emotional involvement he was able to look at his situation critically.

But in Phase Four an unusual thing happened. After four years a new pattern emerged in which he could be characterized as being preoccupied with his own personal problems of adjustment and acceptance into the host country. Once again, in self-defense, he began to give stereotyped descriptions of social groupings which were not of immedi-

ate concern to him in his world. His problem was how to avoid alienation in the host country.

The divisions of time were based upon empirical observations of Indian students and were not meant to be generalized to all groups. Coelho pointed out that Japanese students usually required about twelve months to work through their problems, and European students usually did it in a fraction of that time; thus time groupings were not standardized at this point.

Beals and Humphrey (1957) studied a group of Mexican students that came to the United States to study. They stated that it was clear that in the beginning the students' attitude toward the United States was uncritical. They followed this one group during their entire stay here, and they found that the Mexican students did go through easily observable attitude changes. They followed the standard pattern of going from a non-critical stage to a highly critical stage and then back again to a relatively non-critical stage with respect to their attitude toward the United States.

Scott's research (1956) indicated that Swedish students go through a greatly modified and reduced U-curve. He stated that he could clearly see the phases of the curve, but that it took only seven months for them to go through it.

Sewell and Davidsen (1961) observed in their study of Scandinavians that they showed the same usual phases of the U-curve with respect to attitude toward the United States as they sojourned in this country. Their study also lent support to the assumption of the U-curve concept.

Morris (1960), in a study of three hundred sixty-four foreign

students, found that his data lent some support to the U-curve notion, in that the general pattern, while not statistically significant, supported the concept of a U-curve-shaped change of attitude over time.

He found the following:

| <u>Length of Stay in Months</u> | <u>Number of Students</u> | <u>Per Cent That Showed High Favorableness</u> |
|-------------------------------------|-------------------------------|--|
| 0-9 | 60 | 62 |
| 10-19 | 49 | 45 |
| 20-29 | 37 | 54 |
| 30-39 | 47 | 53 |

Sellitz and Christ (1963) mentioned the fact that it appeared from the results of their study that their group of mixed-nationality foreign students was beginning to go through the traditional phases of the U-curve. However, their study was conducted over a period of only one year and, therefore, they could not observe all of the time phases; but they did note that attitude toward the United States began to deteriorate as time increased.

Lambert and Bressler (1956) made a study of several foreign students--sixteen Indian, two Pakistani, and one Singhalese--who were enrolled in the University of Pennsylvania from July, 1952, to August, 1953.

The data for this study were collected by a series of semi-structured interviews, by the administration of certain written instruments, and by participant observation.

The basic working assumption of this study was that all foreign students share alike in certain basic problems.

In this study, the authors divided their students into three time-groups for reasons of analysis. The time groupings were called "generations", and the first generation consisted of students who were here for less than one year. The second generation consisted of students who were here for from one to three years. The third generation consisted of students who had been here for from two to seven years.

Lambert and Bressler observed that each person interviewed felt compelled to extend himself in playing three active roles while in the United States: (1) the student; (2) the tourist; and (3) the unofficial ambassador. They discussed the results of their study in terms of these three different roles played by Indian students in the United States. The study was presented in a narrative form, with little reference to statistical interpretation of the data obtained.

Under the student role, the authors pointed out that the Indian student faced a dilemma about the values of United States' education. The British degree holds much more prestige at home, so they strove to make their U.S. educational experience useful.

The tourist phase offered many interesting contrasts. In Stage One (one to twelve months), the students avidly tried to "experience America." They visited dams, industrial cities, dance places, night clubs, and the southern areas of the United States. They also usually visited Canada and Mexico.

In Stage Two (one to two years), the students were more reserved and selective in their travel and contacts. They no longer strove to see any or all of America, but rather tended to make contacts which would extend their respective careers. They wanted to visit

with the right persons and go to the right places.

In Stage Three (two to seven years), the tourist pattern was almost gone, and the students' travels were usually near their residence. They visited many of their Indian friends who lived in nearby towns. Contacts with Americans were now limited to a few friends.

The student also played the role of the unofficial ambassador. They were anxious to talk about their homeland and welcomed any opportunity to do this through speeches and seminars. They also set themselves up as unofficial censors of others who spoke on India.

The studies reported on in the following section are very closely akin to the writer's study. This study, in part, investigates whether time in the United States affects the foreign student's experience with personal problems; more specifically, the study attempts to determine if foreign students' personal problems follow a U-curve pattern similar to the U-curve pattern of the student attitude toward the United States. Several studies are mentioned, supporting the contention that personal problems do follow the U-curve pattern, and several studies are reported that do not support this contention.

The next several studies to be reviewed take a contrary position with respect to the U-curve pattern. Several of these studies do not support the contention that time does, in fact, have a differential effect on foreign students with regard to the length of time spent in the United States.

Sellitz and Christ (1963) noted in their study something that tends to throw doubt on the idea of personal problem adjustment following the U-curve pattern. They reported that the U-curve pattern was operating with regard to attitude toward the United

States, but they found that the student's personal adjustment made a slight increase over a period of time. Their finding tended to run contradictory to the other studies that support the U-curve, in that Sellitz's and Christ's students had been here for one year; at that point these students should have been more critical and should have had more personal problems than at any other time, because they would really be in the bottom of the "U" with respect to these matters. However, at the twelve-month point they actually had fewer personal problems than when they first came.

Forstat's (1957) study of one hundred eighty-two foreign students of all nationalities revealed that geographical area of origin and the student's academic status seemed to be factors affecting the total number of problems that foreign students have. However, field of study and length of time in the United States did not seem to be related to the total number of problems that foreign students had. The study did not lend support to the U-curve pattern.

In Wilkening's (1965) study, he observed that in his group the students experiencing the largest number of problems were in the group that had been here over twenty-four months. This was quite contrary to the U-curve concept, which states that the foreign student's crisis period is in the nine- to eighteen-month time period. Actually, to be consistent with the U-curve pattern, the students who had been here over twenty-four months should have been in the stage of fewer problems.

Hadwen (1964) found, in his study of fifty-six foreign students of all nationalities, that the trend was towards more criticism of the United States in the first six months. However, his research

further suggested that foreign students make a separation of United States governmental policy and the individual American. They tend, according to Hadwen, to become more critical of the United States over a period of time, but less critical of the individual American over the same period of time. Hadwen went on to make this statement about personal adjustment problems:

Where adjustment problems of a personal, rather than academic, sort are concerned, the results reported below are consistent with findings of both earlier investigations (Sewell, 1954 and Lysgaard, 1954) that there is an increase in foreign students' experience of such difficulties over the first year.

It was, therefore, Hadwen's finding that personal problems increase over a period of time.

In Gezi's (1965) study, the findings indicated that the duration of the students' stay in this country was not significantly associated with their adjustment here.

The study by Zajonc (1952) dealt with the foreign students' need to conform to a new culture and the frustration that often arose when conformity was not possible.

He constructed his hypothesis based on three basic points, which were as follows:

(1) The foreign student is usually expected to conform to the norms of the host culture;

(2) Because the student is steeped in another culture, conformity to a new pattern may prove disturbing;

(3) The foreign student occupies a uniquely endowed role in the host society in that it is possible for him to vent his aggression against the host country norms without punishment or

rejection.

Zajonc hypothesized that, "given the need to conform, attitudinal aggression of the stranger is a function of his difficulty in conformity." He found, using a sample of twenty Indian students who had been here less than six months and a sample of twenty who had been here more than six months but less than two years, that the greater the need to conform, the greater was the aggression. Aggression and the need to conform were measured by a uniquely structured instrument developed by the author.

Secondly, Zajonc hypothesized that, "strangers with long residence should exhibit lesser need to conform than those with shorter residence." This hypothesis implied that when the channel for aggression was not available, the expression of attitudinal aggression was less likely to occur. His hypothesis was supported by the fact that the newer students expressed a greater need to conform and somewhat less aggression than the older students, who had already discovered that aggression was quite permissible within certain limits. The new students were not able to reduce their frustration caused by the need to conform because they did not understand the latitude allowed them with respect to aggressive outlets.

Therefore, time in the United States appreciably affects how the foreign student handles frustrations that arise out of a need to conform when conformity would be against the homeland's culture. However, one would surmise from this study that as criticalness towards the United States increases through the aggressive expression of criticism, then the better the student's personal adjustment becomes. Therefore, criticalness of the U.S. is an indication of good adjustment.

Synopsis of the Review of the Literature
and Questions Arising From the Review

There are two primary conclusions to be drawn from the literature concerning foreign student problems. The first is that foreign students run the gamut of personal problems associated with their stay in the United States. The studies and articles written on this subject do not suggest that there are consistent, common problems among foreign students studying in the United States. The second conclusion is that there is a difference between the number of problems an undergraduate student experiences and the number of problems a graduate student experiences.

Section Two of the review of the literature dealt with the general background of foreign students studying in the United States. The main focus of these studies centered in two areas. The foreign students seemed to be more favorable to their U.S. experiences if they had had close contact with American students, professors, and graduate students. If students felt a loss of national prestige, they reported their experiences here in a less favorable light than did those students who felt their country had favorable prestige in the eyes of Americans. Students from more highly developed nations were more impressed with Americans than were students from less highly developed nations. The second area of emphasis dealt with bettering college admissions, curricula for foreign students, cultural experiences, and academic orientation. Much frustration was felt by foreign students in the areas of poor English background and academic and educational adjustment.

The last section of the literature review related to studies that

dealt with the influence of time on the foreign student's sojourn in the United States. This portion of the review fell into two divisions. In Division One, the writer reviewed the literature that supported the U-curve theory regarding attitude change of foreign students concerning the United States. This theory states that the foreign student's attitude is favorable upon arrival and for a few months thereafter, but it soon deteriorates until it reaches a low and then there is an upswing until departure from the United States. It was also established in this section that the U-curve theory applied to all nationalities.

The second division related to studies that suggested that the U-curve concept did not apply to personal problems. In other words, the number of problems a foreign student has does not necessarily follow the U-curve pattern of few problems in the beginning, more problems as time passes, and then a return to fewer problems shortly before departure for home.

Several questions arise out of this selected review of the literature, and they are as follows:

1. Will personal problems of undergraduate students be the same as personal problems of graduate students?
2. Do undergraduate foreign students have more or fewer personal problems than graduate foreign students?
3. Will a knowledge of foreign student problems in various time grouping breakdowns aid the foreign student adviser and counselor in meeting the needs of foreign students studying in the United States, with regard to such questions as admission, social life, academic life, and financial aid?

4. Does the U-curve theory regarding attitude change over a period of time also apply to a fluctuation of personal problems over a period of time in a U-curve fashion?

5. Will the undergraduate time groups show significant fluctuation regarding personal problems over a period of time in the United States? The same question is also raised with regard to graduate students.

6. Will patterns of personal problems emerge in any of the three U-curve-type time groupings, and will such patterns, if any, be consistent for graduate and undergraduate foreign students?

CHAPTER III

METHODOLOGY

Introduction

This chapter is a description of the population used in the study and a detailed description of some of the problems encountered in collecting the sample. Also in this chapter will be found a discussion of the instrument used and the statistical methods used to analyze the hypotheses.

Procedure

In general terms one may describe the population as that of a body of students from other countries studying at Oklahoma State University in the Spring semester of 1967. This potential foreign student population was further limited because certain factors were controlled as follows: (1) Only male students were used in the study; (2) the students were grouped in two very broad age groups under the headings of "Graduate Students" and "Undergraduate Students"; (3) the population had had very little contact with Americans abroad; (4) the students were all single; and (5) none of the population had been in the United States previously. So one may characterize the population as students from other countries studying at Oklahoma State University in the Spring semester of 1967; and the population may be further characterized as consisting of male students in two

broad categories, namely, the graduate and undergraduate categories; students who have not had previous contact with Americans abroad nor in the United States; and students who are all single.

All the students who met the criteria as set forth in the above paragraph were divided into groups according to the length of stay in the United States. Group I consisted of students who had been here for a period of one to ten months; Group II consisted of students who had been here for a period of eleven to twenty-one months; and Group III consisted of students who had been here for a period of twenty-two months or more. These groups were further divided into undergraduate and graduate groups. All students were given a number, and a random sample of thirty students was chosen from each graduate group of 60 students and each undergraduate group of 60 students. The students were sent a letter asking if they would participate in the study and, if so, indicating that they should appear at a group meeting for testing on a certain date. Of the first group of sixty potential students, twelve students came to the first meeting and were tested. A follow-up letter was sent out to the forty-eight students who had not appeared, and in response to the follow-up letter a total of five students appeared for testing. Letters for Group II were sent out, and of a potential group of sixty students, eight students appeared for the group meeting. A follow-up letter was sent out, and in response to this letter three students appeared. Letters to the students who were grouped in Group III were then sent out. Of the potential population of sixty students in Group III, nine students came to the meeting and five responded to the follow-up letter. It was felt by the writer that forty-two students, which represented

23 per cent of the total population, did not adequately represent the proposed population of one hundred eighty students chosen at random from the total potential population of students studying at Oklahoma State University. In addition to this fact, the researcher observed that those who responded to the initial letters were friends and former counselees of the examiner.

It was decided at this point, since the collected sample was far from adequate, that if the study was to continue, random sampling would have to be abandoned and the entire potential population would have to be included in the study. Thereafter, the following three methods of data collection were used: (1) the writer saw students personally through contacts in the library; (2) students that visited the writer's office were asked to participate; and (3) those students not seen through personal contact were mailed an inventory with a cover letter asking them to participate by answering the instrument and returning it by mail.

One hundred and fifty-five students who were seen personally by the writer responded and forty-four students returned the inventory by mail, bringing the total respondents to one hundred ninety-nine out of a potential student population of two hundred seventy. This meant that 74 per cent of the total potential population that qualified under the control stipulations participated in this study.

In order that the collected sample might be more fully understood, two areas were chosen for further investigation. The writer felt that those students who mailed in the inventory should be compared with those students who responded to personal contact in order to determine whether differences existed. Twelve students were randomly

selected from the mailed-in test inventories of forty-four students, and twelve test inventories were selected randomly from the one hundred fifty-five students who were seen personally. The Mann-Whitney U test was applied to the two samples and a "U" of 61.5 was obtained. To be significant at the .05 level, the "U" must be 37 or less; therefore, it was concluded that the mailed-in test inventories did not differ significantly from the test inventories obtained from those students who were seen personally.

The writer further felt that information concerning a possible difference between the volunteers and those who chose not to volunteer should be obtained. From the group of non-volunteers twenty-five students were randomly selected and asked to participate in the study. A strong appeal was made, asking these students to cooperate in the study; and, out of the twenty-five non-volunteers, ten students participated in the study. Ten students from the volunteer group were randomly chosen to be a comparison group. Again, the Mann-Whitney "U" was applied to the groups, and a "U" of 44.5 was obtained. For this "U" to be significant at the .05 level, the "U" must be 23 or less. Therefore, it was concluded that the non-volunteers did not differ from the volunteers with respect to how they answered the inventory.

In view of the above findings, the writer concluded that the collected sample of one hundred ninety-nine students fairly adequately represented the total potential foreign student population.

The population used in the study was distributed over twenty-nine different countries, and a summary of this distribution is contained in the following chart.

| Country | Number in Sample | Per Cent of Sample | Total Popula- tion at O.S.U. | Per Cent of Total Population |
|------------------|------------------------|--------------------------|---------------------------------------|------------------------------------|
| 1. India | 47 | 24.0 | 2 78 | 18.5 60 |
| 2. China | 41 | 21.0 | 1 96 | 22.8 43 |
| 3. Pakistan | 19 | 10.0 | 3 40 | 9.5 50 |
| 4. Columbia | 6 | 3.0 | 12 | 2.8 50 |
| 5. Ethiopia | 3 | 2.0 | 5 | 1.1 60 |
| 6. Japan | 4 | 2.0 | 10 | 2.4 40 |
| 7. Thailand | 10 | 5.0 | 5 25 | 5.9 40 |
| 8. Korea | 8 | 4.0 | 21 | 5.0 38 |
| 9. Egypt | 3 | 2.0 | 13 | 3.0 23 |
| 10. Nigeria | 4 | 2.0 | 6 | 1.4 67 |
| 11. Afganistan | 1 | 1.0 | 1 | .2 100 |
| 12. Iraq | 3 | 2.0 | 11 | 2.6 27 |
| 13. Brazil | 2 | 1.0 | 2 | .5 100 |
| 14. Malay | 1 | 1.0 | 1 | .2 100 |
| 15. Greece | 2 | 1.0 | 2 | .5 100 |
| 16. Yugoslavia | 1 | 1.0 | 1 | .2 100 |
| 17. Jamaica W.I. | 3 | 2.0 | 6 | 1.4 50 |
| 18. Iran | 20 | 10.0 | 4 30 | 7.1 67 |
| 19. England | 2 | 1.0 | 2 | .5 100 |
| 20. Mexico | 4 | 2.0 | 9 | 2.1 45 |
| 21. Okinawa | 2 | 1.0 | 2 | .5 100 |
| 22. Bolivia | 2 | 1.0 | 2 | .5 100 |
| 23. Costa Rica | 1 | 1.0 | 2 | .5 50 |
| 24. Lebanon | 2 | 1.0 | 12 | 2.8 17 |
| 25. Venezuela | 4 | 2.0 | 14 | 3.3 29 |
| 26. Arabia | 1 | 1.0 | 8 | 1.9 13 |
| 27. Palestine | 1 | 1.0 | 1 | .2 100 |
| 28. Guyana | 1 | 1.0 | 2 | .5 50 |
| 29. Syria | 1 | 1.0 | 6 | 1.4 17 |
| | <u>199</u> | <u>*100.00</u> 107 | <u>420</u> | |

*Per Cent of Sample adds to more than 100% because fractions were rounded to the nearest whole number

Instrumentation

The Michigan International Student Problem Inventory (MISPI) developed by John Porter, was used to identify problems of foreign students. This inventory is made up of one hundred thirty-two problems often encountered by foreign students, and the purpose of this instrument is to help student personnel workers, or others interested in

helping foreign students, to systematically identify problem areas that are troubling the foreign students. (Porter, 1965).

The M.I.S.P.I. does not claim to be a test, because it cannot measure the scope or depth of student problems. It will, however, identify problem areas and provide the interviewer with clues concerning which problem areas are of greatest concern. Porter states:

The purpose and intent of the M.I.S.P.I. can be divided into four general categories.

I. To conduct research on the problems of students and groups of students from other countries.

II. To facilitate counseling interviews.

III. To provide a means for group surveys which might help identify needed college program changes.

IV. To provide faculty members and other student personnel workers with an instrument for orientation and discussion.

The inventory consists of eleven major categories relating to recognized student personnel services. They are: (Porter, 1965)

I. Admission-Selection Problems - This section consists of such items as evaluation of credits, choosing college subjects, and registration.

II. Orientation Services Problems - This section deals with an adequate introduction to the academic, social and practical aspects of campus life.

III. Academic Record Problems - This section deals with grades, tests, evaluation, degrees, reports and papers, and faculty adviser.

IV. Social-Personal Problems - This section deals with homesickness, sexual customs in the U.S.A., and inter-personal relationships.

V. Living-Dining Problems - This section deals with the difficulty of finding familiar food, housing problems, and room-mate problems.

VI. Health Service Problems - This section deals with diet, rest, tension, and physical illness.

VII. Religious Service Problems - This section deals with U.S. religious practices, and no opportunity to observe the student's own religion.

VIII. English Language Problems - This section deals with English: listening to English, writing English, and using U. S. slang.

IX. Student Activity Problems - This section deals with such problems as dating, acceptance into social groups, and lack of opportunity to meet American students.

X. Financial Aid Problems - This section deals with such problems as lack of money to meet expenses, money from home, part-time work, and the expense of merchandise in the United States.

XI. Placement Service Problems - This section deals with such problems as finding a job on returning home, trying to extend stay in the U.S.A., trying to become a U.S. citizen, and being concerned about the possible usefulness of a U.S. education back home.

It is important to establish some validity to an instrument of this sort, because it claims to present problems that are usually common and usually unique to foreign students. To establish concurrent validity Porter gave the Mooney Problem Check List to a group of one hundred eight foreign students and fifty American students. This showed a difference at the .05 significance level between mean scores of the American students and the foreign students. The same group was given the M.I.S.P.I., and it, too, discriminated between the Americans and the foreign students at the .05 level of significance (Porter, 1965).

In an item inspection Porter also found that the number of statements checked at least once by a group of foreign students on the M.I.S.P.I. was significantly higher (.05 level) than the number of statements checked at least once by a group of American students. This inspection is another way of illustrating the significant difference between the foreign student group and the American group (Porter, 1965).

The two tests mentioned above suggest that the M.I.S.P.I. is valid for differentiating between the problems of foreign students and the problems of United States students (Porter, 1965).

Although reliability estimates are not high, Porter is able to demonstrate moderate reliability for scales of this type. A reliability estimate of .58 was found for the M.I.S.P.I. by using the Kuder-Richardson Formula for the total scale, and a total scale reliability estimate of .67 was found by using the Spearman-Brown Split Half Method. Subscale reliability estimates ranged from .47 to .76, using the Kuder-Richardson Formula (Porter, 1965).

Measures of central tendency for the one hundred eight foreign students showed an average of 15.06 items checked per student. The median number of items checked was 12.50, and the mode was 17.00 of the 132 items of the M.I.S.P.I. It was found that one hundred twenty-seven of the items were checked by at least one student. The highest number of items checked by an individual was fifty-three. (Porter, 1965).

The inventory is divided into eleven categories, represented by twelve problems listed for each category. The students are asked to circle each statement if it is a problem that presently concerns them. After this is done, the student is then asked to place an "X" in the circle by each statement that troubles him the most.

This is a non-timed inventory, and most students finished in thirty-five minutes. All directions for administration of the inventory are on the front of the booklet.

This test may be seen in Appendix A.

Data Analysis

The Mann-Whitney "U" Statistical Test was used to test if one time group differed significantly from each of the other two time groups.

Seigel (1956) states, in his book on nonparametric statistics, that "... when at least ordinal measurement has been achieved, the Mann-Whitney U Test may be used to test whether two independent groups have been drawn from the same population." This test was chosen because of its usefulness as a statistical research tool, and because it is appropriate to use on a non-normal population. Seigel (1956) has stated that:

This is one of the most powerful nonparametric tests, and it is a most useful alternative to the parametric "t" test when the researcher wishes to avoid the "t" test assumption of normal distribution, or when the measurement in the research is weaker than interval scaling.

In this study, the Mann-Whitney U Test is used to determine whether the graduate time groups differ significantly from the other time groups. Graduate groups are compared with undergraduate groups in terms of the number of problems checked and the problem categories checked.

Seigel (1956) states that when large numbers are used ($N \geq 20$), the sampling distribution of the "U" rapidly approaches the normal distribution.

The Kruskal-Wallis One Way Analysis of Variance was used as one of the statistical tests to analyze the data.

Seigel (1956) says this about the Kruskal-Wallis Test:

The Kruskal-Wallis One Way Analysis of Variance by ranks is an extremely useful test for deciding whether "K", Independent Samples, are from different populations. The Kruskal-

Wallis technique lists the null hypothesis that "K" samples come from the same population or from identical populations with respect to averages.

Sample values almost always differ somewhat, but often the question is whether the difference is enough for one to say with confidence that the samples are from different populations. The data in this study call for such an analysis and decision. There are three groups of graduate students and three groups of undergraduate students, and it must be determined whether these groups differ from one another with respect to several variables. Each variable constitutes a separate analysis.

The Kruskal-Wallis test assumes that the variable under study has an underlying continuous distribution, and it also requires at least ordinal measurement of that variable.

The Spearman Rank Correlation Coefficient was used to determine if there was a correlation between the problems checked as severe and problems checked as non-severe.

Of the statistics based on ranks, the Spearman Rank Correlation Coefficient was the earliest to be developed, and it is perhaps the best known test of this type. Seigel (1956) says,

It is a measure of association which requires that both variables be measured in at least an ordinal scale so that the objects or individuals under study may be ranked into ordered series.

One of the hypotheses under study is to determine the amount of correlation between two types of problems. Students indicate on the test whether the problem worrying them is either severe or non-severe, and the Spearman Rank Correlation Coefficient will be used to determine if the correlation between the number of non-severe

problems checked and the number of severe problems checked. The correlation found will be checked for significance at the alpha .05 level by using E. G. Olds (1938) table of critical values of r 's when the Spearman Rank Correlation Coefficient is used (Siegel, 1956).

In addition to these tests mentioned above, the mean number of problems checked, the mean age, and the mean number of months in the United States were also determined from these data.

Nonparametric statistics were chosen to be used as the instruments for data analyses because the group under consideration could not be considered to represent a normal population because of variability in terms of race, English ability, and intelligence. In addition to this the population used in this study was not selected at random.

Discussion of Variables

The variables will be discussed in terms of the independent and dependent variables, the controlled restricting variables, and the uncontrolled irrelevant variables.

The writer defines the independent variable as the characteristic in which two groups are made to differ. Time in the United States is one independent variable. There are three fixed time groups, and they are: (1) the one to ten month group, (2) the eleven to twenty-one month group, and (3) the twenty-two months or more group. A second independent variable is the student classification division. Two groups were identified, and they are: (1) the graduate group classification, and (2) the undergraduate group classification.

The dependent variable is defined as the characteristic observed

but not directly manipulated by the experimenter. The problems checked on the inventory become the basis for the dependent variable. The expression of personal problems took three forms, which are: (1) non-severe problems checked, (2) severe problems checked, and (3) problem categories.

There are several restricting variables identifiable in this study. The criteria used to screen students used in the study are as follows: (1) only males were used; (2) only unmarried students were used; (3) only students who had never lived in the United States were used; (4) only students with very little contact with Americans abroad were used. These variables are called controlled restricted variables.

There are several uncontrolled irrelevant variables that have an unknown but insignificant influence on the study. All nationalities of foreign students were used, but since other similar studies indicate that this variable has little influence on the results, it is assumed in this study that this influence is of little consequence. English proficiency will have an unknown influence on this study. However, it is assumed to be of slight influence, because all students must demonstrate a certain level of English proficiency on a standardized English test before they will be accepted for study at Oklahoma State University.

Another uncontrolled variable is the influence of attrition of students studying in the United States. Many students go back home after about eighteen months in the United States, thus leaving a rather select body of students to comprise the twenty-two months plus group. Of the uncontrolled variables, the least is known about

this one; however, the study indicates that there are no discernable differences between Group I (1-10 mo.) and Group III (22 mo. plus).

CHAPTER IV

RESULTS

Introduction

In this chapter the writer presents the data in table form, followed by an analysis of the data. The statistical tests used to analyze the data are the Mann-Whitney U nonparametric test and the Kruskal-Wallis One Way Analysis of Variance nonparametric test. These tests enable one to determine if there are significant differences between groups and among groups. Following the presentation and analysis of the data, a discussion of the testing of the Hypotheses will be presented. In the discussion of the Hypotheses, graphs will be presented to illustrate more adequately significant findings as they relate to the Hypotheses. The chapter concludes with a summary of the results and a presentation of certain patterns that developed among the various groups with regard to problem categories.

Data Presentation and Analysis of Data

The relationship between the number of non-severe problems checked by one graduate group as compared to the number of non-severe problems checked by each of the other two graduate groups is presented in Table I.

TABLE I

COMPARISON OF GRADUATE STUDENTS WITH
REGARD TO THE NUMBER OF NON-SEVERE
PROBLEMS CHECKED BY TIME GROUPS

| GROUPS BEING COMPARED | MANN-WHITNEY U TEST | KRUSKAL-WALLIS TEST (H) |
|------------------------------|------------------------|----------------------------|
| Group I with Group II | .267 | |
| Group I with Group III | 1.697 | |
| Group II with Group III | 1.417 | |
| Group I, Group II, Group III | | 3.228 |

From the comparison of the number of non-severe problems checked by the three graduate groups, it was determined that none of the groups differed significantly in the number of non-severe problems checked. More specifically, Group I (1-10 mo.) did not indicate that they had significantly more problems than Group II (11-21 mo.); Group I (1-10 mo.) did not have significantly more problems of the non-severe nature than Group III (22 mo. plus), and Group II (11-21 mo.). The statistical test used to determine the preceding results was the Mann-Whitney U test.

The Kruskal-Wallis Analysis of Variance test did not show that the three groups varied in any significant way.

The relationship between the number of non-severe problems checked by one undergraduate group as compared to the number of non-severe problems checked by each of the other two undergraduate groups is presented in Table II.

TABLE II
COMPARISON OF UNDERGRADUATE STUDENTS WITH
REGARD TO THE NUMBER OF NON-SEVERE
PROBLEMS CHECKED BY TIME GROUPS

| GROUPS BEING COMPARED | MANN-WHITNEY U TEST | KRUSKAL-WALLIS TEST (H) |
|------------------------------|------------------------|----------------------------|
| Group I with Group II | 1.537 | |
| Group I with Group III | .285 | |
| Group II with Group III | 1.271 | |
| Group I, Group II, Group III | | 2.512 |

Table II indicates that none of the undergraduate groups differed significantly in the number of non-severe problems checked by each group. This means that Group I (1-10 mo.) did not check significantly greater amounts of non-severe problems than did Group II (11-21 mo.); Group I (1-10 mo.) did not check significantly more problems than did Group III (22 mo. plus); and Group II (11-21 mo.) did not check significantly more problems than did Group III (22 mo. plus). The statistical test used to determine this was the Mann-Whitney U test.

It was also determined through the Kruskal-Wallis One Way Analysis of Variance that the three groups did not significantly differ among themselves.

The data found in Tables I and II relate directly to Hypothesis One. Hypothesis One states that there will be no significant difference between undergraduate groups when the groups are compared with one another with regard to the number of non-severe problems the undergraduate group checked or the number of non-severe problems the

graduate group checked. Essentially, the purpose of this Hypothesis was to determine if personal, non-severe problems significantly increased, decreased, or fluctuated over a period of time. For example, the writer was interested in determining if Graduate Group I (1-10 mo.) had significantly more personal problems than Group II (11-21 mo.) or Group III (22 mo. plus). The three undergraduate groups were compared with one another, and the three graduate groups were compared separately with one another.

So, from an analysis of the data, it was determined that there were no significant differences between these various undergraduate time groupings with regard to the number of non-severe problems each group checked. Therefore, the null hypothesis of no significant difference failed to be rejected; therefore, it was accepted.

The results of testing Hypothesis One indicate that this study does not support the research done by Sewell and Davidsen (1961), Lysgaard (1954), Morris (1960), Porter (1965), and Hadwin (1964), that problems of foreign students increase over a period of time and generally follow a U-curve pattern. (For details see Table III.)

Table III presents the mean figures of non-severe problems, severe problems, age, and number of months in the United States for undergraduate time Groups I, II, and III.

It can be seen from an inspection of Table III that Group II actually experienced fewer non-severe problems than did Groups I and III. This would not be expected under the U-curve theory, because in terms of this theory the Group II students should be very dissatisfied and should indicate more personal problems. It is also

interesting to note that the students who have been in the United States for the longest periods of time experience almost as many personal problems on an average as the new students. One would expect students who are new to our culture to have more problems than the students who are experienced in our culture.

TABLE III

MEANS FOR UNDERGRADUATE GROUPS

| GROUPS | NON-SEVERE PROBLEMS | SEVERE PROBLEMS | AGE | MONTHS IN U.S. |
|-----------|---------------------|-----------------|-------|----------------|
| Group I | 22.75 | 6.07 | 23.42 | 5.21 |
| Group II | 16.38 | 4.61 | 24.14 | 18.00 |
| Group III | 21.78 | 6.70 | 24.13 | 36.89 |

It also may be seen from Table III that severe problems followed the same pattern as non-severe problems, in that Group II had fewer problems than Groups I and III, and the newest students had slightly fewer problems than the students here for the longest period of time.

The relationship between the number of severe problems checked by one graduate group as compared to the number of severe problems checked by each of the other two graduate groups is presented in Table IV.

Table IV indicates that none of the graduate groups differed significantly in the number of severe problems checked by each group. That is, Group I (1-10 mo.) did not check significantly more severe

problems than did Group II (11-21 mo.); Group I (1-10 mo.) did not check significantly more severe problems than Group III (22 mo. plus); and Group II (11-21 mo.) did not check significantly more severe problems than Group III (22 mo. plus). The above data were obtained from the results of the Mann-Whitney U test.

TABLE IV

COMPARISON OF GRADUATE STUDENTS WITH REGARD
TO THE NUMBER OF SEVERE PROBLEMS
CHECKED BY TIME GROUPS

| GROUPS BEING COMPARED | MANN-WHITNEY U TEST | KRUSKAL-WALLIS TEST (H) |
|------------------------------|------------------------|----------------------------|
| Group I with Group II | .484 | |
| Group I with Group III | .767 | |
| Group II with Group III | .429 | |
| Group I, Group II, Group III | | .679 |

The Kruskal-Wallis Test of Variance indicates that the groups did not vary significantly among themselves.

The relationship between the number of severe problems checked by one undergraduate group as compared to the number of severe problems checked by each of the other two undergraduate groups is presented in Table V.

Table V indicates that none of the undergraduate groups differed significantly in the number of severe problems checked by each group. That is, Group I (1-10 mo.) did not check significantly more severe problems than did Group II (11-21 mo.); Group I (1-10 mo.) did not

check significantly more severe problems than did Group III (22 mo. plus); and Group II (11-21 mo.) did not check significantly more severe problems than did Group III (22 mo. plus). The above results were determined by using the Mann-Whitney U test.

TABLE V
COMPARISON OF UNDERGRADUATE STUDENTS WITH
REGARD TO THE NUMBER OF SEVERE PROBLEMS
CHECKED BY TIME GROUPS

| GROUPS BEING COMPARED | MANN-WHITNEY U TEST | KRUSKAL-WALLIS TEST (H) |
|------------------------------|------------------------|----------------------------|
| Group I with Group II | 1.322 | |
| Group I with Group III | .266 | |
| Group II with Group III | 1.474 | |
| Group I, Group II, Group III | | 2.519 |

It was also determined from the results of the Kruskal-Wallis One Way Analysis of Variance that the three groups did not vary significantly.

The data found in Tables IV and V relate directly to Hypothesis Two. Hypothesis Two is much like Hypothesis One, with the exception that Hypothesis Two deals entirely with problems checked as being severe problems. This hypothesis states that there will be no significant difference between groups when the groups are compared with one another with regard to the number of severe problems the graduate group checks or the number of severe problems the undergraduate group checks. Briefly, the purpose of this hypothesis was to determine if

severe problems significantly increase, decrease, or fluctuate over a period of time. Essentially, this hypothesis attempted to find out the same thing as Hypothesis One, with the exception that it dealt entirely with problems checked as severe problems to the foreign student.

With regard to Hypothesis Two, the data suggest that the null hypothesis of no significant difference failed to be rejected; therefore, it was accepted. Again, no significant differences were found between time groups with regard to the number of severe personal problems checked by graduate or undergraduate students. As in Hypothesis One, the testing of Hypothesis Two suggests that severe problems of foreign students do not increase over a period of time, nor do severe problems follow a U-curve pattern. (See Table VI for details.)

Table VI presents the mean numbers for non-severe problems, severe problems, age, and number of months in the United States for Graduate Groups I, II, and III.

Table VI indicates that Graduate Group II has more problems than Group III, but fewer than Group I. Thus, once again it can be seen that the expectation of the U-curve theory that Group II will have more problems than either of the two other groups does not hold up. However, with regard to non-severe problems, Group I follows expectations that the newer student will have more non-severe problems than the student who has been here the longest.

With regard to severe problems, it will be noticed that in line with U-curve expectations Group II has only slightly more problems than do Groups I and III. Also, it can be seen that the group here

the longest has slightly fewer problems than the newest students (Group I). This data is in the U-curve expected direction, but no differences were significant.

TABLE VI
MEANS FOR GRADUATE GROUPS

| GROUPS | NON-SEVERE PROBLEMS | SEVERE PROBLEMS | AGE | MONTHS IN U.S. |
|-----------|---------------------|-----------------|-------|----------------|
| Group I | 19.21 | 5.16 | 26.28 | 5.92 |
| Group II | 18.67 | 5.20 | 27.85 | 16.08 |
| Group III | 15.75 | 4.83 | 28.97 | 47.27 |

In Table VII each of the graduate time groups are compared with one another and the Mann-Whitney U test was used to determine if a significant difference at the .05 level would be found between groups. All possible group comparisons were made. Table VII also presents data related to the Kruskal-Wallis Analysis of Variance of the three graduate time groups in terms of each problem category.

Table VII indicates that when the three graduate time groups are tested for significant differences between groups using the Mann-Whitney U test, in terms of the eleven problem categories, there are eight of the eleven categories that do not show any significant difference at the .05 level. Three of the eleven categories show a significant difference at the .05 level between groups.

More specifically, it will be noticed that Group I (1-10 mo.) answered the questions relative to the Religious Services category

TABLE VII

COMPARISON OF GRADUATE TIME GROUPS IN TERMS OF THE ELEVEN
NON-SEVERE PROBLEM CATEGORIES USING THE MANN-WHITNEY U
AS THE TEST OF SIGNIFICANCE

| Problem Categories | Time Groups | | | Kruskal- Wallis H |
|--------------------------|----------------------------|-----------------------------|------------------------------|-------------------------|
| | Group I vs. Group II | Group I vs. Group III | Group II vs. Group III | |
| | U | U | U | |
| Admission Selection (AS) | 0.96 | 0.86 | 0.08 | 1.14 |
| Orientation Serv. (OS) | 0.20 | 1.09 | 1.27 | 1.88 |
| Academic Record (AR) | 0.47 | 1.34 | 1.05 | 2.14 |
| Social Personal (SP) | 0.33 | 1.11 | 1.23 | 1.89 |
| Living Dining (LD) | 0.29 | 0.10 | 0.15 | 0.08 |
| Health Service (HS) | 0.21 | 0.53 | 0.73 | 0.56 |
| Religious Service (RS) | 2.10* | 0.36 | 1.55 | 4.73* |
| English Language (EL) | 0.24 | 2.34* | 2.99** | 9.41** |
| Student Activity (SA) | 0.23 | 1.77 | 1.72 | 4.04* |
| Financial Aid (FA) | 0.46 | 1.67 | 1.21 | 3.01 |
| Placement Service (PS) | 1.14 | 1.42 | 0.18 | 2.32 |

* Significant at the .05 level

** Significant at the .01 level

significantly differently at the .05 level from the way Group II (11-21 mo.) answered the same questions.

When Group I (1-10 mo.) was compared with Group III (22 mo. plus), it was observed that a significant difference at the .05 level occurred in the category of English Language.

The data in Table VII also reveal a significant difference at the .01 level between Group II (11-21 mo.) and Group III (22 mo. plus) in the category of English Language.

The Kruskal-Wallis One Way Analysis of Variance indicates that there were significant variances at the .05 and .01 levels among the three groups in terms of the categories of Religious Services, English Language, and Student Activities. However, none of the other group comparisons were to the .05 significance level.

The relationship between the non-severe problems between Groups I, II, and III, in terms of mean number of problems, is presented graphically in Figures 1, 2, and 3. Mean scores are used in this discussion to clarify more fully the Mann-Whitney U data because the average reader understands mean scores more readily than U scores.

The tables, beginning with Table VII, in this study indicate if a significant difference exists between time period groups in terms of number of problems checked and problem categories checked; however, the reader cannot determine from the table the direction of the significant difference. Therefore, the figure is designed to show the reader which group has the most problems. The figures show this numerically (mean scores) and graphically.

Also, in contrast to the tables, the figures indicate to the reader that the results of this study, for the most part, do not

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | | |
|------------|----------|------------------------------|------------------------------------|-------|-------|-------|-------|
| | | | 0.0 | . 1.0 | . 2.0 | . 3.0 | . 4.0 |
| Adm | Group I | 1.45 | //////////////// | | | | |
| Sel | Group II | 1.65 | XXXXXXXXXXXXXXXX | | | | |
| Orien | Group I | 1.48 | //////////////// | | | | |
| Serv | Group II | 1.44 | XXXXXXXXXXXXXXXX | | | | |
| Acad | Group I | 2.14 | //////////////////// | | | | |
| Rec | Group II | 1.85 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Soc | Group I | 2.21 | //////////////////// | | | | |
| Per | Group II | 2.26 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Liv | Group I | 1.50 | //////////////// | | | | |
| Din | Group II | 1.50 | XXXXXXXXXXXXXXXX | | | | |
| Hlth | Group I | 1.31 | //////////////// | | | | |
| Serv | Group II | 1.32 | XXXXXXXXXXXXXXXX | | | | |
| Rel* | Group I | 0.57 | ////// | | | | |
| Serv | Group II | 1.15 | XXXXXXXXXXXX | | | | |
| Eng | Group I | 3.14 | //////////////////// | | | | |
| Lang | Group II | 2.76 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Std | Group I | 1.48 | //////////////// | | | | |
| Act | Group II | 2.10 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Fin | Group I | 2.10 | //////////////////// | | | | |
| Aid | Group II | 1.68 | XXXXXXXXXXXXXXXX | | | | |
| Plc | Group I | 1.83 | //////////////// | | | | |
| Serv | Group II | 1.38 | XXXXXXXXXXXXXXXX | | | | |

* Significant at the .05 level

** Significant at the .01 level

Figure 1. Mean Number and Graphic Presentation of Non-Severe Problems for Graduate Group I versus Graduate Group II

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | | | | | | | |
|------------|-----------|------------------------------------|------------------------------------|---|-----|---|-----|---|-----|---|-----|--|
| | | | 0.0 | . | 1.0 | . | 2.0 | . | 3.0 | . | 4.0 | |
| Adm | Group I | 1.45 | //// | | | | | | | | | |
| Sel | Group III | 1.68 | XXXXXXXXXXXXXXXXXXXX | | | | | | | | | |
| Orien | Group I | 1.48 | //// | | | | | | | | | |
| Serv | Group III | 1.81 | XXXXXXXXXXXXXXXXXXXX | | | | | | | | | |
| Acad | Group I | 2.14 | //// | | | | | | | | | |
| Rec | Group III | 1.68 | XXXXXXXXXXXXXXXXXXXX | | | | | | | | | |
| Soc | Group I | 2.21 | //// | | | | | | | | | |
| Per | Group III | 1.81 | XXXXXXXXXXXXXXXXXXXX | | | | | | | | | |
| Liv | Group I | 1.50 | //// | | | | | | | | | |
| Din | Group III | 1.62 | XXXXXXXXXXXXXXXXXXXX | | | | | | | | | |
| Hlth | Group I | 1.31 | //// | | | | | | | | | |
| Serv | Group III | 1.27 | XXXXXXXXXXXXXXXXXXXX | | | | | | | | | |
| Rel | Group I | 0.57 | //// | | | | | | | | | |
| Serv | Group III | 0.84 | XXXXXXXX | | | | | | | | | |
| Eng* | Group I | 3.14 | //// | | | | | | | | | |
| Lang | Group III | 1.41 | XXXXXXXXXXXXXXXXXXXX | | | | | | | | | |
| Std | Group I | 1.48 | //// | | | | | | | | | |
| Act | Group III | 1.00 | XXXXXXXXXXXX | | | | | | | | | |
| Fin | Group I | 2.10 | //// | | | | | | | | | |
| Aid | Group III | 1.35 | XXXXXXXXXXXXXXXXXXXX | | | | | | | | | |
| Plc | Group I | 1.83 | //// | | | | | | | | | |
| Serv | Group III | 1.30 | XXXXXXXXXXXXXXXXXXXX | | | | | | | | | |

* Significant at the .05 level

** Significant at the .01 level

Figure 2. Mean Number and Graphic Presentation of Non-Severe Problems for Graduate Group I versus Graduate Group III

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | | | | | | | |
|------------|-----------|------------------------------|------------------------------------|---|-----|---|-----|---|-----|---|-----|--|
| | | | 0.0 | . | 1.0 | . | 2.0 | . | 3.0 | . | 4.0 | |
| Adm | Group II | 1.65 | //// | | | | | | | | | |
| Sel | Group III | 1.68 | xxxx | | | | | | | | | |
| Orien | Group II | 1.44 | //// | | | | | | | | | |
| Serv | Group III | 1.81 | xxxx | | | | | | | | | |
| Acad | Group II | 1.85 | //// | | | | | | | | | |
| Rec | Group III | 1.68 | xxxx | | | | | | | | | |
| Soc | Group II | 2.26 | //// | | | | | | | | | |
| Per | Group III | 1.81 | xxxx | | | | | | | | | |
| Liv | Group II | 1.50 | //// | | | | | | | | | |
| Din | Group III | 1.62 | xxxx | | | | | | | | | |
| Hlth | Group II | 1.32 | //// | | | | | | | | | |
| Serv | Group III | 1.27 | xxxx | | | | | | | | | |
| Rel | Group II | 1.15 | //// | | | | | | | | | |
| Serv | Group III | 0.84 | xxxx | | | | | | | | | |
| Eng** | Group II | 2.76 | //// | | | | | | | | | |
| Lang | Group III | 1.41 | xxxx | | | | | | | | | |
| Std | Group II | 1.68 | //// | | | | | | | | | |
| Act | Group III | 1.00 | xxxx | | | | | | | | | |
| Fin | Group II | 1.68 | //// | | | | | | | | | |
| Aid | Group III | 1.35 | xxxx | | | | | | | | | |
| Plc | Group II | 1.38 | //// | | | | | | | | | |
| Serv | Group III | 1.30 | xxxx | | | | | | | | | |

* Significant at the .05 level

** Significant at the .01 level

Figure 3. Mean Number and Graphic Presentation of Non-Severe Problems for Graduate Group II versus Graduate Group III

support the U-Curve Theory. That is, if the U-curve theory is to hold up then Group I should always have fewer problems than Group II, and Group II should always have more problems than Group III.

In Figure 1, the data indicate that there is a significant difference at the .05 level between Groups I and II in the category of Religious Services. Group I (1-10 mo.) indicated less concern for the Religious Services category in that they checked an average of 0.57 problems per person, and Group II (11-21 mo.) checked an average of 1.15 problems per person concerning religious problems.

The data of Figure 2 reveal that there is a significant difference at the .05 level between Groups I and III in the category of English Language. Group I (1-10 mo.) expressed more concern than Group III (22 mo. plus), in that Group I checked an average of 3.14 problems per person, and Group III checked an average of 1.41 problems per person.

In Figure 3, one will observe that there is a significant difference at the .01 level between Groups II and III in the category of English Language. Group II (11-21 mo.) checked an average of 2.76 problems per person and Group III (22 mo. plus) checked an average of 1.41 problems per person.

One will note from an examination of Figures 1, 2, and 3 that the data does not lend support to the U-curve theory. If the theory is to hold up then Groups I and III should always have fewer problems checked than Group II.

The data shown in Table VII directly relate to Hypothesis Three, and, beginning with Hypothesis Three, the writer began to examine the way each time group reacted to the eleven problem categories used in

the study. In general, Hypothesis Three states that there will be no significant difference between the three graduate time groupings when the eleven problem groupings of Groups I, II, and III are compared with one another.

The main purpose of this hypothesis is to determine if there are differences within the graduate student groups with regard to specific non-severe problem areas, and to determine whether there is a change over a period of time. The essential issue to be determined is whether one time group can be characterized by certain kinds of problems that are unique and significantly different from any other time group. The instrument used provided for eleven problem categories, covering a range of personal problems commonly experienced by foreign students. To test if any of these specific problem categories was more important for one group than for any other group, each problem category in a group was compared with each problem category in every other group. In this hypothesis, a distinction is made between graduate student time groups and undergraduate student time groups. A distinction is also made between non-severe problems that concern the foreign student and the problems that they consider most troublesome (severe problems) for them. That is, graduate students are analyzed separately from undergraduate students, and non-severe problem categories are considered separately from severe problem categories.

With regard to Hypothesis Three, non-severe problems, the data indicate that the null hypothesis of no significant difference between groups was rejected for sub-hypotheses "a" (Group I compared with Group II), "b" (Group I compared with Group III), and "c"

(Group II compared with Group III).

In summary, one finds that Group I (1-10 mo.), Group II (11-21 mo.), and Group III (22 mo. plus) are characterized by problem areas that are unique to one group, but not necessarily found to be important to the other time groups in the comparison.

Table VIII presents a comparison of the way one graduate time group answered the eleven severe problem categories with the way another graduate time group answered the same categories using the Mann-Whitney U test to determine if the difference between groups was significant at the .05 level. All possible group comparisons have been made. Table VIII also presents data related to Kruskal-Wallis Analysis of Variance of the three graduate time groups in terms of each problem category.

It will be noted that in Table VIII, ten of the eleven problem categories were not answered significantly differently by any of the three graduate groups based on the data related to the Mann-Whitney U Test for significant differences between groups. One category was answered significantly differently at the .05 level in the comparison of Group I (1-10 mo.) and Group II (11-21 mo.). More specifically, Group I answered questions related to the category of Religious Services significantly differently from Group II.

The data in Table VIII also reveal that there is significant variance at the .05 level in the category of Religious Services among all three time groupings. The Kruskal-Wallis One Way Analysis of Variance test indicates that significant variance exists between Graduate Groups I, II, and III in the category of Religious Services.

The relationship between the severe problems of Groups I and II

TABLE VIII

COMPARISON OF GRADUATE TIME GROUPS IN TERMS OF THE ELEVEN SEVERE PROBLEM CATEGORIES USING THE MANN-WHITNEY U AS THE TEST OF SIGNIFICANCE

| Problem Categories | Time Groups | | | Kruskal-Wallis |
|--------------------------|----------------------|-----------------------|------------------------|----------------|
| | Group I vs. Group II | Group I vs. Group III | Group II vs. Group III | |
| | U | U | U | |
| Admission Selection (AS) | 0.10 | 0.20 | 0.29 | 0.09 |
| Orientation Serv. (OS) | 0.46 | 1.74 | 1.09 | 3.22 |
| Academic Record (AR) | 0.47 | 0.01 | 0.46 | 0.29 |
| Social Personal (SP) | 0.14 | 1.05 | 0.82 | 1.78 |
| Living Dining (LD) | 0.34 | 1.02 | 0.64 | 1.09 |
| Health Service (HS) | 0.34 | 0.41 | 0.40 | 0.22 |
| Religious Service (RS) | 1.96* | 1.81 | 0.17 | 3.90* |
| English Language (EL) | 0.85 | 1.90 | 1.15 | 3.79 |
| Student Activity (SA) | 0.52 | 0.06 | 0.43 | 0.31 |
| Financial Aid (FA) | 0.46 | 0.65 | 0.13 | 0.45 |
| Placement Service (PS) | 0.09 | 0.43 | 0.39 | 0.22 |

* Significant at the .05 level

** Significant at the .01 level

in terms of mean number of problems is presented in Figure 4.

The data in Figure 4 reveal that there is a significant difference at the .05 level between Groups I and II in the category of Religious Services. Group II (11-21 mo.) expressed the most concern by checking an average of 0.32 severe problems per person, and Group I (1-10 mo.) checked an average of 0.29 severe problems per person.

The following paragraphs are a continuation of Hypothesis Three, but with an emphasis on severe problem categories checked by graduate students. The data in Table VIII relate directly to this section of Hypothesis Three.

The null hypothesis of no significant difference between Groups I and II (sub-hypothesis "a") and Groups II and III (sub-hypothesis "c") could not be rejected; therefore, it was accepted, based on the data found in Table VIII.

The analysis of the data indicates that the null hypothesis of no significant difference between Graduate Groups I and III (sub-hypothesis "b") was rejected. Graph 4 shows this difference in terms of Religious Services.

Table IX presents a comparison of the way one undergraduate time group answered the eleven problem categories with the way another undergraduate time group answered the eleven problem categories using the Mann-Whitney U test to determine if the difference between groups was significant at the .05 level. All possible group comparisons are presented in Table IX. Table IX also presents data related to the Kruskal-Wallis Analysis of Variance of the three undergraduate time groups in terms of each problem category.

The data in Table IX indicate, based upon the Mann-Whitney U

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | | |
|------------|----------|------------------------------------|------------------------------------|-------|-------|-------|-------|
| | | | 0.0 | . 1.0 | . 2.0 | . 3.0 | . 4.0 |
| Adm | Group I | 0.33 | /// | | | | |
| Sel | Group II | 0.38 | XXXX | | | | |
| Orien | Group I | 0.19 | // | | | | |
| Serv | Group II | 0.35 | XXXX | | | | |
| Acad | Group I | 0.62 | ///// | | | | |
| Rec | Group II | 0.71 | XXXXXXXX | | | | |
| Soc | Group I | 0.55 | ///// | | | | |
| Per | Group II | 0.62 | XXXXXXXX | | | | |
| Liv | Group I | 0.29 | /// | | | | |
| Din | Group II | 0.38 | XXXX | | | | |
| Hlth | Group I | 0.40 | //// | | | | |
| Serv | Group II | 0.41 | XXXX | | | | |
| Rel* | Group I | 0.10 | / | | | | |
| Serv | Group II | 0.32 | XXX | | | | |
| Eng | Group I | 1.38 | //////////////// | | | | |
| Lang | Group II | 0.68 | XXXXXXXX | | | | |
| Std | Group I | 0.29 | /// | | | | |
| Act | Group II | 0.38 | XXXX | | | | |
| Fin | Group I | 0.48 | //// | | | | |
| Aid | Group II | 0.50 | XXXXX | | | | |
| Plc | Group I | 0.55 | ///// | | | | |
| Serv | Group II | 0.47 | XXXXX | | | | |

* Significant at the .05 level

** Significant at the .01 level

Figure 4. Mean Number and Graphic Presentation of Severe Problems for Graduate Group I versus Graduate Group II

TABLE IX

COMPARISON OF UNDERGRADUATE TIME GROUPS IN TERMS OF THE
ELEVEN NON-SEVERE PROBLEM CATEGORIES USING THE
MANN-WHITNEY U AS THE TEST OF SIGNIFICANCE

| Problem Categories | Time Groups | | | Kruskal- Wallis |
|--------------------------|----------------------------|-----------------------------|------------------------------|--------------------|
| | Group I vs. Group II | Group I vs. Group III | Group II vs. Group III | |
| | U | U | U | |
| Admission Selection (AS) | 1.21 | 0.03 | 1.37 | 2.10 |
| Orientation Serv. (OS) | 1.12 | 1.41 | 2.64** | 6.95** |
| Academic Record (AR) | 0.25 | 1.64 | 1.51 | 3.60 |
| Social Personal (SP) | 0.49 | 0.10 | 0.32 | 0.21 |
| Living Dining (LD) | 1.00 | 1.46 | 0.23 | 2.24 |
| Health Service (HS) | 1.63 | 0.64 | 1.38 | 3.07 |
| Religious Service (RS) | 1.06 | 0.15 | 0.96 | 1.26 |
| English Language (EL) | 0.61 | 0.83 | 0.07 | 0.74 |
| Student Activity (SA) | 0.32 | 0.55 | 0.14 | 0.30 |
| Financial Aid (FA) | 1.50 | 0.33 | 1.56 | 2.97 |
| Placement Service (PS) | 2.07* | 0.73 | 1.17 | 3.75 |

* Significant at the .05 level

** Significant at the .01 level

test of significant differences between groups, that of the eleven problem categories nine were not answered significantly differently by the undergraduate groups; and two categories were answered significantly differently by Groups I and II and Groups II and III.

The data indicate that Group I (1-10 mo.) answered the category of Placement Services significantly differently at the .05 level from Group II (11-21 mo.).

The data in Table IX also reveal that Group II (11-21 mo.) answered questions related to Orientation Services significantly differently at the .01 level from Group III (22 mo. plus).

The Kruskal-Wallis Test results indicate that the three undergraduate groups varied significantly at the .05 level in the category of Orientation Services.

The relationship between the non-severe problems between Groups I and II and II and III in terms of mean numbers of problems is presented graphically in Figures 5 and 6.

The data in Figure 5 indicate that there is a significant difference at the .05 level between Groups I and II in the category of Placement Services. Group I (1-10 mo.) expressed more concern with placement than did Group II (11-21 mo.). Group I checked an average of 1.71 problems per person, and Group II checked an average of 0.95 problems per person.

Figure 6 reveals that there is a significant difference at the .01 level between Groups II and III in the category of Orientation Services. Group III (22 mo. plus) expressed a significantly greater concern in the area of orientation than did Group II. Group III (22 mo. plus) checked an average of 2.46 problems per person, and

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | | |
|------------|----------|------------------------------|------------------------------------|------|------|------|------|
| | | | 0.0 | 1.0 | 2.0 | 3.0 | 4.0 |
| Adm | Group I | 1.96 | //// | //// | //// | //// | //// |
| Sel | Group II | 1.33 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Orien | Group I | 1.79 | //// | //// | //// | //// | //// |
| Serv | Group II | 1.14 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Acad | Group I | 2.46 | //// | //// | //// | //// | //// |
| Rec | Group II | 2.43 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Soc | Group I | 2.07 | //// | //// | //// | //// | //// |
| Per | Group II | 1.76 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Liv | Group I | 2.82 | //// | //// | //// | //// | //// |
| Din | Group II | 1.95 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Hlth | Group I | 1.43 | //// | //// | //// | //// | //// |
| Serv | Group II | 0.86 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Rel | Group I | 0.75 | //// | //// | //// | //// | //// |
| Serv | Group II | 0.38 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Eng | Group I | 3.00 | //// | //// | //// | //// | //// |
| Lang | Group II | 2.38 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Std | Group I | 1.79 | //// | //// | //// | //// | //// |
| Act | Group II | 1.67 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Fin | Group I | 2.96 | //// | //// | //// | //// | //// |
| Aid | Group II | 1.52 | xxxx | xxxx | xxxx | xxxx | xxxx |
| Plc* | Group I | 1.71 | //// | //// | //// | //// | //// |
| Serv | Group II | 0.95 | xxxx | xxxx | xxxx | xxxx | xxxx |

* Significant at the .05 level

** Significant at the .01 level

Figure 5. Mean Number and Graphic Presentation of Non-Severe Problems for Undergraduate Group I versus Undergraduate Group II

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | | |
|------------|-----------|------------------------------------|------------------------------------|-------|-------|-------|-------|
| | | | 0.0 | . 1.0 | . 2.0 | . 3.0 | . 4.0 |
| Adm | Group II | 1.33 | //// | | | | |
| Sel | Group III | 1.92 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Orien** | Group II | 1.14 | //// | | | | |
| Serv | Group III | 2.46 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Acad | Group II | 2.43 | //// | | | | |
| Rec | Group III | 3.24 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Soc | Group II | 1.76 | //// | | | | |
| Per | Group III | 2.05 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Liv | Group II | 1.95 | //// | | | | |
| Din | Group III | 1.92 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Hlth | Group II | 0.86 | //// | | | | |
| Serv | Group III | 1.14 | XXXXXXXXXXXX | | | | |
| Rel | Group II | 0.38 | //// | | | | |
| Serv | Group III | 0.78 | XXXXXXXX | | | | |
| Eng | Group II | 2.38 | //// | | | | |
| Lang | Group III | 2.43 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Std | Group II | 1.76 | //// | | | | |
| Act | Group III | 1.68 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Fin | Group II | 1.52 | //// | | | | |
| Aid | Group III | 2.46 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Plc | Group II | 0.95 | //// | | | | |
| Serv | Group III | 1.70 | XXXXXXXXXXXXXXXXXXXX | | | | |

* Significant at the .05 level

** Significant at the .01 level

Figure 6. Mean Number and Graphic Presentation of Non-Severe Problems for Undergraduate Group II versus Undergraduate Group III

Group II (11-21 mo.) checked an average of 1.14 problems per person.

Again, one will note from an examination of Figures 1, 2, and 3 that the data does not lend support to the U-curve theory. If the theory is to hold up then Groups I and III should always have fewer problems checked than Group II.

The data in Table IX relate specifically to Hypothesis Four. Hypothesis Four deals specifically with undergraduate students; in general, it states that there will be no significant difference between the three undergraduate time groupings when the eleven problem category groupings of Groups I, II, and III are compared with one another. The primary purpose of this hypothesis is to determine if one undergraduate time group can be characterized by certain kinds of problems that are significantly different and unique from any other time groups. Again, the eleven problem categories of one group are compared with the same eleven problem categories of every other group. Graduate students are analyzed separately from undergraduate students, and non-severe problem categories are considered separately from severe problem categories.

The analysis of the data found in Table IX indicates that the null hypothesis of no significant difference between Undergraduate Groups I and II (sub-hypothesis "a") and Undergraduate Groups II and III (sub-hypothesis "c") with regard to the eleven problem categories was rejected. In terms of sub-hypothesis "b", the null hypothesis of no difference between Groups I and III failed to be rejected; therefore, it was accepted.

In summary, there are problem categories and problems that are found in one group but that are not found to any significant degree

in the other groups being compared. That is to say, Group I differs from Group II with regard to certain problems, and Group II differs from Group III with regard to certain problems.

Table X presents a comparison of the way undergraduate time groups answered the eleven severe problem categories with the way other undergraduate time groups answered these same categories, using the Mann-Whitney U test to determine if the difference between groups was significant at the .05 level. All possible group comparisons are presented in Table X. Table X also presents data related to the Kruskal-Wallis Analysis of Variance of the three graduate time groups in terms of each problem category.

In Table X the data analyzed by the Mann-Whitney U Test indicate that of the eleven problem categories eight were not answered significantly different at the .05 level by the undergraduate groups, and three categories were answered significantly different by several time groups.

When Group I (1-10 mo.) was compared with Group II (11-21 mo.), it was observed that a significant difference at the .05 level occurred in the category of Health Services.

The table data further reveal that Group I (1-10 mo.) answered questions related to Orientation Services significantly differently at the .05 level from Group III (22 mo. plus).

Table X also indicates that when Group II (11-21 mo.) was compared with Group III, a significant difference at the .05 level was observed in the category of Religious Services.

The Kruskal-Wallis One Way Analysis of Variance reveals in Table X that the three undergraduate time groups vary significantly

TABLE X

COMPARISON OF UNDERGRADUATE TIME GROUPS IN TERMS OF THE ELEVEN SEVERE PROBLEM CATEGORIES USING THE MANN-WHITNEY U AS THE TEST OF SIGNIFICANCE

| Problem Categories | Time Groups | | | Kruskal-Wallis |
|--------------------------|----------------------|-----------------------|------------------------|----------------|
| | Group I vs. Group II | Group I vs. Group III | Group II vs. Group III | |
| | U | U | U | |
| Admission Selection (AS) | 1.05 | 0.12 | 1.00 | 1.25 |
| Orientation Serv. (OS) | 0.86 | 1.96* | 1.02 | 3.92* |
| Academic Record (AR) | 0.37 | 1.86 | 1.25 | 3.84* |
| Social Personal (SP) | 0.83 | 0.16 | 0.81 | 0.81 |
| Living Dining (LD) | 0.48 | 0.10 | 0.66 | 0.43 |
| Health Service (HS) | 2.05* | 0.39 | 1.82 | 4.26* |
| Religious Service (RS) | 1.79 | 0.15 | 1.96* | 3.64 |
| English Language (EL) | 0.38 | 0.16 | 0.51 | 0.28 |
| Student Activity (SA) | 0.54 | 0.23 | 0.74 | 0.56 |
| Financial Aid (FA) | 0.94 | 0.11 | 1.14 | 1.34 |
| Placement Service (PS) | 1.07 | 0.11 | 1.08 | 1.39 |

* Significant at the .05 level

** Significant at the .01 level

with regard to the category of Academic Records. However, when the groups are compared with one another, none of the group comparisons differ significantly. A possible explanation for this is that the Kruskal-Wallis Test uses all of the possible data and is, therefore, a more sensitive test than the Mann-Whitney U Test, which was used for the two-by-two group comparisons.

The relationship between the severe problems between Groups I, II, and III, in terms of mean numbers of problems, is presented graphically in Figures 7, 8, and 9.

In Figure 7 one will note that there is a significant difference between Groups I and II in the category of Health Services. Group I (1-10 mo.) expressed more concern for this area by checking an average of 0.50 severe problems per person, whereas Group II (11-21 mo.) checked only 0.10 severe problems per person.

The data of Figure 8 reveal that a significant difference at the .05 level exists between Groups I and III in the category of Orientation Services. In this comparison it will be noticed that Group III (22 mo. plus) expressed more concern in this area than did Group I (1-10 mo.). Group III checked an average of 0.92 and Group I checked an average of 0.46 severe problems per person.

Figure 9 indicates that there is a significant difference between Groups II and III in the category of Religious Services. Group III (22 mo. plus) checked an average of 0.16 severe problems per person, while Group II (11-21 mo.) did not check any problems in this area.

This next section is a continuation of the discussion to Hypothesis Four in terms of the severe problem categories of undergraduate students. The data shown in Table X relate directly to the testing

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | | |
|------------|----------|------------------------------------|------------------------------------|-----|-----|-----|-----|
| | | | 0.0 | 1.0 | 2.0 | 3.0 | 4.0 |
| Adm | Group I | 0.43 | //// | | | | |
| Sel | Group II | 0.24 | XX | | | | |
| Orien | Group I | 0.46 | ////// | | | | |
| Serv | Group II | 0.62 | XXXXXXX | | | | |
| Acad | Group I | 0.64 | ////// | | | | |
| Rec | Group II | 0.86 | XXXXXXXXXX | | | | |
| Soc | Group I | 0.43 | //// | | | | |
| Per | Group II | 0.48 | XXXXX | | | | |
| Liv | Group I | 0.68 | //////// | | | | |
| Din | Group II | 0.38 | XXXX | | | | |
| Hith* | Group I | 0.50 | ////// | | | | |
| Serv | Group II | 0.10 | X | | | | |
| Rel | Group I | 0.25 | /// | | | | |
| Serv | Group II | 0.00 | | | | | |
| Eng | Group I | 0.79 | //////// | | | | |
| Lang | Group II | 0.90 | XXXXXXXXXX | | | | |
| Std | Group I | 0.39 | //// | | | | |
| Act | Group II | 0.38 | XXXX | | | | |
| Fin | Group I | 0.96 | ////////// | | | | |
| Aid | Group II | 0.29 | XXX | | | | |
| Pic | Group I | 0.54 | ////// | | | | |
| Serv | Group II | 0.29 | XXX | | | | |

* Significant at the .05 level

** Significant at the .01 level

Figure 7. Mean Number and Graphic Presentation of Severe Problems for Undergraduate Group I versus Undergraduate Group II

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | | |
|------------|-----------|------------------------------|------------------------------------|-----|-----|-----|-----|
| | | | 0.0 | 1.0 | 2.0 | 3.0 | 4.0 |
| Adm | Group I | 0.43 | //// | | | | |
| Sel | Group III | 0.38 | XXXX | | | | |
| Orien* | Group I | 0.46 | ///// | | | | |
| Serv | Group III | 0.92 | XXXXXXXXXX | | | | |
| Acad | Group I | 0.64 | ///// | | | | |
| Rec | Group III | 1.24 | XXXXXXXXXXXXXX | | | | |
| Soc | Group I | 0.43 | //// | | | | |
| Per | Group III | 0.54 | XXXXX | | | | |
| Liv | Group I | 0.68 | //////// | | | | |
| Din | Group III | 0.49 | XXXXX | | | | |
| Hlth | Group I | 0.50 | ///// | | | | |
| Serv | Group III | 0.38 | XXXX | | | | |
| Rel | Group I | 0.25 | /// | | | | |
| Serv | Group III | 0.16 | XX | | | | |
| Eng | Group I | 0.79 | //////// | | | | |
| Lang | Group III | 0.92 | XXXXXXXXXX | | | | |
| Std | Group I | 0.39 | //// | | | | |
| Act | Group III | 0.38 | XXXX | | | | |
| Fin | Group I | 0.96 | ////////// | | | | |
| Aid | Group III | 0.78 | XXXXXXXXXX | | | | |
| Plc | Group I | 0.54 | ///// | | | | |
| Serv | Group III | 0.51 | XXXXX | | | | |

* Significant at the .05 level

** Significant at the .01 level

Figure 8. Mean Number and Graphic Presentation of Severe Problems for Undergraduate Group I versus Undergraduate Group III

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | | | | | | | |
|------------|-----------|------------------------------------|------------------------------------|---|-----|---|-----|---|-----|---|-----|--|
| | | | 0.0 | . | 1.0 | . | 2.0 | . | 3.0 | . | 4.0 | |
| Adm | Group II | 0.24 | // | | | | | | | | | |
| Sel | Group III | 0.38 | XXXX | | | | | | | | | |
| Orien | Group II | 0.62 | ////// | | | | | | | | | |
| Serv | Group III | 0.92 | XXXXXXXXXX | | | | | | | | | |
| Acad | Group II | 0.86 | ////////// | | | | | | | | | |
| Rec | Group III | 1.24 | XXXXXXXXXXXXXX | | | | | | | | | |
| Soc | Group II | 0.48 | //// | | | | | | | | | |
| Per | Group III | 0.54 | XXXXX | | | | | | | | | |
| Liv | Group II | 0.38 | //// | | | | | | | | | |
| Din | Group III | 0.49 | XXXXX | | | | | | | | | |
| Hlth | Group II | 0.10 | / | | | | | | | | | |
| Serv | Group III | 0.38 | XXXX | | | | | | | | | |
| Rel* | Group II | 0.00 | | | | | | | | | | |
| Serv | Group III | 0.16 | XX | | | | | | | | | |
| Eng | Group II | 0.90 | ////////// | | | | | | | | | |
| Lang | Group III | 0.92 | XXXXXXXXXX | | | | | | | | | |
| Std | Group II | 0.38 | //// | | | | | | | | | |
| Act | Group III | 0.38 | XXXX | | | | | | | | | |
| Fin | Group II | 0.38 | //// | | | | | | | | | |
| Aid | Group III | 0.78 | XXXXXXXXXX | | | | | | | | | |
| Plc | Group II | 0.29 | /// | | | | | | | | | |
| Serv | Group III | 0.51 | XXXXX | | | | | | | | | |

* Significant at the .05 level

** Significant at the .01 level

Figure 9. Mean Number and Graphic Presentation of Severe Problems for Undergraduate Group II versus Undergraduate Group III

of Hypothesis Four.

The data suggest that the null hypothesis of no significant difference between groups with regard to the eleven problem categories was rejected for sub-hypothesis "a" (Group I and Group II comparison), sub-hypothesis "b" (Group I and Group III comparison), and sub-hypothesis "c" (Group II and Group III comparison). This means that when each time group was compared with the other time groups, there was at least one of the eleven categories in each comparison which was answered significantly differently by one of the groups.

In summary, it was determined that, in each time group comparison, one of the two groups being compared indicated that they had significantly more concern with a specific group of problems. Therefore, a particular time group of students can be characterized by certain kinds of problems that the other group doesn't have to the same extent.

Table XI presents a comparison of Undergraduate Groups I, II, and III with regard to the number of non-severe problems checked by each group.

TABLE XI

A COMPARISON OF GRADUATE GROUPS WITH UNDERGRADUATE GROUPS IN TERMS OF THE NUMBER OF NON-SEVERE PROBLEMS CHECKED BY EACH TIME GROUP USING THE MANN-WHITNEY U TEST OF SIGNIFICANT DIFFERENCE

| | | Undergraduate | | |
|----------|----------------------------|-----------------------|-------------------------|----------------------------|
| | | Group I (1-10 mo.) | Group II (11-21 mo.) | Group III (22 mo. plus) |
| Graduate | Group I (1-10 mo.) | U = 0.816 | | |
| | Group II (11-21 mo.) | | U = 1.127 | |
| | Group III (22 mo. plus) | | | U = 1.774 |

* Significant at the .05 level

In Table XI it will be observed that none of the groups, when tested for significant differences using the Mann-Whitney U Test, reached the .05 level of significance. More specifically, when each graduate time group was compared with its corresponding undergraduate time group in terms of the number of non-severe problems checked, it was found that the graduate groups did not check significantly more problems than did the undergraduate groups.

The data in Table XI relate directly to the testing of Hypothesis Five. In Hypotheses Five and Six, a comparison of the undergraduate students with the graduate students is begun, and in this analysis the total numbers of problems checked per group in the eleven problem categories, as they relate to a comparison of undergraduate and graduate students, are compared.

Hypothesis Five states that there will be no significant difference found between undergraduate and graduate students in the number of problems checked in either the non-severe problem area or the severe problem area. The primary purpose of this hypothesis is to determine if graduate students studying in the United States for a certain length of time have more problems than undergraduate students studying in the United States for a similar length of time. Therefore, each graduate student time group was compared to its undergraduate student counterpart, with regard to the number of non-severe problems the group has and the number of severe problems the group has.

An analysis of the data indicate that the null hypothesis of no significant difference in number of problems checked, when Group I is compared with Group I (sub-hypothesis "a"), Group II is compared with Group II (sub-hypothesis "b"), and when Group III is compared with

Group III, failed to be rejected; therefore, it was accepted.

In summary, no difference was found to exist between the undergraduate time groups and the graduate time groups with regard to the number of severe or non-severe problems checked. Therefore, based upon data in Table XI, it was concluded that undergraduate students do not have significantly more problems than do graduate students in any of the three time group comparisons.

Table XII presents a comparison of Undergraduate Groups I, II, and III with Graduate Groups I, II, and III, with regard to the number of non-severe problems checked by each group using the Mann-Whitney U test to determine if the difference between groups was significant at the .05 level.

TABLE XII

A COMPARISON OF GRADUATE GROUPS WITH UNDERGRADUATE GROUPS IN TERMS OF THE NUMBER OF SEVERE PROBLEMS CHECKED BY EACH TIME GROUP USING THE MANN-WHITNEY U TEST OF SIGNIFICANT DIFFERENCE

| | | Undergraduate | | |
|----------|----------------------------|-----------------------|-------------------------|----------------------------|
| | | Group I (1-10 mo.) | Group II (11-21 mo.) | Group III (22 mo. plus) |
| Graduate | Group I (1-10 mo.) | U = 0.344 | | |
| | Group II (11-21 mo.) | | U = 0.734 | |
| | Group III (22 mo. plus) | | | U = 1.234 |

* Significant at the .05 level

Table XII shows that none of the group comparisons, when tested for significant differences using the Mann-Whitney U Test, reached the .05 level of significance. When each graduate time group was compared with its corresponding undergraduate time group, it was found that the

graduate groups did not check significantly more problems as being severe than did the undergraduate time groups.

The data found in Table XII enabled the writer to further test Hypothesis Five in terms of severe problems checked by the graduate and undergraduate students.

Once again, no significant differences were found to exist between the undergraduate students and the graduate students with regard to the number of severe problems they checked. Therefore, the null hypothesis for sub-hypothesis "a" (Graduate Group I compared with Undergraduate Group I), sub-hypothesis "b" (Graduate Group II compared with Undergraduate Group II), and sub-hypothesis "c" (Graduate Group III compared with Undergraduate Group III) failed to be rejected; therefore, it was accepted, based upon the data found in Table XII.

In summary, it was found that undergraduate students do not have significantly more severe problems than do graduate students.

Table XIII presents a comparison of the way graduate time groups answered the eleven problem categories with the way the undergraduate time groups answered the same eleven problem categories in terms of non-severe problems checked using the Mann-Whitney U test to determine if the difference between groups was significant at the .05 level.

Table XIII shows that when graduate time groups were tested with the Mann-Whitney U test to determine if they were significantly different from undergraduate time groups in terms of the eleven problem categories, significant differences were found in the following categories: Academic Records, Living Dining, Religious Services, and Financial Aids.

When Undergraduate Group I (1-10 mo.) was compared with Graduate

TABLE XIII

A COMPARISON OF THE GRADUATE TIME GROUPS WITH THE UNDERGRADUATE
TIME GROUPS IN TERMS OF THE ELEVEN NON-SEVERE
PROBLEM CATEGORIES USING THE MANN-WHITNEY U
AS THE TEST OF SIGNIFICANCE

| Problem Categories | Time Groups | | |
|--------------------------|---------------------------------|-----------------------------------|-------------------------------------|
| | Grad Gp I vs. U-Grad Gp I | Grad Gp II vs. U-Grad Gp II | Grad Gp III vs. U-Grad Gp III |
| | U | U | U |
| Admission Selection (AS) | 1.27 | 0.96 | 0.61 |
| Orientation Serv. (OS) | 0.76 | 0.14 | 1.41 |
| Academic Record (AR) | 0.44 | 0.09 | 3.37** |
| Social Personal (SP) | 0.32 | 1.04 | 0.45 |
| Living Dining (LD) | 2.47** | 1.27 | 1.07 |
| Health Service (HS) | 0.30 | 1.55 | 0.43 |
| Religious Service (RS) | 0.83 | 2.12* | 0.25 |
| English Language (EL) | 0.10 | 0.95 | 1.45 |
| Student Activity (SA) | 0.70 | 0.03 | 1.36 |
| Financial Aid (FA) | 1.05 | 0.76 | 2.19* |
| Placement Service (PS) | 0.20 | 0.54 | 1.02 |

* Significant at the .05 level

** Significant at the .01 level

Group I (1-10 mo.), it was found that Undergraduate Group I differed significantly at the .01 level from Graduate Group I in the category of Living Dining.

When Undergraduate Group II (11-21 mo.) was compared with Graduate Group II (11-21 mo.), it was found that Graduate Group II differed significantly at the .05 level from Undergraduate Group II in the category of Religious Services.

When Undergraduate Group III (22 mo. plus) was compared with Graduate Group III (22 mo. plus), it was found that Undergraduate Group III differed significantly, at the .01 level, from Graduate Group III in the category of Academic Records.

The relationship between non-severe problems between Graduate Groups I, II, III, and Undergraduate Groups I, II, and III, is presented graphically in Figures 10, 11, and 12.

In Figure 10 one can see that a significant difference, at the .01 level, exists between Graduate Group I (1-10 mo.) and Undergraduate Group I (1-10 mo.) in the category of Living Dining. Graduate Group I checked an average of 1.50 problems per person, while Undergraduate Group I checked an average of 2.82 problems per person.

Figure 11 indicates that there is a significant difference between Graduate Group II (11-21 mo.) and Undergraduate Group II (11-21 mo.) in the category of Religious Services. Graduate Group II checked an average of 1.15 problems per person, and Undergraduate Group II checked an average of 0.38 problems per person.

Figure 12 indicates that there are significant differences, at the .01 and .05 levels, between Graduate Group III (22 mo. plus), and Undergraduate Group III (22 mo. plus) in the categories of

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | | |
|------------|-------------|------------------------------|------------------------------------|-------|-------|-------|---|
| | | | 0.0 | . 1.0 | . 2.0 | . 3.0 | . |
| Adm | Grad Gp I | 1.45 | ////////// | | | | |
| Sel | U-Grad Gp I | 1.96 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Orien | Grad Gp I | 1.48 | ////////// | | | | |
| Serv | U-Grad Gp I | 1.79 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Acad | Grad Gp I | 2.14 | ////////// | | | | |
| Rec | U-Grad Gp I | 2.46 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Sec | Grad Gp I | 2.21 | ////////// | | | | |
| Per | U-Grad Gp I | 2.07 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Liv** | Grad Gp I | 1.50 | ////////// | | | | |
| Din | U-Grad Gp I | 2.82 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Hlth | Grad Gp I | 1.31 | ////////// | | | | |
| Serv | U-Grad Gp I | 1.43 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Rel | Grad Gp I | 0.57 | ////// | | | | |
| Serv | U-Grad Gp I | 0.75 | XXXXXXX | | | | |
| Eng | Grad Gp I | 3.14 | ////////// | | | | |
| Lang | U-Grad Gp I | 3.00 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Std | Grad Gp I | 1.48 | ////////// | | | | |
| Act | U-Grad Gp I | 1.79 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Fin | Grad Gp I | 2.10 | ////////// | | | | |
| Aid | U-Grad Gp I | 2.96 | XXXXXXXXXXXXXXXXXXXX | | | | |
| Plc | Grad Gp I | 1.83 | ////////// | | | | |
| Serv | U-Grad Gp I | 1.71 | XXXXXXXXXXXXXXXXXXXX | | | | |

* Significant at the .05 level

** Significant at the .01 level

Figure 10. Mean Number and Graphic Presentation of Non-Severe Problems for Graduate Group I versus Undergraduate Group I

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | |
|------------|--------------|------------------------------|------------------------------------|-----|-----|-----|
| | | | 0.0 | 1.0 | 2.0 | 3.0 |
| Adm | Grad Gp II | 1.67 | //// | | | |
| Sel | U-Grad Gp II | 1.33 | xxxx | | | |
| Orien | Grad Gp II | 1.44 | //// | | | |
| Serv | U-Grad Gp II | 1.14 | xxxx | | | |
| Acad | Grad Gp II | 1.85 | //// | | | |
| Rec | U-Grad Gp II | 2.43 | xxxxxxxxxxxxxxxxxxxxxxxx | | | |
| Sec | Grad Gp II | 2.26 | //// | | | |
| Per | U-Grad Gp II | 1.76 | xxxxxxxxxxxxxxxxxxxxxxxx | | | |
| Liv | Grad Gp II | 1.50 | //// | | | |
| Din | U-Grad Gp II | 1.95 | xxxxxxxxxxxxxxxxxxxxxxxx | | | |
| Hlth | Grad Gp II | 1.32 | //// | | | |
| Serv | U-Grad Gp II | 0.86 | xxxx | | | |
| Rel | Grad Gp II | 1.15 | //// | | | |
| Serv | U-Grad Gp II | 0.38 | xxxx | | | |
| Eng | Grad Gp II | 2.76 | //// | | | |
| Lang | U-Grad Gp II | 2.38 | xxxxxxxxxxxxxxxxxxxxxxxx | | | |
| Std | Grad Gp II | 1.68 | //// | | | |
| Act | U-Grad Gp II | 1.67 | xxxxxxxxxxxxxxxxxxxxxxxx | | | |
| Fin | Grad Gp II | 1.68 | //// | | | |
| Aid | U-Grad Gp II | 1.52 | xxxxxxxxxxxxxxxxxxxxxxxx | | | |
| Pic | Grad Gp II | 1.38 | //// | | | |
| Serv | U-Grad Gp II | 0.95 | xxxx | | | |

* Significant at the .05 level
 ** Significant at the .01 level

Figure 11. Mean Number and Graphic Presentation of Non-Severe Problems for Graduate Group II versus Undergraduate Group II

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | |
|------------|---------------|------------------------------|------------------------------------|-----|-----|-----|
| | | | 0.0 | 1.0 | 2.0 | 3.0 |
| Adm | Grad Gp III | 1.68 | ////////// | | | |
| Sel | U-Grad Gp III | 1.92 | XXXXXXXXXX | | | |
| Orien | Grad Gp III | 1.81 | ////////// | | | |
| Serv | U-Grad Gp III | 2.46 | XXXXXXXXXX | | | |
| Acad* | Grad Gp III | 1.68* | ////////// | | | |
| Rec | U-Grad Gp III | 3.24 | XXXXXXXXXX | | | |
| Sec | Grad Gp III | 1.81 | ////////// | | | |
| Per | U-Grad Gp III | 2.05 | XXXXXXXXXX | | | |
| Liv | Grad Gp III | 1.62 | ////////// | | | |
| Din | U-Grad Gp III | 1.92 | XXXXXXXXXX | | | |
| Hith | Grad Gp III | 1.27 | ////////// | | | |
| Serv | U-Grad Gp III | 1.14 | XXXXXXXXXX | | | |
| Rel | Grad Gp III | 0.84 | ////////// | | | |
| Serv | U-Grad Gp III | 0.78 | XXXXXXXXXX | | | |
| Eng | Grad Gp III | 1.41 | ////////// | | | |
| Lang | U-Grad Gp III | 2.43 | XXXXXXXXXX | | | |
| Std | Grad Gp III | 1.00 | ////////// | | | |
| Act | U-Grad Gp III | 1.68 | XXXXXXXXXX | | | |
| Fin* | Grad Gp III | 1.35* | ////////// | | | |
| Aid | U-Grad Gp III | 2.46 | XXXXXXXXXX | | | |
| Plc | Grad Gp III | 1.30 | ////////// | | | |
| Serv | U-Grad Gp III | 1.70 | XXXXXXXXXX | | | |

* Significant at the .05 level
 ** Significant at the .01 level

Figure 12. Mean Number and Graphic Presentation of Non-Severe Problems for Graduate Group III versus Undergraduate Group III

Academic Records and Financial Aids. In the category of Academic Records, Graduate Group III checked an average of 1.68 problems per person, and Undergraduate Group III checked an average of 3.24 problems per person. In the category of Financial Aids, Graduate Group III checked an average of 1.35 problems per person, and Undergraduate Group III checked an average of 2.46 problems per person.

Hypothesis Six states that there is no significant difference found between graduate students and undergraduate students, when each graduate time group is compared to its undergraduate counterpart with regard to the eleven problem categories. The purpose of this hypothesis was to determine if any difference existed between graduate students who had been in the United States for a certain length of time and undergraduate students who had been in the United States the same amount of time, in terms of groups of personal problems. The essential issue to be determined was whether graduate students could be characterized by certain unique groups of problems that are different from those of undergraduate students. To test for these differences, the graduate students who had been in the United States for from one to ten months were compared with undergraduates who had been here for from one to ten months, in terms of the eleven problem categories. The same process was repeated for Group II (11-21 mo.) and Group III (22 mo. plus); in addition, the data was analyzed separately in terms of non-severe and severe problem categories.

An examination of the data with respect to Hypothesis Six reveals that the null hypothesis of no significant difference between groups was rejected for sub-hypotheses "a" (Graduate Group I compared with Undergraduate Group I), "b" (Graduate Group II compared with Under-

graduate Group II), and "c" (Graduate Group III compared with Undergraduate Group III).

Therefore, it was concluded that when an undergraduate time group is compared with a graduate time group, one group can be characterized as having certain groups of problems that are unique only to itself. Therefore, it was concluded that graduate students have problems that are unique to them as a group, and undergraduate students have problems that are unique to them as a group.

Table XIV presents a comparison of the way graduate time groups answered the eleven severe problem categories with the way the undergraduate time groups answered the same eleven severe problem categories, in terms of severe problems checked using the Mann-Whitney U test to determine if the difference between groups was significant at the .05 level.

Table XIV shows that when graduate time groups were compared, using the Mann-Whitney U test to test for significant differences, with undergraduate time groups in terms of the eleven problem categories, significant differences at the .05 level were found in the following categories: Orientation Services, Academic Records, and Health Services. This table presents the eleven problem categories in terms of number of problems checked as severe problems.

When Undergraduate Group I (1-10 mo.) was compared with Graduate Group I (1-10 mo.), it was found that neither group checked more problems as severe problems than the other group for any of the eleven problem categories.

When Graduate Group II (11-21 mo.) was compared to Undergraduate Group II (11-21 mo.), it was found that Graduate Group II differed

TABLE XIV

A COMPARISON OF THE GRADUATE TIME GROUPS WITH THE UNDERGRADUATE TIME GROUPS IN TERMS OF THE ELEVEN SEVERE PROBLEM CATEGORIES USING THE MANN-WHITNEY U AS THE TEST OF SIGNIFICANCE

| Problem Categories | Time Groups | | |
|--------------------------|---------------------------------|-----------------------------------|-------------------------------------|
| | Grad Gp I vs. U-Grad Gp I | Grad Gp II vs. U-Grad Gp II | Grad Gp III vs. U-Grad Gp III |
| | U | U | U |
| Admission Selection (AS) | 0.63 | 0.50 | 0.36 |
| Orientation Serv. (OS) | 1.46 | 1.74 | 1.98* |
| Academic Record (AR) | 0.41 | 0.34 | 2.32* |
| Social Personal (SP) | 0.49 | 0.97 | 0.65 |
| Living Dining (LD) | 1.07 | 0.19 | 0.35 |
| Health Service (HS) | 0.22 | 1.96* | 0.58 |
| Religious Service (RS) | 1.84 | 1.82 | 0.22 |
| English Language (EL) | 0.99 | 0.19 | 0.65 |
| Student Activity (SA) | 0.34 | 0.68 | 0.52 |
| Financial Aid (FA) | 0.03 | 0.76 | 0.66 |
| Placement Service (PS) | 0.20 | 0.87 | 0.60 |

* Significant at the .05 level

** Significant at the .01 level

significantly at the .05 level from Undergraduate Group II in the category of Health Services.

When Undergraduate Group III (22 mo. plus) was compared to Graduate Group III (22 mo. plus), it was found that Graduate Group III differed significantly, at the .05 level, from Undergraduate Group III in the category of Orientation Services.

The relationship between severe problems between Graduate Groups II and III and Undergraduate Groups II and III is presented graphically in Figures 13 and 14.

In Figure 13, the data reveal that there is a significant difference at the .05 level between Graduate Group II (11-21 mo.) and Undergraduate Group II (11-21 mo.) in the category of Health Services. Graduate Group II checked an average of 0.41 severe problems per person, and Undergraduate Group II checked an average of 0.10 severe problems per person.

In Figure 14, the data indicate that there are significant differences at the .05 level between Graduate Group III (22 mo. plus) and Undergraduate Group III (22 mo. plus) in the categories of Orientation Services and Academic Records. Graduate Group III checked an average of 0.46 severe problems per person, and Undergraduate Group III checked an average of 0.92 severe problems per person in the category of Orientation Services. One also will note in Figure 14 that Graduate Group III checked an average of 0.59 severe problems per person, and Undergraduate Group III checked an average of 1.24 severe problems per person in the category of Academic Records.

The following paragraphs are a continuation of the explanation of the data concerning Hypothesis Six, but severe problem categories

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | |
|------------|--------------|------------------------------|------------------------------------|-----|-----|-----|
| | | | 0.0 | 1.0 | 2.0 | 3.0 |
| Adm | Grad Gp II | 0.38 | //// | | | |
| Sel | U-Grad Gp II | 0.24 | XX | | | |
| Orien | Grad Gp II | 0.35 | //// | | | |
| Serv | U-Grad Gp II | 0.62 | XXXXXX | | | |
| Acad | Grad Gp II | 0.71 | //////// | | | |
| Rec | U-Grad Gp II | 0.86 | XXXXXXXXXX | | | |
| Soc | Grad Gp II | 0.62 | //////// | | | |
| Per | U-Grad Gp II | 0.48 | XXXXX | | | |
| Liv | Grad Gp II | 0.38 | //// | | | |
| Din | U-Grad Gp II | 0.38 | XXXX | | | |
| Hlth* | Grad Gp II | 0.41 | //// | | | |
| Serv | U-Grad Gp II | 0.10 | X | | | |
| Rel | Grad Gp II | 0.32 | /// | | | |
| Serv | U-Grad Gp II | 0.00 | | | | |
| Eng | Grad Gp II | 0.68 | //////// | | | |
| Lang | U-Grad Gp II | 0.90 | XXXXXXXXXX | | | |
| Std | Grad Gp II | 0.38 | //// | | | |
| Act | U-Grad Gp II | 0.38 | XXXX | | | |
| Fin | Grad Gp II | 0.50 | //// | | | |
| Aid | U-Grad Gp II | 0.38 | XXXX | | | |
| Pic | Grad Gp II | 0.47 | //// | | | |
| Serv | U-Grad Gp II | 0.29 | XXX | | | |

* Significant at the .05 level

** Significant at the .01 level

Figure 13. Mean Number and Graphic Presentation of Severe Problems for Graduate Group II versus Undergraduate Group II

| Categories | Groups | Mean No. of Problems Checked | Average Number of Problems Checked | | | |
|------------|---------------|------------------------------------|------------------------------------|-----|-----|-----|
| | | | 0.0 | 1.0 | 2.0 | 3.0 |
| Adm | Grad Gp III | 0.32 | /// | | | |
| Sel | U-Grad Gp III | 0.38 | XXXX | | | |
| Orien* | Grad Gp III | 0.46 | //// | | | |
| Serv | U-Grad Gp III | 0.92 | XXXXXXXXXX | | | |
| Acad* | Grad Gp III | 0.59 | //// | | | |
| Rec | U-Grad Gp III | 1.24 | XXXXXXXXXXXX | | | |
| Soc | Grad Gp III | 0.41 | //// | | | |
| Per | U-Grad Gp III | 0.54 | XXXXX | | | |
| Liv | Grad Gp III | 0.57 | //// | | | |
| Din | U-Grad Gp III | 0.49 | XXXXX | | | |
| Hlth | Grad Gp III | 0.54 | //// | | | |
| Serv | U-Grad Gp III | 0.38 | XXXX | | | |
| Rel | Grad Gp III | 0.27 | /// | | | |
| Serv | U-Grad Gp III | 0.16 | XX | | | |
| Eng | Grad Gp III | 0.41 | //// | | | |
| Lang | U-Grad Gp III | 0.92 | XXXXXXXXXX | | | |
| Std | Grad Gp III | 0.35 | //// | | | |
| Act | U-Grad Gp III | 0.38 | XXXX | | | |
| Fin | Grad Gp III | 0.38 | //// | | | |
| Aid | U-Grad Gp III | 0.78 | XXXXXXXXXX | | | |
| Plc | Grad Gp III | 0.54 | //// | | | |
| Serv | U-Grad Gp III | 0.51 | XXXXX | | | |

* Significant at the .05 level

** Significant at the .01 level

Figure 14. Mean Number and Graphic Presentation of Severe Problems for Undergraduate Group III versus Graduate Group III

are emphasized hereafter.. The data in Table XIV relate directly to the further testing of Hypothesis Six.

It was found that the null hypothesis of no significant difference in terms of severe problem categories failed to be rejected; therefore, it was accepted for sub-hypothesis "a", which is a comparison of the way Graduate Group I answered the eleven problem categories with the way Undergraduate Group I answered the same categories.

Significant differences were found in the way Graduate Groups II and III answered the eleven problem categories, as compared to the way Undergraduate Groups II and III answered the same categories. Therefore, the null hypothesis of no significant difference between the comparison of Graduate Group II with Undergraduate Group II (sub-hypothesis "b"), and the comparison of Graduate Group III and Undergraduate Group III was rejected, based upon the data found in Table XIV.

Thus, it can be seen that, in terms of severe problem categories, when Groups II and III graduate students are compared with Groups II and III undergraduate students, these groups can be characterized by certain groups of problems that are unique to one group, but not to the other. Therefore, it was concluded that undergraduate students may have groups of severe problems that are unique to them, and graduate students may have groups of severe problems that are unique to them.

In summary, it was found that Graduate Groups II and III and Undergraduate Groups II and III have certain problem categories that can be said to characterize these groups.

The last piece of data to be presented concerns the possible correlation between the number of non-severe problems checked by each

person with the number of severe problems checked by each person.

The Spearman-Rank Correlation Coefficient was applied to the numerical data, and it was found that the non-severe problems checked correlated .57 with the severe problems checked. This relationship was found to be significant at the .01 level using Old's (1938) Table of Critical Values of r 's (Siegal, 1956). It was further determined that when the correlation of .57 was squared, this amount of correlation accounted for one-third of the variance found in the comparison.

Hypothesis Seven states that there is no significant correlation between the total number of non-severe problems checked and the total number of severe problems checked. The primary purpose of this hypothesis is to determine whether a person who has a high number of problems checked also sees a high number of his problems as being severe problems, as compared to a person who has a low number of problems checked. The essential issue to be determined was this: As the number of problems a person checks goes up, does the number of severe problems he has also go up? The preceding findings relate to a combination of total problems checked by both graduate and undergraduate students.

Discussion of Results and Problem Category Patterns

The essential point to determine in Hypotheses One and Two was as follows: Do foreign students' personal problems significantly increase or fluctuate over a length of time spent in the United States? An analysis of the data reveal that foreign students' personal problems

do not significantly increase the longer they stay in the United States. Further, it was determined that one time period in this study cannot be characterized by significantly more personal problems than any other time period in this study. The three time periods analyzed were one to ten months, eleven to twenty-one months, and twenty-two months or more.

The essential feature of Hypothesis Three was to determine if any one of the three time periods mentioned above could be characterized by certain kinds of problems that tended to be unique to that time period. It was concluded that often specific time periods could be characterized by certain kinds of problems. For example, Graduate Group I (1-10 mo.) is characterized by a concern with the English language, and Graduate Group II (11-21 mo.) is concerned with Religious Services and the English Language.

Under Hypothesis Three, an analysis of the data suggest the development of several problem category patterns in terms of the graduate students.

It was found that Graduate Group III (22 mo. plus) is less concerned about English language problems than Graduate Group I (1-10 mo.) or Graduate Group II (11-21 mo.).

Problems relating to Religious Services were found to bother Graduate Group II (11-21 mo.) more than Graduate Group I (1-10 mo.) or Graduate Group III (22 mo. plus).

Hypothesis Four is quite similar to Hypothesis Three, except Hypothesis Four sought to determine whether undergraduate time groups could be characterized by certain problems that significantly differ from other time groups. The findings suggest that one group can be

characterized as having problems different from the other two groups. To be more specific, it was found that Undergraduate Group I (1-10 mo.) is more concerned with problems concerning placement and health, Group II (11-21 mo.) is more concerned with religion, and Undergraduate Group III (22 mo. plus) is more concerned with orientation and religion.

In terms of Hypothesis Four, a pattern developed with regard to the category of Orientation Services. The undergraduate students that have been here the longest, Group III (22 mo. plus), have significantly more problems with the category of Orientation Services than do Undergraduate Group I (1-10 mo.) and Group II (11-21 mo.).

Although not a problem category pattern, an analysis of the data for Hypothesis Four, undergraduates, indicates that Group II (11-21 mo.) has consistently fewer problems than Groups I (1-10 mo.) and III (22 mo. plus).

The central issue to be determined in Hypothesis Five was whether undergraduate students who have been here a certain length of time have significantly more problems than the graduate students who have been in the United States for the same length of time. It was concluded that length of time does not differentially affect the undergraduate student more than the graduate student with regard to numbers of problems checked. Therefore, undergraduates apparently do not have more personal problems than do the graduate students.

Hypothesis Six sought to determine if graduate students could be distinguished from undergraduate students with regard to the kinds of personal problems that they indicated.

It was determined that often graduate student time groups do

have problems that are common to them that are uniquely different from the corresponding undergraduate time groups. More specifically, it was determined that Undergraduate Group I (1-10 mo.) is more concerned with English Language problems, and Undergraduate Group III (22 mo. plus) is more concerned with problems about Academic Records, Finances and Orientation. Concerning the graduate students, it was determined that they are more concerned with problems about religion and health.

One pattern developed with regard to academic records. It was found that the undergraduate students who had been here the longest, Group III (22 mo. plus), expressed greater concern with problems related to academic records than did the graduate students here for the same length of time.

The main emphasis of Hypothesis Seven was to determine if a significant relationship exists between the numbers of non-severe problems checked and the number of severe problems checked. The data indicate that a significant relationship exists at the $\alpha = .01$ level. Therefore, it was concluded that the more problems a foreign student feels he has, the more problems he will consider as severe problems.

This concludes the analysis of the data and the discussion of the Hypotheses. The next chapter summarizes the study and presents implications for further study.

CHAPTER V

SUMMARY AND IMPLICATIONS FOR FURTHER STUDY

Summary

Basically, this is a study of foreign students at Oklahoma State University and the kinds of problems they encounter. More specifically, this study deals with problems encountered in three distinct periods of time that characterize the foreign students' sojourn in the United States. Based upon current research, these time periods of ten months for the first two groups and ten months plus for the last group were chosen as representative of the phases that foreign students go through with regard to attitude toward the United States and personal problems. A basic thrust of this study is to examine each time period with the intention of identifying characteristics of one period that are uniquely different from the other two time periods. More specifically this study sought to determine if the foreign students in any one of the three time periods had significantly more personal problems than students in the other time periods. Also, the study sought to determine if problems in one time period revealed certain groupings of problems in that period that were unique and significantly different from groupings of problems in the other two time periods. In order to do this more efficiently, the students were further classified into graduate groups and undergraduate groups.

The literature pertinent to this study was reviewed under the following topics:

1. Literature related to personal problems of foreign students.
2. Literature relative to the background of foreign students studying in the United States.
3. Literature related to the differential effects of time on foreign student behavior and attitude.

The population for this study was selected from foreign students studying at Oklahoma State University who met certain conditional criteria. The following control criteria were established: (1) only males were used; (2) only unmarried students were used; (3) only students who had limited or no previous contact with the United States were accepted. The population consisted of 270 students that met all these conditions. The population was grouped into three time periods according to the length of stay in the United States.

A representative sample was chosen at random, but because of very poor response and other problems (see Chapter III), it was decided to regroup and use the entire population. Most of the students were seen in person, but about twenty-two percent of the volunteers returned their information by mail. Seventy-four per cent of the population participated in this study. In order to check for population differences, the information received by mail was compared to the information received by personal contact by using the Mann-Whitney U test to determine if the information received by mail was significantly different at the .05 level from the information received by personal contact. It was found that no significant differences existed between the two groups. Also, after all the population had been given ample

opportunity to respond, the writer persuaded ten more students to volunteer for the study. This group of non-volunteers was compared, by use of the Mann-Whitney U test to test for significant differences, to the volunteers and, again, no significant differences were found to exist between the groups with regard to responses to the instrument.

The instrument used in determining the number and kinds of problems the foreign students have is the Michigan International Student Problem Inventory, by John Porter. This is an inventory consisting of 132 problems common to foreign students. This instrument is also divided into eleven problem categories that consist of problems usually related to certain college student personnel functions.

Nonparametric statistics were used to analyze these data, because the sample was not considered to represent the normal population. These statistics are the Mann-Whitney U, Kruskal-Wallis One Way Analysis of Variance, the Spearman-Rank Correlation Coefficient, and means.

This study has several limitations. It utilized only single, male students; therefore, it cannot be easily generalized to female students. The population was limited to Oklahoma State University foreign students; therefore, one cannot safely generalize the results of this study to all other colleges and universities. Finally, the instrument used is a new one and its reliability and validity have not been fully established by research from other investigators.

Hypotheses I and II are very similar in content. The real difference lies in the fact that Hypothesis I deals with problems of a non-severe nature and Hypothesis II deals with problems of a severe nature.

The essential point to determine in Hypotheses I and II was: Do foreign students' personal problems significantly increase or fluctuate over a length of time in the United States? Graduate and undergraduate students were divided into three time periods and studied in terms of the number of problems each time period of graduate and undergraduate students checked as troubling them. The three time periods were: one to ten months in the United States, eleven to twenty-one months in the United States, and twenty-two months plus in the United States.

An analysis of the data indicated that neither the graduate or undergraduate students showed a significant increase of problems over the length of time spent in the United States. It was further determined that the time groups did not significantly fluctuate over the length of time spent in the United States. That is, graduate or undergraduate time group one (1-10 mo.) did not have significantly more or less severe or non-severe problems than time groups two (11-21 mo.) or three (22 mo.), and time group two did not have significantly more or less severe or non-severe problems than time groups one or three, and time group three did not have significantly more severe or non-severe problems than did time groups one or two.

The essential issue relative to Hypothesis III was to determine whether there are differences within the graduate student groups with regard to specific problem areas, and to determine if there is a change in the number of problems experienced over a period of time. The writer tested each time period group, using the Mann-Whitney U test, to determine if each time period group answered the eleven problem categories significantly different from the other time group

periods. The main problem to be determined was whether one group could be characterized by certain kinds of problems that are unique and significantly different from any other time group.

The analysis of data reveals that each of the graduate time groups have certain groups of problems that are unique to that group. It was concluded that the graduate time groups can be characterized by problem areas that are unique to one group, but not necessarily found to be important to the other time groups. This held true for non-severe problem categories and severe problem categories.

More specifically, it was found that Group II (11-21 mo.) is concerned with religious services; Group I (1-10 mo.) is more concerned with the English language in terms of non-severe problem categories; and with regard to severe problem categories, Group II (11-21 mo.) is more concerned with religious services.

Hypothesis IV was very similar to Hypothesis III, with the main difference being that Hypothesis IV dealt only with undergraduate time groups. This hypothesis stated that there will be no significant differences between the three undergraduate time groupings when the eleven problem category groupings of Groups I, II, and III are compared with one another.

The analysis of the data reveals that Groups II and III are characterized by specific groups of problems that are unique to these groups. These problems are in terms of non-severe problems.

When the data was analyzed with regard to severe problem categories, it was found that Groups I and III have groups of problems unique to these groups.

With regard to non-severe problem categories, it was determined

that Group I (1-10 mo.) is concerned with placement services, and Group III (22 mo. plus) is concerned with orientation services. In terms of severe problem categories, it was determined that Group I (1-10 mo.) is concerned with health services, and Group III (22 mo. plus) is concerned with orientation services and religious services.

To summarize Hypothesis IV, it was concluded that undergraduate student time groups may be characterized by problems unique to each time group.

Hypothesis V stated that there will be no significant differences found between undergraduate and graduate students in the number of problems checked in either the non-severe problem area or the severe problem area. The primary purpose of this hypothesis was to determine if graduate students studying in the United States for a certain length of time have more problems than undergraduate students studying in the United States for a similar length of time.

The analysis of the data reveals that the undergraduate students do not have significantly more problems than the graduate students in any of the three time group comparisons. This holds for both severe and non-severe kinds of problems.

The essential issue to be determined in Hypothesis VI was whether graduate students can be distinguished from undergraduate students with regard to the kinds of personal problems that they indicated. Hypothesis VI stated that there will be no significant differences found between graduate students and undergraduate students, when each graduate time group is compared to its undergraduate counterpart with regard to the eleven problem categories.

An analysis of the data in terms of non-severe problem categories

reveals that Undergraduate Group I has a certain group of problems that are unique to it; Graduate Group II has problems unique to it; and Undergraduate Group III has groups of problems unique to it. So it was concluded that often graduate students and undergraduate students can be characterized as having groups of problems that are unique to one group but not to the other. Each time group has unique problems associated to one college classification level or the other.

In terms of severe problem categories, it was determined that Graduate Group II has problems unique to it, but not to the Undergraduates, and Undergraduate Group III has certain kinds of problems unique to them but not to the graduate students. That is, Graduate Group II (11-21 mo.) is more concerned with health services, and Undergraduate Group III (22 mo. plus) is more concerned with orientation services and academic records.

Therefore, it was concluded that often graduate students and undergraduate students can be characterized as having problems unique to one college classification and time group but not to the other one in that time group.

The essential issue to be determined in Hypothesis VII was whether the number of severe problems rises as the number of problems checked rises.

An analysis of the data reveals that there is a moderate correlation of .57 between the number of non-severe problems and severe problems. This correlation is significant at the .05 level.

Implications for Further Study

It appears that this study does not lend support to the U Curve

theory or to the studies done by Sewell and Davidsen (1961), Morris (1960), Porter (1965), Wilkening (1965), and Hadwen (1964), which relate to an increase of problems over time.

To be consistent with the U Curve theory, significant differences should appear between groups with regard to number of problems. This study does not support the U Curve assumption. In fact, one notes from examining the means of Groups I, II, and III for undergraduate students that usually there is an opposite, inverted U-Curve effect.

A study that rigidly controls the variables affecting time in the United States would be useful to shed further light on the U-Curve concept. The variables that would be useful to control are the following: (1) English language as a first language versus English as a second language; (2) dropouts and early returnees; (3) attitude of foreign students before arrival; (4) intellectual ability; (5) nationality; (6) pretest of personal problems upon arrival and post-test at certain time periods.

This study does indicate that certain groups have problems that are unique to that group and not to others. One also finds that some problem patterns emerge with regard to problem categories in various time groups. It would be useful if a similar study could be done to determine whether these problems and patterns of problems will consistently remain characteristic to certain time groups.

This study reveals several unusual results that bear more investigation before conclusions can be reached as to why they occurred. One will note that Orientation Services are of more concern to graduate and undergraduate students who have been here twenty-two months or

more. One might question why the groups that have been here the longest have more problems concerning orientation than the new arrivals have.

It would also be useful to know why Academic Records should concern the group of longest tenure in the United States (graduate and undergraduate students in the twenty-two month plus period). It is they who have had the most experience with the United States educational system, yet they indicate the most concern with Academic Records.

Also, one may wonder why the category Religious Services greatly troubles Graduate Group II. They indicate that they have more non-severe and severe problems with this category; so, one may wonder why this category is important to one group and inconsequential to the others.

To obtain as much accurate information as possible about the relationship of time in the United States to problems of foreign students, a longitudinal study is needed. A group of foreign students should be followed for a period of at least three years. Repeated measures should be plotted for individuals and nationality groupings which may reveal trends obscured by the grouping procedure made necessary by the cross-sectional approach of the present study.

The present study suggests that it is probable that foreign students have personal problems that are characteristic of their specific time phase in their sojourn in the United States. However, the related literature indicates that little recognition of this probability is used in the actual practice of dealing with foreign students and in the planning of foreign student programs to meet the

needs of foreign students. It may be useful to plan an action research program to test the usefulness of utilizing this kind of information in the planning of foreign student programs and in the practice of counseling with foreign students.

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APPENDIX A

MICHIGAN INTERNATIONAL STUDENT PROBLEM INVENTORY

Step One Read the list of statements below carefully, if a statement suggests a situation which is troubling you, circle the number to the left of it, as follows (9.) Writing or typing term (semester) papers.

Do not write in spaces below

| 1. Evaluation of my former school credentials | 34. Getting admitted to U.S. college | (N) | (D) | | |
|---|---|-----|-----|--|--|
| 2. Concern about value of a U.S. education | 35. Registration for classes each term | A | S | | |
| 3. Choosing college subjects | 36. Not attending college of my first choice | | | | |
| 4. Treatment received at orientation meetings | 37. Relationship with foreign student advisor | | | | |
| 5. Unfavorable remarks about home country | 38. Leisure time activities of U.S. students | O | S | | |
| 6. Concept of being a "foreign" student | 39. Law enforcement practices in the U.S. | | | | |
| 7. Frequent college examinations | 40. Competitive college grading system | | | | |
| 8. Compulsory class attendance | 41. Objective examinations (true-false, etc.) | A | P | | |
| 9. Writing or typing term (semester) papers | 42. Insufficient advice from academic advisor | | | | |
| 10. Concern about becoming too "westernized" | 43. Being lonely | | | | |
| 11. Insufficient personal-social counseling | 44. Feeling inferior to others | S | P | | |
| 12. Being in love with someone | 45. Trying to make friends | | | | |
| 13. Taste of food in United States | 46. Costs of buying food | | | | |
| 14. Problems regarding housing | 47. Insufficient clothing | L | D | | |
| 15. Being told where one must live | 48. Not being able to room with U.S. student | | | | |
| 16. Poor eye sight | 49. Hard to hear | | | | |
| 17. Recurrent headaches | 50. Nervousness | H | S | | |
| 18. My physical height and physique | 51. Finding adequate health services | | | | |
| 19. Religious practices in United States | 52. Finding worship group of own faith | | | | |
| 20. Attending church socials | 53. Christianity as a philosophy | R | S | | |
| 21. Concern about my religious beliefs | 54. Variety of religious faiths in U.S. | | | | |
| 22. Speaking English | 55. Reciting in class | | | | |
| 23. Giving oral reports in class | 56. Understanding lectures in English | E | L | | |
| 24. Ability to write English | 57. Reading textbooks written in English | | | | |
| 25. Regulations on student activities | 58. Dating practices of U.S. people | | | | |
| 26. Treatment received at social functions | 59. Being accepted in social groups | S | A | | |
| 27. Relationship of men and women in U.S. | 60. Not being able to find "dates" | | | | |
| 28. Lack of money to meet expenses | 61. Saving enough money for social events | | | | |
| 29. Not receiving enough money from home | 62. Immigration work restrictions | F | A | | |
| 30. Having to do manual labor (work with hands) | 63. Limited amount U.S. dollar will purchase | | | | |
| 31. Finding a job upon returning home | 64. Becoming a citizen of the United States | | | | |
| 32. Not enough time in U.S. for study | 65. Changes in home government | P | S | | |
| 33. Trying to extend stay in United States | 66. Desire to not return to home country | | | | |
| TOTALS | | | | | |
| | | | | | |

Step Two Now go back over the numbers you have circled, and place an X in the circle of statements which are of most concern to you, as follows (X) Writing or typing term (semester) papers.

Continue on Page 4 after Step Two

VITA

Jerry Richard Day

Candidate for the Degree of

Doctor of Education

Thesis: A STUDY OF THE DIFFERENTIAL EFFECTS OF LENGTH OF TIME IN THE UNITED STATES ON FOREIGN GRADUATE AND UNDERGRADUATE STUDENTS WITH REGARD TO THE NUMBER, SEVERITY, AND CATEGORY GROUPINGS OF PROBLEMS HE EXPERIENCES

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