A STUDY TO IDENTIFY AND ANALYZE ADJUSTMENT PROBLEMS

EXPERIENCED BY FOREIGN NON-EUROPEAN GRADUATE

STUDENTS ENROLLED IN SELECTED UNIVERSITIES

IN THE STATE OF NORTH CAROLINA

by

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ii

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The purpose of this study was to identify the adjust-
ment problems experienced by foreign non-European graduate
students enrolled in selected universities in the State of
North Carolina and to investigate the relationships between
the adjustment problems and the selected variables of educa-
tional and home backgrounds, the nature of financial support,
the types of academic programs pursued, the age upon entering
the United States, the length of residence in the United
States, the campus of enrollment, and the usefulness of
student personnel services available to foreign graduate
students. Further, the study sought to discover any dis-
cernible differences In the adjustment pattern of foreign
non-European graduate students from selected geographical
regions. Finally, the study had as its objective to suggest
measures that could contribute to the alleviation of the
adjustment problems of foreign non-European graduate students.

In order to collect data for this study, a foreign
student problems inventory was devised. The subjects for
this study were selected from Chapel Hill, Greensboro, and
Raleigh campuses of the University of North Carolina and
Duke University through stratified, disproportionate,
random sampling procedures. They represented the Far East,

South Asia, the Middle East, Africa, and Latin America. The copies of the inventory were sent by mail, and 195 completed returns were received, which constituted 52.14 per cent of the sample. A limited number of respondents were also interviewed to determine the veracity of the inventory responses.

Because of the data for this research being in ordinal and nominal scales, the nonparametric tests were considered most appropriate for their analysis. The Kendall coefficient of concordance (W), a multivariate correlation measure, the Spearman rank correlation coefficient (r_s), a bivariate correlation measure, the Kruskal-Wallis one-way analysis of variance by ranks (H), and X^2 were the statistical tests used to analyze the data.

The foreign non-European graduate students consider the following academic problems as most severe: giving oral reports, participating in class discussions, taking notes in class, understanding lectures, taking appropriate courses of study, and preparing written reports. Their most severe personal problems concern home sickness, adequate housing, enough funds, and finding companionship with the opposite sex. And their most severe social problems relate to becoming used to American social customs, making personal friends with American students, being accepted by the social groups, and inhibited participation in campus activities. All these problems require a long period of time for their resolution. However, relatively speaking, the academic

problems have been found to be more severe and they take longer time for their resolution than the other two types.

Further, there has been found to exist a strong positive relationship among the academic, personal, and social adjustment of foreign non-European graduate students. Also, there is some evidence that the student personnel services help them in their academic adjustment. However, their usefulness in their personal and social adjustment has not been borne out by this research.

Comparatively speaking, the students from South Asia, those who study agriculture, engineering, and physical sciences, and those who are self-supporting, have been found to make better academic adjustment than those who come from the Far East or Latin America, those who study social sciences, and those who get money from home, respectively.

Finally, the variables of length of residence in the United States, age upon entering United States, varied educational and home backgrounds, and the campus of enrollment have not been found to have a bearing on the academic, personal, and social adjustment of foreign non-European graduate students.

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Finally, patience, optimism, understanding, and
willingness to sacrifice have also been the essentials for
the completion of my program. For contributing these and
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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

America as a world power commands admiration and
respect almost from all, her friends as well as foes. Most
of the nations of the world look toward her for leadership,
particularly in the fields of science and technology, and
wish to learn from her the techniques to harness the forces
of nature for their betterment. This fact is indisputably
verified by the staggering number of foreign students who
come avidly to her shores from varied distances and diverse
directions. At present the number of foreign students in
the United States is well over 100,000[1], and if the past
trend is any prognosis for the future, this number will
increase substantially in the years to come.[2] Although the
majority of the foreign students come here to study in the
scientific and technical fields, the number of those who
enroll in social sciences and humanities is also significant.

Foreign students come to the United States in the
quest of knowledge to help themselves and their countries.

[1]Richard Dremuk, "Will We Be Admitting Foreign Students
in 1975?" The Journal of the Association of College Admissions
Counselors, XI (1966), pp. 4-8.

[2]D. C. Spriestersback, "Admission of the Foreign
Graduate Student," The Graduate Student: Proceedings of the
Council of Graduate Schools in the United States (Washington,
D. C., 1965), pp. 46-50.

But it is a unique transaction which benefits America as well.
American people get an opportunity through foreign students
to enhance their understanding of other cultures and societies.
The foreign students come with different backgrounds and
share their experiences with American people. Further, on
their return they are likely to occupy positions of leader-
ship in their countries and may contribute to forging amicable
relations with the United States. Thus, the sojourn of
foreign students in the United States is a gain to all con-
cerned--to the individual student, to his home country, to
the host institution, and to the United States.

The realization of the value of foreign students is
manifest in the liberal immigration laws of the United States.
Whereas the foreign nationals seeking immigration to this
country under other categories have to face stringent regula-
tions, the laws governing the immigration of foreign students
are extra-ordinarily generous. The United States Government
is cognizant of the limitless potential of foreign students
as valuable agents in building harmonious international
relations, and has taken numerous measures to capitalize on
it.

Foreign students come to this country at the cost of
tremendous personal sacrifice, and many of them suffer from
countless deprivations during their stay here. The students
of non-European background in particular experience a
traumatic cultural shock. They also encounter emotional,

social, academic, and financial problems in varying degrees of severity. When they return home, they carry along with them not only the knowledge and skills acquired here, but also an image of America solidified through their perceptions and experiences. This makes it imperative that the foreign students have nothing less than a fully satisfying experience during their stay in this country.

In accordance with the current trend, the number of foreign students in the institutions of higher education in the United States will continue to increase. This is because America is the only advanced country in the world which offers maximum freedom and generous conditions to attract foreign students to her institutions. So long as she maintains her lead in the scientific and technical fields, and does not change her liberal immigration policy toward the foreign students, the trend is almost irreversible. Therefore, it seems logical to conclude that the host institution has a singular responsibility to ensure that the foreign students find their stay on the campus academically profitable and socially enjoyable.

Numerous studies have been conducted during the last decade on several campuses to identify the problems of foreign students and to discover measures to ameliorate them. The findings of these studies are quite interesting and illuminating, but because of apparent contradictions meaningful generalizations are hard to derive. This may be due to

the multiplicity of often uncontrollable variables involved
in the research studies. For example, the attitude of the
community may be an important factor. Small isolated rural
communities are likely to be more reserved and less receptive
to foreign students than larger towns and cities which have
been exposed to the outside world. Foreign students of
European background generally experience fewer problems than
those of the non-European backgrounds, and there may be
differences even among the latter. Some institutions may
have acquired a greater degree of awareness of the problems
of foreign students and may be better equipped to help them.
The types of programs pursued by foreign students may hinder
or help the process of adjustment. The programs in social
sciences and humanities with a greater demand for competency
in the use of English language may render academic adjustment
more difficult than those in scientific and technical
fields which generally do not require the same degree of
linguistic proficiency. The academic status of foreign
students and the length of their stay in the United States
may be among other variables which might have a significant
bearing on their adjustment problems.

The multitude of often uncontrollable variables per-
haps accounts for the inconsistencies and contradictions in
the findings. Nonetheless, some tenuous generalizations from
the literature may be drawn. For example:

1. Foreign students should be thoroughly screened as to their fitness to profit from study at an American institution prior to their departure from the home country.

2. American standardized tests are inappropriate for foreign students, and no decision should be based on their results.

3. Proficiency in the use of English language is a significant factor in the academic success of foreign students.

4. Foreign non-European students face greater adjustment problems than European students.

5. Individual attention and departmental orientation are more beneficial and hence desirable than mass orientation programs.

6. Attitudes toward the United States are the result of the experiences of individual students in this country.

These generalizations, however, are not definitive and conclusive and have been contradicted by several studies. For example, proficiency in the use of English language is reported by some studies as a significant factor in the academic success of foreign students,[3] but some researchers

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[3]Smarn Parakarn, "A Study of Academic Achievement of Foreign Students at Kansas State University, Summary and Conclusions," College Student Personnel Abstracts, II (1966), p. 44.

have challenged this assertion.[4] Further, some studies have recommended improved admission and orientation procedures to help reduce the frustrations of foreign students,[5] yet strong motivation has been reported to be able to surmount all the handicaps.[6] Cultural adaptation has been found to be a problem for the foreign non-European students, but some of them are so deeply committed to the attainment of their academic goals that problems of food, housing, companionship, etc., seem to vanish into insignificance.[7] Therefore, the only conclusions that can reasonably be drawn are that, despite the numerous studies already completed, further research is needed to obtain more precise and convincing results, and that the findings of a study at one institution are not generalizable to foreign students at another institution.

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[4]Emilia V. Lara, "The Effect of Previous Study of English on the Academic Performance of Forty Foreign Students at the University of Kansas," International Student Studies No. 17, University of Kansas (February, 1966), p. 19.

[5]D. C. Spriestersback, op. cit., pp. 46-50.

[6]Genevieve Po-Ai Ho, "Factors Affecting Adaptation to American Dietary Pattern by Students from the Oriental Countries," Dissertation Abstract, XX (11), p. 3977.

[7]Gerald M. Shattuck, "Between Two Cultures: A Study of the Social Adaptation of Foreign Students to an American Academic Community," College Student Personnel Abstracts, 11 (1966), p. 45.

CHAPTER II

REVIEW OF THE LITERATURE

Exploration of the literature has revealed that an inordinate amount of interest has been taken in foreign students enrolled in American colleges and universities during the last decade. This interest is evidenced by the large number of studies undertaken related to numerous aspects of foreign students. What is further obvious from the literature search is the fact that the studies are of a desultory nature and do not compose any meaningful configuration. They may be perceived as related to such aspects of foreign students as admission and orientation, adjustment problems, housing, counseling, attitudinal changes, relationships with American students, and a number of other facets which defy classification. In this chapter, the salient studies generally pertaining to adjustment problems have been presented in detail, whereas the others which have at least tangential relationship to adjustment, are reported only briefly with a somewhat loose categorization. The categories chosen are those that seem to contain a large number of significant studies.

Studies Related to Adjustment Problems

of Foreign Students

A number of studies have been conducted to identify
the problems of foreign students with the intent of finding
solutions to them. Burke conducted a survey of the status
and problems of foreign students in the United States.[1] He
found that 36 per cent of the foreign students came from the
oriental countries, 17 per cent from Latin America, 14 per
cent from the Middle East, 12 per cent from Europe, and 11
per cent from Canada. The study, further, showed that most
foreign students attended college in California or New York,
usually at one of the branches of the University of California
or New York University, and that the most popular areas of
study were engineering, humanities, and natural and physical
sciences. According to this study, the problems faced by
foreign students include insecurity about admission procedures,
difficulty in finding suitable housing specially where there
is discrimination, English language problem, academic
problems aggravated by differences between the American
educational system and that of their own countries, and
problems regarding cultural differences, social life,
finances, employment, governmental regulations, and health.

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[1] Jack D. Burke, "The Status and Problems of Foreign
Students in the United States" (unpublished report, University
of Pennsylvania, 1966).

Two studies were conducted in the State of Oregon on
the adjustment problems of foreign students. One of them was
an exploratory descriptive investigation designed to study
the backgrounds and characteristics of foreign students at
the University of Oregon, and to identify and analyze their
academic and personal-social difficulties.[2] The research
included 147 foreign students from some 50 countries of the
non-English speaking world. The student difficulties
identified were analyzed in terms of such background
variables as national origin, duration of stay in the United
States, academic classification, age, sex, previous travel
experience, and religion. The study revealed that the
foreign students experience academic difficulties which
mainly stem from their handicap in the use of English language,
contrast in the educational methods, and unfamiliarity with
the 'American English.'

Further, except for national background, the foreign
student characteristics of duration of stay in the United
States, academic classification, sex, and age showed no
marked relationship to the problems of academic adjustment.
In regard to personal-social difficulties, the over-whelming
majority of the students indicated that they were homesick

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[2]Elias K. Zain, "A Study of the Academic and Personal-
Social Difficulties Encountered by a Selected Group of Foreign
Students at the University of Oregon," Dissertation Abstract,
XXVI (8), p. 4352.

for their families and homes. In addition, the most diffi-
cult problems, as indicated by the largest percentages, were
finding residences with reasonable rent, adjusting to American
foods as well as customs, participating in social events,
and finding suitable companionship with the opposite sex.
The most troublesome problems were social in nature, and the
least difficult problems were primarily personal.

The other study sought to investigate the academic
and social adjustment of Middle Eastern students attending
colleges and universities in the State of Oregon.[3] The
primary purposes of the study were to examine the extent to
which academic and social adjustment of Middle Eastern
students attending colleges and universities in Oregon were
related to selected factors in the student's past and
immediate environment; the extent to which the sample of
Middle Eastern students was actually homogeneous in those
background areas thought to be pertinent to academic and
social adjustment; and the extent to which the nature of the
school setting related to the kinds of services utilized by
the students.

The sample included 272 students from nine Middle
Eastern countries enrolled in colleges and universities in
Oregon. Significant differences were found in academic and

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[3]Abdulla Rashid Hagey, "Academic and Social Adjustment
of Middle Eastern Students Attending Oregon Colleges and
Universities," Dissertation Abstract, XXIX (12), p. 4282.

social adjustment of the students as it related to their

past and immediate environment, national origin, and the

type of school they attended.

Another study conducted at Texas A. and M. University

attempted to discover the factors that influenced the degree

of success or failure of foreign students enrolled in that

institution. This study was based on 450 foreign students

at Texas A. and M. University.[4] The findings revealed that

such factors as academic classification, marital status,

competence in the use of English language were significant

in the success or failure of foreign students. There was no

relationship found between academic success, national

origin, and field of study at the graduate level. However,

at the undergraduate level, the field of study appeared to

be significant. Further, financial support received from

the family showed a negative relationship with academic

success. Other contributing factors found were emotional

anxiety, lack of social life on campus, feeling of being

placed in the wrong program, and diet offensive to their

religious beliefs.

Another study was conducted to identify the factors

associated with adjustment of foreign students studying

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[4]Kamel M. Moghrabi, "An Analysis of Factors that
Influence the Degree of Success or Failure of Foreign Students
at Texas A. and M. University," Dissertation Abstract, XXVII
(10), p. 3232.

extension education at selected land grant institutions.[5]
Eighty students from five institutions were included in the
study. The American education system, separation from
family and friends, use of English language, and cultural
changes were listed as the major adjustment problems.
Satisfaction with their preparation for the study experience,
the suitability of housing, and their attitude toward their
graduate study in extension were the most significant positive
factors in determining personal adjustment. This study also
revealed certain special academic adjustment problems typical
of the students in agriculture education.

Boddy reports that foreign students from the Far East,
South Asia, the Middle East, and Latin America face greater
problems on entering graduate school than do students from
the United Kingdom and Northern Europe whose culture is more
similar to ours.[6] Inaccessibility of educational opportuni-
ties in most of the non-Western areas plus class, cultural,
and economic handicaps result in graduate students from these
areas being members of a small elite group. Yet even in this

[5]Walter Theodore Wilkening, "Factors Associated with
Adjustment of Foreign Students Studying Extension Education
at Selected Land Grant Institutions," Dissertation Abstract,
XXVI (7), p. 3732.

[6]Francis M. Boddy, "Special Problems of the Foreign
Students," The Graduate Student: Proceedings of the Fifth
Annual Meeting of the Council of Graduate Schools in the
United States (Washington, D. C., December, 1965), pp. 118-
121.

elite group, the level of undergraduate training is lower
than that for Western countries. Foreign students from
non-Western countries also face the problem of adapting to
a new culture and unfamiliar institutional procedures. For
many graduate foreign students the professions have such
high prestige value that few students enter the basic sciences,
social sciences, or the humanities, even though they may be
better fitted for these fields. Foreign students need
special counseling to enable them to adapt to American
universities and to choose the courses most suitable to
them.

Lloyd observes that concern with the language profi-
ciency of foreign graduate students tends to supersede
concern with other areas of academic life.[7] The thinking of
foreign students is dominated by political philosophies and
activities in contrast to that of most American students who
still look on the university as a center of learning rather
than of political activity. Foreign students have difficulty
in adapting to the freedom of graduate school and the typically
American style of informality in relationships between students
and professors. In addition, the large open-stack libraries
in American universities make students rely less upon
professors' lectures and more on their own investigation

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[7]Wesley P. Lloyd, "Socio-Academic Problems of Graduate
Students from Other Lands," The Graduate Student: Proceedings
of the Fifth Annual Meeting of the Council of Graduate Schools
in the United States (Washington, D. C., 1965), pp. 121-126.

a situation requiring tremendous adjustment on the part of
foreign students who have depended almost exclusively on
lectures to acquire information. Further, specific cultures
produce important differences among foreign students.

Galichia found that foreigners in the United States
exhibit four common adjustment patterns.[8] They may remain
detached observers, actively promote their home cultures,
become enthusiastic participants in the new culture, or
adjust easily as permanent immigrants. Americans accept most
readily those foreign nationals who have a good command of
English, are of higher socio-economic status and from an
urban background, and who have had previous informal contact
with Americans. Social adjustment is best in a university
or community having few foreigners because of their lack of
opportunity to band together in social isolation. Foreign
nationals become active participants in settings where
factors that impair smooth adjustment, such as social
isolation, racial prejudice, and the informality of most
Americans are minimized. The foreign national's personality
is important, with openmindedness, flexibility, and a pre-
disposition to universalism among the characteristics that
aid in the adjustment process.

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[8]Sharon Galichia, "The Factors Influencing an Adequate
Social Adjustment of a Foreign National to the United States,"
International Student Studies No. 19, University of Kansas
(July, 1966).

Two studies of a rather comprehensive nature were carried out at Indiana University. One of these was completed by Santos, the purpose of which was to determine the problems of seven groups of foreign students enrolled at Indiana University in the spring of 1959 with a view of planning adequately for realistic services to meet their inventoried needs.[9] The academic, financial, personal, religious, emotional, and social aspects of adjustment to college life were analyzed. The sample was limited to the non-English speaking countries in seven geographical areas, namely: Latin America, Europe, Southeast Asia, Southwest Asia, Southern Asia, Central Africa, and North Africa. The following conclusions were drawn: (1) The academic, financial, and social problems seemed to give the most trouble to the foreign students, and the religious and personal problems seemed to give the least trouble. (2) The seven groups varied widely with regard to general characteristics and to the six problem areas. (3) The Christian students, travelled students, and graduate students seemed to be better adjusted than their counterparts. (4) The ability to speak English before coming to the United States failed to be a factor in the total adjustment of the students, although it seemed to be a factor in academic adjustment.

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[9]Antusa P. Santos, "A Study of the Problems Faced by Foreign Students at Indiana University with Implications for Action," Dissertation Abstract, XX (9), p. 3580.

The other study was conducted by Hill who tried to identify the problems of a group of foreign students from Indonesia, Thailand, Pakistan, and India enrolled at Indiana University during the fall of 1963.[10] A secondary purpose was to determine if any of their problems were specifically related to either nationality or sex. The six problems investigated included academic, financial, housing, religion, personal, and social. Seventy-eight students participated in the study.

The results of the study indicated that: (1) As a group, the Indonesian, Thai, Indian, and Pakistani students experienced substantial difficulties with academic, personal, and financial problems. Of these, the academic problems were greatest, and they were largely related to a lack of proficiency in the English language. The students experienced no substantial difficulty with either housing, religion, or social adjustment. (2) According to sex, the women experienced substantially greater difficulties with academic problems than the men. (3) According to nationality, the Thai students experienced substantially more difficulties with academic problems which involved English proficiency than the students from Indonesia, India, or Pakistan. The Thai

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[10]Jarvis H. Hill, "An Analysis of a Group of Indonesian, Thai, Pakistani, and Indian Students' Perceptions of Their Problems While Enrolled at Indiana University," Dissertation Abstract, XXVII (7), p. 2007.

and Indian students experienced substantially greater difficulties in getting acquainted with American educational methods than the Indonesian and Pakistani students.

A study slightly different in nature was carried out by Hattari whose purpose was to determine the relationship of selected personal and social factors to academic achievement of foreign students.[11] The personal and social factors included: (1) scholastic ability, (2) English proficiency, (3) home background, (4) educational background, and (5) ability to establish effective interpersonal relationships on campus. The study included 53 foreign students who had been registered for at least two semesters at the University of Nebraska. The students represented 25 different countries. The findings revealed no significant relationship between the academic achievement of the foreign students and the personal and social variables under investigation.

In a study of 62 Middle Eastern students enrolled in 11 California colleges and universities, Gezi found the following four factors significant in their adjustment to the United States.[12] (1) Students who come to the United States

[11]Purificacion M. Hattari, "Relationship of Selected Personal and Social Factors to the Academic Achievement of Foreign Students," Dissertation Abstract, XXVIII (4), p. 1297.

[12]Kalil I. Gezi, "Factors Associated with Student Adjustment in Cross-Cultural Contact," California Journal of Educational Research, XVI (May, 1965), pp. 129-136.

with favorable or unfavorable attitudes toward this country
tend to reinforce these attitudes when a program of guided
cultural contacts is lacking. (2) The length of time they
are here is not related to the quality of their adjustment,
but the type and quality of their experience is. (3) When
foreign students feel that American students are downgrading
their homelands, they become antagonistic, thus making
adjustment more difficult. (4) Finally, academic success
is closely related to satisfaction with their experiences
in the United States.

Borhanmanesh carried out a study of Iranian students
in Southern California colleges and universities to determine
what factors prompt them to study in the United States, the
nature of their American experiences, and the reasons why
they intend either to remain abroad or to return home.[13]
The findings revealed that students from lower-class families,
those working toward advanced degrees, those longest in the
United States, and those dissatisfied with employment
opportunities in Iran tend to remain in the United States
after graduation. Most students were satisfied with their
social experiences in the United States but had some trouble
with acculturation. Single women students were more dis-
satisfied with their social life than were single male students.

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[13]Mohamad Borhanmanesh, "A Study of Iranian Students
in Southern California" (unpublished doctoral dissertation,
University of California, Los Angeles, 1965), pp. 190.

Partially supporting the above findings, Akka observes
that, while attending college in the United States, the
Middle Eastern students from the most radically different
cultural backgrounds are most likely to have emotional and
adjustment problems manifested in psychosomatic complaints.[14]
These problems are caused by cultural conflict. Foreign
students regard academic failure as critical because of
their responsibilities to advisers, the Immigration Office,
sponsors, and family, and because of their realization that
they probably will not receive a second chance. They may
be troubled by financial problems. Middle Eastern students
with successful social lives may encounter sexual problems;
if not successful they feel inadequate and rejected by the
opposite sex.

In another study, it was found that the Middle Eastern
students were more concerned with problems of a social nature.[15]
They were bothered by social withdrawal, inability to sleep
well, sexual problems, and sadness. These problems may have
been caused by the stress of cultural change and by the
unfamiliarity of life in America.

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[14]Rouben I. Akka, "The Middle Eastern Student on the
American College Campus," The Journal of the American College
Health Association, XV (February, 1967), pp. 215-254.

[15]A. Jarrahi-Zadeh and W. J. Eichman, "The Problems
of Middle Eastern Students and Their Adjustment to American
Colleges," Paper Read at the American Orthopsychiatric
Association, 1968.

In a study of 170 foreign graduate students at the New York State College of Agriculture at Cornell University, Shattuck found that anxiety is related to cultural shock, that undue anxiety impedes the learning process, and that lack of a clear perception of one's role or a perception of loss of national status are related to cultural shock.[16] The adaptation of foreign students to an American university setting was related to the assistance received from professors or American graduate students but not to university sponsored orientation or other traditional forms of adaptive assistance. The researcher observes that a decentralized orientation program closely coordinated with plans of the student's department is better than a centralized one. A few weeks of language training is insufficient for foreign students and summer orientation programs do not reach enough students. As long as American academic institutions continue to accept foreign students, they should provide effective orientation and guidance services.

At the University of Wisconsin, 261 foreign students participated in the initial stages of a long term study of adjustment difficulties, adaptation patterns, and prediction

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[16]Gerald M. Shattuck, "Between Two Cultures: A Study of the Social Adaptation of Foreign Students to an American Academic Community," College Student Personnel Abstracts, 11 (1966), p. 45.

of foreign student adjustment.[17]   The findings indicated

that: (1) The greater the student's desire for interpersonal

involvement during the period of study in the United States,

the more he anticipated adjustment problems and was indeed

vulnerable to them; (2) the use of medical health service was

related one time to concern with homesickness, and at a

later time to the desire for change; and (3) the student's

specific prediction of academic difficulties was a good

predictor of poor academic achievement.

A study to determine the reaction to Canadian culture

was conducted when a government program sponsored 15 teachers

in 1964 and 30 teachers in 1965 from Uganda to the University

of Alberta for one year of teacher training.[18]   The findings

revealed that the most annoying differences for Uganda

students concerned the business like role of Canadian women,

punctual emphasis on time, absence of spontaneous personable

behavior, and foolish questions about Uganda.

Two studies which attempted to determine the relation-

ship between academic success and national origin were conducted

by Chi and Halasz. Chi analyzed English proficiency scores

of 251 Chinese, Indian, Arabian, African, European, and

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[17]M. H. Klein, M. H. Miller, and A. Alexander,
"Adaptation of the Foreign Student to the American Experience,"
Paper read at American Psychiatric Association, Detroit, May,
1967.

[18]"Culture Shock: An Exploration in Observation,"
College Student Personnel Abstracts, 11 (1967), pp. 171-172.

Latin American students at the University of Kansas for the two-year period, 1964-1965.[19] The European student group scored highest followed by the African group, although the variability of the Africans was considerable. Chinese students appeared to have more difficulty than those from most of the other countries.

Halasz conducted a comparative study of entrance qualifications and academic success of graduate students from India, Japan, the Philippines, and Taiwan at the University of California, Los Angeles, in 1966 to evaluate the relevance of the University's entrance requirements and to establish a profile of the expected performance of students from these countries.[20] The Philippine students were found to be exceptionally successful, due primarily to a special program in teaching English as a second language at the University. Indian students, admitted only after completion of an Indian Master's degree, were also satisfactory academically. Japanese and Taiwanese students had greater difficulties with English, which often hampered normal progress toward the degree.

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[19]Christopher Chi, "A Comparative Study of English Proficiency of Chinese Students with Students from other Countries," College Student Personnel Abstracts, II (1967), p. 171.

[20]Sari C. Halasz, "Foreign Graduate Student Study, UCLA--India, Japan, the Philippines, and Taiwan (Fall 1959 through Spring 1965), Graduate Division, Admissions Section, University of California, Los Angeles (July, 1966), pp. 46.

Ho conducted a study to identify the factors affecting adaptation to American dietary pattern by students from the oriental countries.[21] The purpose of her investigation was three-fold: (1) to provide an estimate of change between dietary practices in the home country and in the host country; (2) to evaluate factors involved in dietary adaptation; and (3) to relate dietary adaptation to some other types of adjustment for a group of students and visiting scholars from the orient.

There was a significant relationship between nationality and the degree of adaptation to food. The Indian group had the highest score, and the Chinese, the lowest. There were also statistically significant relationships between nationality groups and the following selected variables: ability to speak English, practice in extra-curricular activities, length of residence in the United States, cooking experience in the home country, and age.

The Indian group had the least difficulty in English language and was the most active in extra-curricular activities. The individuals of this group were judged to be highly motivated to achieve their academic goals and therefore the non-academic problems and difficulties became secondary to them.

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[21]Genevieve Po-Ai Ho, "Factors Affecting Adaptation to American Dietary Pattern by Students from the Oriental Countries," <u>Dissertation Abstract</u>, XXII (11), p. 3977.

The studies presented above are concerned directly with the adjustment problems of foreign students. There have been conducted numerous other studies which have an inferential relationship with the adjustment problems of foreign students. The significant ones of them are discussed in the remaining portion of this chapter.

Studies Related to Admission and Orientation
of Foreign Students

Some studies have been conducted concerning the admission of foreign students to the American institutions of higher learning, with a view to formulate more effective policies. One such attempt has been by Sugimoto who tried to discover the relationship between certain items found on admission forms and the academic success of foreign students.[22] The study included 1,375 foreign students enrolled at the University of California, Los Angeles. The most significant pre-admission predictors of the academic success of foreign students were found to be graduate standing, age, and type of visa held. Of least predictive value were such standard pre-admission items as scores on the English examination, student's sex, admission status, and the date of entry into the United States. The first semester

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[22]Roy A. Sugimoto, "The Relationship of Selected Predictive Variables to Foreign Student Achievement at the University of California, Los Angeles," Dissertation Abstract, XXVIII (I), p. 65.

grade point average appeared to be the best index of the student's eventual academic success. The researcher concluded that careful screening procedures be applied prior to the admission of very young, single undergraduates who possessed F or J visas, and that the student's admission level be determined at the end of his first year of study at the University.

General consensus exists among knowlegeable educators that foreign students, on the whole, perform commendably and that English language proficiency is one of the most important factors associated with academic success. Kaplan suggests that, ideally, the admitting institution should assume the responsibility for providing instruction in English for the foreign students whom it has admitted rather than making English proficiency a criterion for admission.[23]

A survey of admissions procedures of foreign students was conducted through a committee of the American Association of Collegiate Registrars and Admissions Officers.[24] The committee recommended a model foreign student admission system based on centralization of administration of all

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[23]Robert B. Kaplan, "English Proficiency--Criterion for Admission," National Association for Foreign Students Affairs Newsletter, XX (December, 1968), pp. 4-5.

[24]Loe J. Sweeney, "Administration of Foreign Student Admissions," College and University, XXXXII (Summer, 1967), pp. 433-446.

levels (undergraduate, professional, and graduate), considera-
tion of applicants as whole persons, and use of a team
approach in admission decisions.   In a model system, the
primary evaluation of applicants should include such factors
as educational goals, educational preparation, financial
support, and English proficiency.   Centralization of
administration of foreign students' admission has also been
proposed by Frey.[25]

Several attempts have been made to identify predictive
measures for the academic success of foreign students.
Mulligan in a study of 285 foreign students at the Baruch
School from 1958-1965 found that neither deficiency in
English, educational background, nor age at the time of
admission were useful in predicting academic success of
foreign students.[26]   Paraskevopoulos in his study came to
the conclusion that the typical United States admission
tests had only limited predictive validity for foreign
students.   Much of the failure of these tests was traced to
the low level of English proficiency among most foreign
students.[27]   Conversely, Howell concluded that Scholastic

[25] James S. Frey, "The Evaluation of Foreign Student
Credentials: A Proposal," College Student Personnel
Abstracts, I (1966), p. 133.

[26] Agnes C. Mulligan, "Evaluating Foreign Credentials,"
College and University, XXXXI (Spring, 1966), pp. 307-313.

[27] John Paraskevopoulos, "Research on Foreign Students
at the University of Illinois," College and University,
XXXXIII (Winter, 1968), pp. 513-524.

Aptitude Test scores seemed to be the most useful available predictors of further academic performance, even though such scores would require adjustment when compared with the scores of American students.[28]

In order to help the foreign students not to have disappointing experiences in American institutions, a number of propositions have been made to screen them prior to their departure from their home country. Spriestersback suggests that field trips may be made by United States university faculty members to underdeveloped nations to determine what their educational needs are and which universities can best meet those needs.[29] He further suggests the possibility of setting up universities in strategic spots around the world as a more effective way to help underdeveloped countries than bringing their students to the United States. Dremuk recommends that all colleges should critically evaluate the effectiveness and suitability of their academic programs available to foreign students, and that better methods are needed to assess foreign student records for placement.[30]

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[28]John J. Howell, "On the Meaning of SAT Scores Obtained by Foreign Students of Non-English Language Background," College and University, XXXXIII (Winter, 1968), pp. 225-232.

[29]D. C. Spriestersback, "Admission of the Foreign Graduate Student," The Graduate Student: Proceedings of the Fifth Annual Meeting of the Council of Graduate Schools in the United States (Washington, D. C., December, 1965), pp.46-50.

[30]Richard Dremuk, "Will We Be Admitting Foreign Students In 1975?" The Journal of the Association of College Admissions Counselors, XI (1966), pp. 4-8.

Education and World Affairs, recognizing the problems encountered by the United States universities in handling foreign students who are unprepared for study in this country through lack of language facility, financial support, background, and orientation, stresses the need for a more careful screening and selection of students prior to departure for the United States.[31] It recommends the establishment of a network of counseling, evaluating, and testing centers in foreign countries and the coordination of admissions procedures of American universities.

Baker points out that the Institute of International Education has developed excellent guidelines for admitting foreign students, and admissions officers should use them.[32] Johnson suggests that the foreign student admissions problems can be alleviated by a sister relationship with a country or university abroad which would simplify procedures regarding the exchange of students by eliminating communication difficulties.[33] This arrangement would resolve such problems

[31]"The Overseas Selection of Foreign Students," Education and World Affairs (New York: April, 1966), pp. 34.

[32]Robert H. Baker, "The Evaluation of Credentials and Admission of Foreign Students," The Graduate Student: Proceedings of the Fifth Annual Meeting of the Council of Graduate Schools in the United States (Washington, D. C.: December, 1965), pp. 112-118.

[33]George A. Johnson, "Foreign Student Admissions: Another Approach," The Journal of the Association of College Admissions Counselors, XI (1966), p. 3.

as transfer of credits and difference in student status, and would provide the opportunity for a study in depth of the culture and language of the adopted country.

Clubine considers the admissions process as the key to preventing the foreign students from failing.[34] In an attempt to avoid frustration and failure to foreign students admitted in the field of economics, the University of Colorado began in 1958 a summer orientation program, the Economics Institute.[35] This program now has expanded to serve other graduate schools as well. The three main areas of instruction are economics, mathematics, and English. Similarly, the Orientation Institute for Latin American Students in Washington, D. C., established by Catholic University of America and the Latin American Bishop's Council provides intensive language training and information for undergraduate and graduate students as well as professional people who wish to carry on research or study in the United States.[36]

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[34]Eugene L. Clubine, "The Rehabilitation of the Foreign Casualty," Detroit Convention Abstracts, (Washington, D. C.: American Personnel and Guidance Association, Arpil, 1968), p. 119.

[35]W. F. Owen and J. L. Colwell, "Orientation for Foreign Students," International Educational and Cultural Exchange (Winter, 1968), pp. 48-54.

[36]Frederick J. Bosco, "The Orientation Institute for Latin American Students," The Catholic Educational Review, LXV (April, 1967), pp. 250-251.

Studies Related to Housing of Foreign Students

A few studies have been conducted to determine the
housing problems foreign students face. One of the most
important factors influencing foreign students' reactions to
life in the United States is their housing, whether it is in
residence halls, fraternities and sororities, international
houses, cooperatives, private apartments, or rooming houses.[37]

Coan in a survey of the housing of foreign students
at the University of Kansas found greatest dissatisfaction
occurring in the off-campus double rooms and the residence
halls.[38] About one-half of those in the residence halls were
unhappy with their American room-mates and felt that their
rooms were not quiet enough for study. A substantial number
of foreign students indicated dissatisfaction with the way
their personal, social, and dietary needs were being met.
Finding local housing during vacation periods was a common
problem.

National Association for Foreign Student Affairs has
developed guidelines for the housing of foreign students.[39]

[37]C. H. Bang, "Student Housing Melting Pot," Proceed-
ings of the Seventeenth Annual Conference of the Association
of College and University Housing Officers (University Park,
Pennsylvania, 1965), pp. 206-214.

[38]Clark Coan, "A Survey of the Housing of Foreign
Students at the University of Kansas," International Student
Studies, No. 20 (University of Kansas, August, 1966), p. 37.

[39]National Association for Foreign Student Affairs,
"Guidelines: Housing of Foreign Students," Field Service
Publications, NAFSA (March, 1967), pp. 12.

It recommends that foreign student advisors and housing officers should try to improve the housing experiences of foreign students by examining facilities, current practices, and problems of on- and off-campus housing.

Davis tried to assess the degree to which the International House of New York reaches its stated objectives which are: (a) to help its overseas members academically; (b) to assist them to understand the United States, and (c) to foster the concept of brotherhood.[40] The survey included all residents in the House from September, 1951 to June, 1961. Analysis of 700 responses revealed that residence in the International House did help the students in achieving academic objectives of lasting value. However, the contribution of the House with respect to attaining the other two objectives was not rated very significant.

Studies Related to Counseling of Foreign Students

In order to be an effective foreign student adviser, an understanding of the student's culture is essential in counseling foreign students.[41] Some foreign students from

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[40]James Louis Davis, "A Survey of Present and Former Foreign Students Regarding the Effects of Their Residence in the International House of New York," Dissertation Abstract, XXVI (4), p. 1990.

[41]Mary E. Hennes, "Insights into Foreign Student Counseling at UCLA and the New Immigration Law," Paper Read at American College Health Association, San Diego (May, 1966).

countries where women have an inferior status have difficulty
in relating to a woman counselor. Due to different cultural
patterns of learning, some foreign students are more receptive
than creative. The emphasis on individual responsibility in
this country confuses students from family-orientated
societies. The concept of personal guilt is new to some.
About 40 per cent of the foreign students are self-supporting,
but the menial nature of the work available shocks students
from countries where such work is associated with the lower
classes.

Walker and Alcorn tried to identify the critical
requirements of foreign student advisers.[42] The responses
of 666 subjects contributed 362 usable incidents which fell
into seven major categories. Nearly one-half of the usable
incidents consisted of providing services to foreign students
as individuals. Three of the categories accounted for 40
per cent of the responses: Developing better understanding
between foreign students and Americans through campus inter-
action, establishing a better relationship between foreign
students. The least commonly cited areas were professional
development of the foreign student adviser, helping foreign
students understand and comply with institutional regulations,
and providing adequate pre-admission services to prospective
foreign students.

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[42]B. R. Walker and J. C. Alcorn, "Critical Requirements
of Foreign Student Advisers," The Journal of College Student
Personnel, IX (May, 1968), pp. 190-192.

Bridgers suggests that foreign student advisers can
do most for their students by acting as coordinators in a
basic team approach involving admissions officers, teachers
of English as a second language, and community volunteers.[43]
The team on occasion will also include student leaders,
other student personnel staff members, and faculty members.

National Association for Foreign Student Affairs also
considers ;the major role of foreign student advisers to
coordinate the various offices and resources of the institu-
tion in serving the particular needs of foreign students.[44]
A three-way dialogue should be maintained among the foreign
student, his academic adviser, and the foreign student
adviser. Close communication among these three persons can
lead to identification and resolution of the problems
foreign students face. The foreign student adviser should
consider the promotion of American and Foreign student
relationships as one of his major responsibilities,[45] and

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[43]Furman A. Bridgers, "The Team Approach to the
Foreign Student Program," National Association for Foreign
Student Affairs Newsletter, XVIII (January, 1967), pp. 1-3.

[44]National Association for Foreign Student Affairs,
"Guidelines: Academic and Personal Advising," College
Student Personnel Abstracts, II (1966), p. 219.

[45]National Association for Foreign Student Affairs,
"Guidelines: American-Foreign Student Relationships,"
Field Service Publications, G-9, NAFSA (January, 1967),
p. 11.

he should be well prepared to handle the emergency situations involving foreign students.[46]

Westcott conducted a study to determine the actual and ideal-role of the foreign student adviser, as perceived by advisers and their immediate supervisors.[47] The data included 115 questionnaires returned by advisers, and 75 by their administrators. The results of the study indicated that significant differences existed in the actual and ideal perceptions of the adviser's role among advisers as well as among administrators. For the same functions, the ideal ratings were consistently higher for both groups.

<center>Studies Related to Attitudinal Changes

in Foreign Students</center>

A few studies have been conducted to determine the changes in the attitudes of foreign students toward the United States during their stay here. Becker included in his study 27 Indians, 25 Isrealis, and 25 Europeans, representing an underdeveloped, semi-developed, and highly developed country, from the University of California, Los

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[46]Robert M. Kinger, Handbook for Foreign Student Advisers on Emergency Situations Involving Foreign Students, revised edition (Washington, D. C.: The National Association for Foreign Student Affairs, November, 1967), p. 8.

[47]Nina Agerwala Westcott, "A Position-Analysis of the Foreign Student Adviser as Reflected by Foreign Student Advisers and Administrators," Dissertation Abstract, XXVIII (3), p. 945.

Angeles campus in the Spring of 1964.[48] The researcher found

that, as compared with the Europeans, Indian and Isreali

respondents were less favorable to the United States, more

defensive about their home country, and expressed a far

greater sense of patriotic obligation to it. Thus, percep-

tion of the United States differed among nationality groups.

The researcher attributed these differences in perception

to the differences in the students' cultural backgrounds.

Some investigators have reported that many foreign

students perceive personal relationships in this country

as shallow; American family life too loosely structured;

children lacking discipline and parental authority; and the

values generally held by Americans as superficial. To verify

these conclusions, Heilpern conducted a study to investigate

the changes in perception of American home life as reported

by students from abroad who visited in American homes.[49]

Her findings contradicted the earlier conclusions.

From the students' responses. Heilpern drew the fol-

lowing conclusions: (I) the American family was friendly

and hospitable; (2) there was a democratic relationship

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[48]Tamar Shfiron Becker, "Perceptions and Attitudinal
Changes Among Foreign Students on the UCLA Campus,"
Dissertation Abstract, XXVII (IO), p. 3519.

[49]Florence F. Heilpern, "A Case Study of the Effects
of Visiting in American Homes on the Opinions of a Selected
Group of Students from Abroad," Dissertation Abstract, XXVI
(8), p. 4864.

between parents and the children; (3) the students approved

of the liberal relationship between parents and children;

(4) they observed that elderly parents were treated respect-

fully; (5) the students agreed that the young people were

given responsibility for their actions; (6) they approved

of the tolerance shown for the diversity in religion;

(7) the concept of materialism took on different interpreta-

tions after knowing American families; and (8) culture in

the home was reflected in the decor of the interiors, the

display of good reading materials, the collection of

classical records, paintings, and the quality of the furniture.

<div align="center">Studies Related to American and

Foreign Students Relationships</div>

Studies have also been conducted concerning the

relationships between American and Foreign students. Shaffer

and Dowling examined the relationships between 554 American

students and 756 foreign students at the University of

Indiana.[50] The following conclusions were drawn: (I) Initial

contacts between American and Foreign students occurred

informally and spontaneously. (2) Friendship arose from

similar interest and environmental proximity. (3) Friend-

ships were formed from a wide range of countries and regions

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[50]R. H. Shaffer and R. R. Dowling, "Foreign Students
and Their American Student Friends," College Student Personnel
Abstracts, I (1966), p. 220.

of the world. (4) Friendships fostered a broader interest

in and subsequent re-evaluation of national and international

affairs. (5) American friends consider foreign students to

be more culturally oriented and more mature than American

students.

Bloland conducted a study with a view to appraise the

practices for developing personal relationships between

American and foreign students on 30 campuses, each having

100 or more foreign students.[51] Area and regional groups

emphasizing affiliation of American and Foreign students

proved to be the most common practice. Displays of inter-

national articles or programs featuring the home country of

foreign students were considered to be the practices best

received by both American and Foreign students. The practice

considered poorest was a residence hall policy requiring

American and foreign students to live together.

In an attempt to discover the nature of the cross-

cultural relationships, Nelson conducted a study of the

American and foreign undergraduate students at Indiana

University.[52] He found that more close American friends of

foreign students lived and mixed socially with foreign

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[51]Paul A. Bloland, "Developing American-Foreign
Student Relationships," The Journal of College Student
Personnel, VIII (November, 1967), pp. 397-401.

[52]Donald T. Nelson, "The Impact of Foreign Undergraduate
Students Upon American Undergraduate Students," Dissertation
Abstract, XXVII (7), p. 2010.

students, had a wide circle of foreign student friends, knew

foreign people before coming to Indiana University, and

spoke a language other than English. A significant impact

of foreign students upon close American student friends was

found in specific new interests, a more accepting attitude,

and cross-cultural plans for the future.

Koo conducted a study to ascertain the nature of

American students' contacts with the attitudes toward the

foreign students at Michigan State University.[53] He found

that the American students did not avoid foreign students

and they sought the opportunity to know them. Further, the

American students did not prefer association with foreign

students from Europe rather than with foreign students from

other areas, language difficulty was not related to the

lack of contact between the American and the foreign students,

and personal friendliness and participation in extra-curricular

activities did not lead to more contacts with the foreign

students. The findings of the positive relationship between

residence proximity and contact with foreign students is

confirmed.

Another study, conducted by Hassan, was concerned with

investigating the social interaction between foreign students

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[53]May Koo, "American Students' Contacts with and
Attitudes Towards Foreign Students," Dissertation Abstract,
XXIII (12), p. 4605.

and Americans.[54] The study involved foreign students at-
tending Purdue University during the second semester of the
academic year 1959-1960. The sample consisted of 397
foreign students representing 16 countries or major geographical
or cultural areas. A significant relationship was found to
exist between country of origin and social interaction.
Foreign students who came from technologically developed
countries, equalitarian societies, and countries with good
political and cultural relations with the United States
tended to interact with Americans more than other foreign
nationals.

Social class position and occupational prestige were
found to be significantly related to social interaction.
Students who came from families of high status or who had
jobs with relatively high prestige in the power structure
of their countries interacted with Americans more than other
foreign nationals. Foreign students' democratic orientation,
low degree of involvement in the home country, and increasing
length of stay in the United States were found to be related
significant to high degree of interaction with Americans.

Further, it was found that almost all foreign students
felt that Americans were less democratically oriented than
the students themselves. The only exceptions were Arab,

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[54]A. M. A. Hassan, "Social Interaction Between
Foreign Students and Americans in a Mid-Western Community,"
Dissertation Abstract, XXII (7), p. 2492.

Greek, and Thai students. Favorable perception of American democratic orientation was found to be related significantly to favorable experiences encountered by foreign students in the United States, and to their adjustment to the academic and social life in the United States.

Miscellaneous Studies Related

to Foreign Students

Several studies have been conducted on foreign students which may be considered as institutional research. For example, Burroughs traced the development of programs and facilities to help the foreign students at the University of California, Los Angeles from 1927 to the present time.[55] Green tried to ascertain the characteristics and experiences of the international alumni at Cornell University from 1935 to 1959.[56] Similarly, Wee conducted a study of foreign students who received Master's degrees in educational administration from Teachers College, Columbia University,

[55]Franklin T. Burroughs, "Foreign Students at UCLA: A Case Study in Cross-Cultural Education," Dissertation Abstract, XXV (3), p. 1711.

[56]Donald G. Green, "Characteristics of International Alumni, Cornell University, 1935-1959," Dissertation Abstract, XXV (6), p. 3352.

during the period 1950-1962,[57] and Mitchell studied the foreign students in the graduate program at George Peabody College for Teachers, 1956-1962.[58] The primary purpose of these studies was to examine, modify, and improve the policies and programs of the institutions to serve the foreign students better. Chou[59] and Berte[60] have also sought to serve the same purpose by their studies at the University of Georgia and the University of Cincinnati, respectively.

Garside conducted a study involving a cross-cultural comparison of personality of Polynesian, Oriental, and Caucasion college students at the Church College of Hawaii as measured by scales of the MMPI. She found statistically significant differences among them.[61]

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[57]Joo Liat Wee, "A Study of Students from Other Lands Who Received Master's Degrees in Educational Administration from Teachers College, Columbia University, 1950-1962," Dissertation Abstract, XXV (1), p. 259.

[58]Joy A. H. Mitchell, "The Foreign Students in the Graduate School at George Peabody College for Teachers, 1956-1962," Dissertation Abstract, XXIII (10), p. 3691.

[59]Frank Hua-Tsin Chou, "A Study of the Foreign Student Program at the University of Georgia, 1948-1949," Dissertation Abstract, XXI (8), p. 2158.

[60]Neal R. Berte, "An Analytical Study of the Foreign Student Program at the University of Cincinnati," Dissertation Abstract, XXVII (6), p. 1532.

[61]Jayne G. Garside, "A Cross-Cultural Comparison of Personality," Dissertation Abstract, XXVI (10), p. 5864.

Paraskevopoulos and Dremuk carried out a faculty survey at the University of Illinois to find out the procedures for grading foreign students.[62] An analysis was made of 565 questionnaires. They found that, on the whole, practically no differential standards were used in the physical and biological sciences, but allowances were occasionally made in the social and behavioral sciences where the need for language skills is greater.

Parakarn in a study of 462 graduate and undergratuate foreign students at Kansas State University found that those who passed the Kansas State University English Proficiency Tests received better grades than did those who failed.[63] Further, students who had been academically successful in their own countries continued to receive commendable grades at Kansas State. Of all the factors studied, the most important requisite for academic success was proficiency in English. On the other hand, Lara, in a study at the University of Kansas, concluded that the correlations between

[62]J. Paraskevopoulos and R. Dremuk, "Grading Patterns for Foreign Students: A Faculty Survey," College Student Personnel Abstracts, IV (1969), p. 450.

[63]Smarn Parakarn, "A Study of Academic Achievement of Foreign Students at Kansas State University, Summary and Conclusions," College Student Personnel Abstracts, II (1966), pp. 4-8.

academic achievement and amount of previous formal English study was negligible.[64]

In a study at the University of Arizona, Guglielmo explored into the rights and obligations of foreign students in an American University.[65] The main purpose of the study was to discover what factors in the foreign student's background and experience have a positive or negative relationship to his knowledge of regulations regarding: (1) immigration regulations, (2) automobile operator's responsibilities, (3) income tax and social security, (4) housing regulations, (5) employment responsibilities, and (6) purchasing and installment buying. The sample consisted of 146 foreign students enrolled at the University of Arizona.

The researcher found that foreign students who had lived in the United States for a long time, who had travelled in other countries, who had had experience of full-time or part-time employment, and those who came from educated families had a greater understanding of the regulations in this country. He recommended a strong orientation program, increased opportunity for inter-personal contacts between

[64]Emilia V. Lara, "The Effect of Previous Study of English on the Academic Performance of Forty Foreign Students at the University of Kansas," International Student Studies No. 17, University of Kansas (February, 1966), p. 19.

[65]Hector Guglielmo, "Rights and Obligations of Foreign Students in An American University," Dissertation Abstract, XXVIII (4), p. 1237.

foreign students and American students and families, and
provision of adequate counseling facilities for foreign
students.

Smith in delineating the role of a foreign student
in campus unrest suggests that he should be encouraged to
participate in campus activism at the same time making sure
that he knows what he is getting into.[66] He should be made
aware of what is lawful and what is not, his legal rights,
university rules and penalties for violating them, the
effect of expulsion on his student visa, the attitude of his
home country, and the realization that participation in
activism may make him unpopular with some people.

Conclusion

The review of the literature fails to provide a con-
figuration of concerted and coordinated efforts to study the
problems of foreign students in the United States. The
studies cited above are, at best, sporadic, spasmodic, and
erratic attempts to know about the problems of foreign students
with almost no follow-ups as to their amelioration. They do
not constitute an organic development or form a mosaic; they
do not lend to progressive and systematic extension of know-
ledge; instead, they are disconnected, disjointed, and

[66]Eugene H. Smith, "Campus Activism and Foreign
Students," International Educational and Cultural Exchange,
IV (Winter, 1969), pp. 39-44.

awkwardly encumbered on each other. Because contradictions
and inconsistencies pervade the literature, meaningful
conclusions are difficult to derive. Besides, variables
like the institutional setting, the student personnel
services, the personal characteristics of the foreign students,
and inter-governmental relations make generalizations very
hazardous. Therefore, the need for systematic well-coordinated
extensive research studies cannot be overemphasized.

The examination of the literature has revealed certain
areas for investigation pertaining to foreign students
which either have not been researched at all or have
received only meager attention. These areas are outlined in
the following chapter. The present investigation was an endea-
vor to find answers to certain questions in these areas from
the responses of foreign students enrolled in selected
universities in the State of North Carolina. The findings
of this study are obviously generalizable to the participating
universities of North Carolina. Perhaps, they may have
relevance to other comparable institutions of the nation as
well. However, the greatest gain that might possibly accrue
from this study appears to be that it may generate interest
to conduct similar investigations in other institutions in
different parts of the country, which might eventually
facilitate the formation of a gestalt.

CHAPTER III

THE PROBLEM FOR INVESTIGATION

This chapter presents justification for the study, limitations of the study, statement of the problem, formulation of hypotheses, and definition of terms.

Need for the Study

The identification of the problem for research necessitated an extensive survey of the literature pertaining to adjustment problems of foreign students enrolled in the institutions of higher education in the United States. The review revealed certain areas which either have not been researched at all or have received only scant attention. In particular, answers to the following questions are lacking:

1. What is the relationship between the academic, personal, and social adjustment of foreign students and their educational and home backgrounds?

2. What is the relationship between the academic, personal, and social adjustment of foreign students and the nature of their financial support?

3. What is the relationship between the academic, personal, and social adjustment of foreign students and the programs of study they pursue?

4. What is the relationship between the academic, personal, and social adjustment of foreign students and the student personnel services available to them?

5. What is the nature of the adjustment pattern of foreign students from different geographical regions?

Answers to these questions are not available in the literature at present, yet they are of seminal importance both to foreign students as well as to their advisers.

The multitude of variables in institutional settings and students' backgrounds suggests that each institution have a program of periodical study of the problems of foreign students on its campus and provide, modify, and improve its student personnel services in accordance with the discovered needs. An exploration of the literature revealed that no study of any consequence has ever been undertaken by any institution in the State of North Carolina. Therefore, such a study was considered overdue. This assessment of the situation was corroborated by the student personnel officials of the major universities in the State. It was believed that such a study would shed light on the adjustment problems of foreign students, with implications for more effective student personnel services. These considerations formed a prelude to the decision to undertake an inquiry in the area of adjustment problems of foreign students enrolled in selected universities in the State of North Carolina.

Limitations of the Study

For some practical considerations, certain limitations
were imposed on the scope of this study. It was decided to
conduct the study in the universities with a large concentra-
tion of foreign students located in the State of North
Carolina. This decision seems to be sound for two reasons:
First, because of the varied and often uncontrollable
variables alluded to earlier, conclusions from studies on
foreign students are difficult to generalize. Secondly, no
study of any consequence has ever been undertaken in the
universities located in the State of North Carolina.
Another fact that became apparent was that the total number
of foreign students, both graduate and undergraduate, on
these campuses was in excess of 1500. Hence, it seemed
reasonable to limit the study further to concern itself
only with the foreign graduate students. Further, the
literature has shown almost indisputably that the European
students do not face adjustment problems of any serious
nature. Therefore, it was only logical to further restrict
the study to include only the foreign non-European graduate
students. Thus, this study included the foreign non-
European graduate students enrolled at the University of
North Carolina at Chapel Hill, Raleigh, and Greensboro, and
at Duke University in the fall of 1970.

Statement of the Problem

The purpose of this study was to identify the adjustment problems experienced by foreign non-European graduate students enrolled in selected universities in the State of North Carolina, and to investigate the relationships between the adjustment problems and the selected variables of educational and home backgrounds, the nature of financial support, the types of academic programs pursued, the age upon entering the United States, the length of residence in the United States, the campus of enrollment, and the usefulness of student personnel services available to foreign graduate students. Further, the study sought to discover any discernible differences in the adjustment pattern of foreign non-European graduate students from selected geographical regions. Finally, the study had as its objective to suggest measures that could contribute to the alleviation of the adjustment problems of foreign non-European graduate students.

Hypotheses

The following null hypotheses were formulated to be tested through the research:

1. There is no relationship among the academic, personal, and social adjustment of foreign non-European graduate students.

2. Difficulty of adjustment is not related to the length of time taken in attaining adjustment.

3. There is no relationship between the academic, personal, and social adjustment of foreign non-European graduate students and the usefulness of student personnel services as perceived by them.

4. Severity of problems is not related to the length of time taken in their resolution.

5. There is no difference among the academic, personal, and social problems in terms of (a) the degree of their severity, and (b) the length of time taken in their resolution.

6. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students from varied geographical regions.

7. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied lengths of residence in the United States.

8. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students in terms of their age upon entering the United States.

9. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied programs of study.

10. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied sources of financial support.

11. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied educational backgrounds.

12. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied home backgrounds.

13. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students enrolled on the four campuses.

Definition of Terms

1. Adjustment problems referred to the problems of academic, personal, and social nature experienced by foreign non-European graduate students.

2. Types of programs included humanities, social sciences, education, physical sciences, biological sciences, medicine, agriculture, and engineering.

3. The foreign non-European graduate students representing the Far East, South Asia, the Middle East, Africa, and Latin America were included in the study.

4. Educational background referred to the possession of the Bachelor's and/or Master's degrees and whether earned in the United States or elsewhere.

5. Home background referred to the social status of the student's family in his country (lower class, middle class, or upper class) as indicated by him.

6. The nature of financial support was to be determined by the major source of support, e.g., scholarship (including fellowship and grant), loan, home, or self-support through employment in the United States.

CHAPTER IV

THE PROCEDURES OF THE INVESTIGATION

The pertinent data for this investigation were col-

lected through a foreign student problems inventory. The

inventory was the outcome of the experience gained through

the perusal of relevant and related studies and consultation

with the foreign students.[1] This method of collecting data

was considered most appropriate for the reason that the

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[1]Abdulla R. Hagey, "Academic and Social Adjustment of
Middle Eastern Students Attending Oregon Colleges and Univer-
sities" (unpublished Ph.D. dissertation, University of Oregon,
1968), pp. 155-160.

P. M. Hattari, "Relationship of Selected Personal and
Social Factors to the Academic Achievement of Foreign
Students" (unpublished Ed.D. dissertation, The University of
Nebraska Teachers College, 1966), pp. 152-159.

Jarvis H. Hill, Sr., "An Analysis of a Group of
Indonesian, Thai, Pakistani, and Indian Students' Perceptions
of Their Problems While Enrolled at Indiana University,"
(unpublished Ed.D. dissertation, Indiana University, 1966),
pp. 166-175.

Kamel M. Moghrabi, "An Analysis of Factors that
Influence the Degree of Success or Failure of Foreign Students
at Texas A. & M. University" (unpublished Ph.D. dissertation,
Texas A. & M. University, 1966), pp. 112-119.

Antusa P. Santos, "A Study of the Problems faced by
Foreign Students at Indiana University with Implications for
Action" (unpublished Ed.D. Dissertation, Indiana University,
1959), pp. 168-175.

Elias K. Zain, "A Study of the Academic and Personal-
Social Difficulties Encountered by a Selected Group of
Foreign Students at the University of Oregon" (unpublished
Ed.D. dissertation, University of Oregon, 1965), pp. 145-149.

purpose of the study was a factual inquiry, not involving revelation of emotions, feelings, and sentiments. The subjects could respond freely, without any hesitation or reservation, on the basis of their observation, experience, and judgment. Besides, the respondents were given the option not to reveal their identification, in order to augment the truthfulness of their responses.

Development of the Inventory

In essence, the inventory has three sections (Appendix B). The first section contains items designed to collect personal data relevant to the study. It was suspected that certain personal characteristics might have some bearing on the nature of the adjustment that the foreign non-European graduate students often make with their new environment.

The second section of the inventory is a list of problems usually encountered by foreign non-European graduate students while studying in the United States. The list contains statements representative of the academic, personal, and social problems. The purpose of this section was to identify the problems experienced by the foreign non-European graduate students according to the degree of their severity and the extent of their duration as perceived by them. The respondents were to indicate the degree of severity on a four point scale: (a) great difficulty, (b) some difficulty, (c) little difficulty, (d) no difficulty.

They were to indicate the extent of duration on a three point scale: (a) temporary--lasting for about a semester, (b) prolonged--lasting for a year or two, (c) permanent-- never ending.

The statements were revised a number of times until the consultants who included foreign non-European faculty members as well as foreign non-European graduate students, agreed that the statements represented problems pertaining to the respective areas of academic, personal, and social adjustment (Appendix B). The statements have been presented in the section in a sequence according to the area of adjust- ment. The first sixteen statements represent the academic problems, another sixteen, the personal problems, and the last seven, the social problems. The problems stated are not of the same level of gravity, nor is it crucial for the significance of the study for them to possess that charac- teristic. Nonetheless, they are typical of the problems usually encountered by the foreign non-European graduate students during their stay in this country.

The third section lists the student personnel services generally provided by a university. The items in this section were developed with the help of the information supplied by the office of the student personnel services on each campus included in the study. This section contains thirty-three statements, each representing a specific service generally available on the four campuses. The purpose of this section

is to obtain the respondent's perception of the usefulness of the student personnel services on the campus on a four point scale: (a) most useful, (b) somewhat useful, (c) least useful, (d) unavailable. The responses of this section were to determine the degree of usefulness of student personnel services to the respondents and then to ascertain its bearing on their academic, personal, and social adjustment.

In addition, two open-ended questions were provided in section two and three each to elicit unrestrained responses. Likewise, at the end of the third section some space was left for personal comments of the respondents. However, because of the inherent difficulty in their quantification, the responses were not statistically analyzed. Nor did they seem to add anything of significance to the information obtained through items seeking structured responses.

A brief introduction to the inventory appeared on the front cover explaining its purpose and significance and requesting the respondent to expedite its completion and return. Specific directions for each section were given at the beginning of the section. The inventory was now ready for testing.

Testing of the Inventory

The purpose of testing the inventory was to detect its inadequacies and imperfections and to eliminate them. Twenty-four foreign non-European graduate students from the four campuses served as subjects for the testing. The testing was conducted informally in a group of three or four subjects at a time at their convenience and extended over a period of two weeks. The subjects were very cooperative and interested in the study and spared no efforts in attempting to improve the inventory. They discussed the inventory after they had completed it, and suggestions for its improvement were freely given, evaluated, modified, accepted, or discarded. Since the items in the inventory were not threatening to their ego, no reservation, hesitancy, or equivocation in responses were noticeable on the part of the subjects. In fact, they were very enthusiastic about the study because they saw in it a possible means to alleviate their adjustment problems and a source of help to those who might come to the United States in the future. The testing of the inventory proved of great help, and the following improvements were made in it:

1. Certain words not readily understood by foreign students were replaced by those which facilitated communication and comprehension.

2. The structure of certain sentences was modified to remove awkwardness in reading.

3. Certain statements that were judged to be duplicate in substance and those that did not seem to be very relevant to the study were weeded out.

4. The response categories that seemed to overlap were reworded to make them exclusive of each other.

5. Appropriate changes were made in the directions for the three sections to render them more explicit.

6. The introductory message was revised to make it more appealing to elicit the cooperation of the respondents in completing and returning the inventory.

7. Changes were also made in the format of the inventory to make it easy to complete.

As a result of the prolonged and vexatious process of synthesis and analysis, exclusion and inclusion, modification and revision, the inventory ultimately was ready for its final use.

Selection of the Sample

Along with the development and refinement of the inventory, plans were being made for drawing a sample of the foreign non-European graduate students on the campuses of the four universities. Since the purpose of the investigation was to obtain the views of the foreign non-European graduate students in regard to the adjustment problems they encounter in this country and to determine whether or not the provision of student personnel services has any bearing on them,

adequate sampling of students representing the various geographical regions from each of the four campuses was considered to be crucially important.

Keeping the above objective in mind, the foreign student advisers on the four campuses were contacted to obtain a copy of the directory of foreign students enrolled in their respective institutions. From these directories, a list of all foreign non-European graduate students enrolled on each campus was prepared. The foreign non-European graduate students enrolled in the four institutions in the fall of 1970 constituted the population for the study. A copy of the letter sent to the foreign student advisers is enclosed in Appendix B.

Having identified the population, the next step was to select the sample. Since adequate sampling of students representing each geographical region and each campus was deemed essential for comparative analysis, the disproportionate sampling procedure was adopted. Consequently, the regions represented by fewer foreign graduate students and the campuses having fewer foreign graduate students contributed more subjects to the sample than those regions that were represented by a larger number of foreign graduate students and those campuses that had a larger foreign graduate student body. For example, the foreign graduate students from Africa and those enrolled on the Greensboro campus were included in the sample out of their proportion, almost up to

100 per cent; whereas the proportion of those from the Far
East or South Asia and those enrolled on the Raleigh or
Chapel Hill campuses did not exceed 50 per cent of their
strength. This device proved helpful in preventing too
high a proportion of the subjects being selected from the
regions contributing a large number of foreign graduate
students or from the campuses enrolling a large number of
foreign graduate students. The net result was that the
regions contributing fewer foreign graduate students and
the campuses enrolling fewer foreign graduate students were
considered to be adequately represented in the sample,
which otherwise would have been eclipsed through proportion-
ate sampling. The subjects were selected randomly from the
list prepared from the four directories.

Collection of the Data

A mailing list of 374 foreign non-European graduate
students was prepared from the four directories, and the
copies of the inventory were mailed to them in the first
week of November, 1970. A self-addressed, stamped, return
envelope was enclosed with each copy. The subjects were
assured that their identity would not be disclosed.

By the end of the third week of November, 22 per cent
of the returns had been received. However, in order to
expedite the returns, follow-up devices were employed begin-
ning with the fourth week of November. Because of the

proximity of the four campuses, most of the members of the sample were contacted through telephone two times and requested to return the completed inventory at their earliest convenience. In addition, personal visits were made, where possible, to some subjects to impress upon them the significance of the study and to solicit their cooperation in returning the completed inventory. Also, messages were communicated through word of mouth to that effect. Finally, those who could not be reached through telephone or other means were contacted through postal cards. These follow-up devices proved very effective, and by the end of December, 52.14 per cent returns were received. A copy of the postal card is enclosed in Appendix B.

A general notion prevails in academic circles that through the interview technique it is possible to elicit more valid responses. However, it was not borne out by this investigation. Five subjects from each of the five geographical regions were interviewed to corroborate the veracity of their responses in the inventory they had already returned. A comparison of the two sets of responses did not reveal any differences. This might very well have been due to the factual nature of the information sought. Consequently, further interviewing was deemed unnecessary.

Nature of the Returns

A total of 374 copies of the inventory were mailed, of which 195 were completed and returned. The completed returns constituted 52.14 per cent of the copies mailed. With a return of this size, a biased sample is relatively unlikely. Its representativeness was tested in the following way: The returns, as they were received, were put into three piles--(a) those received in the first few days, (b) those received about three weeks later, and (c) those received in the last few days as a result of the follow-up efforts. The data were examined for the three groups, and comparisons were made against one another for significant differences among them. No change in the pattern of responses was noticeable. Hence, it is reasonable to conclude that the subsequent returns, if received, would not have been different in character.

Of the total copies mailed, 50 per cent went to Raleigh, 26 per cent to Chapel Hill, 20 per cent to Duke, and 4 per cent to the Greensboro campus. It is interesting to note that the returns from the campuses are also approximately in the same proportion (Table I). Further, of the total copies mailed, 35 per cent were sent to students from the Far East, 27 per cent to those from South Asia, 18 per cent to those from the Middle East, and 14 and 6 per cents to Latin American and African students, respectively. Again, returns reveal the geographical distribution in the

TABLE I

FREQUENCY AND PERCENTAGE DISTRIBUTION OF INVENTORY COPIES MAILED TO AND
RETURNED FROM FOREIGN NON-EUROPEAN GRADUATE STUDENTS BY CAMPUSES

| Campuses | Inventory Copies Mailed | | Inventory Copies Returned | | Percentage of Returns as of Total Inventory Copies Mailed | Percentage of Returns as of Inventory Copies Mailed to each Campus |
	Number	Percentage of Total Copies Mailed	Number	Percentage of Total Returned		
Chapel Hill	98	26.20	47	24.10	12.57	47.96
Duke	74	19.79	34	17.44	9.09	45.95
Greensboro	16	4.28	11	5.64	2.94	68.75
Raleigh	186	49.73	103	52.82	27.54	55.38
Total	374	100.00	195	100.00	52.14	

corresponding proportion (Table 2). Thus, it is evident
that in terms of the inventory copies mailed as well as the
returns received, among the campuses, the Raleigh campus is
first, followed by Chapel Hill, Duke and the Greensboro
campus, and among the geographical regions, the Far East is
first, followed by South Asia, the Middle East, Latin
America, and Africa.

Further, when one examines the percentage of returns
from each campus as of the inventory copies mailed to it,
one would note that the lowest returns (46 per cent) are
from the Duke campus, and the highest (69 per cent) from
the Greensboro campus (Table I). Similarly, examining in
terms of the regions, the returns (49 per cent) from the Far
Eastern students are the smallest, and those (63 per cent)
from the Latin American students the highest (Table 2).

Characteristics of the Respondents

The inventory called for some personal information
such as sex, length of residence in the United States, age
upon entering the United States, marital status, family in
the United States, participation in a program for orientation
to the United States, present housing accommodation, area of
study, major source of financial support, mother tongue,
competency in English language, subject area preparation,
highest academic degree held and the country where earned,
education of parents, and the social status of the family
in the home country.

TABLE 2

FREQUENCY AND PERCENTAGE DISTRIBUTION OF INVENTORY COPIES MAILED TO AND
RETURNED FROM FOREIGN NON-EUROPEAN GRADUATE STUDENTS BY
GEOGRAPHICAL REGIONS

Geographical Regions	Inventory Copies Mailed		Inventory Copies Returned		Percentage of Returns as of Total Inventory Copies Mailed	Percentage of Returns as of inventory Copies Mailed to Subjects from each Geographical Region
	Number	Percentage of Total Mailed	Number	Percentage of Total Returned		
Far East	132	35.29	64	32.82	17.21	48.49
South Asia	101	27.01	52	26.67	13.97	51.49
Middle East	68	18.18	35	17.95	9.36	51.47
Africa	22	5.88	11	5.64	2.94	50.00
Latin America	51	13.64	32	16.41	8.66	62.75
Unknown			1	.01	.00	
Total	374	100.00	195	100.00	52.14	

Of all the respondents, 82 per cent are males (Table 3). Thirty-three per cent of them have been in the United States for about a semester, 35 per cent for one to two years, and the rest for more than two years (Table 4). At the time of entering the United States, 36 per cent were 20 to 24 years old; 45 per cent, 25 to 30 years, and the remainder includes those who were below 20 and over 30 years in age (Table 5). One-half of them are married and the rest are single. However, only 38 per cent of them have their families with them in the United States (Table 6).

Sixty-nine per cent of the respondents have indicated that they did not participate in any formal program designed to orient them to the United States (Table 7). Sixty per cent of them live in privately owned accommodations, and the rest in university dormitories or university apartments (Table 8).

Of all the respondents, 30 per cent are studying engineering, 36 per cent are enrolled in science subjects including agriculture, biological sciences, physical sciences, and medicine, and the rest are pursuing studies in such areas as the humanities, education, social sciences, and others (Table 9).

Fifty-seven per cent of the respondents have indicated scholarship, fellowship, or grant as the major resource of their financial support. Another 17 per cent depend on home, and 16 per cent support themselves through employment in the

TABLE 3

FREQUENCY AND PERCENTAGE DISTRIBUTION
OF RESPONDENTS BY SEX

Sex	Number	Percentage
Male	160	82.10
Female	35	17.90
Total	195	100.00

TABLE 4

FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS
BY LENGTH OF RESIDENCE IN UNITED STATES

Length of Residence	Number	Percentage
About a Semester	64	32.80
One to Two years	69	35.40
More than Two Years	59	30.30
Unknown	3	1.50
Total	195	100.00

TABLE 5

FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS
BY AGE UPON ENTERING UNITED STATES

Age in Years	Number	Percentage
Less than 20	12	6.20
20-24	70	35.80
25-30	88	45.10
Over 30	21	10.80
Unknown	4	2.10
Total	195	100.00

TABLE 6

FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS
BY MARITAL STATUS AND WHETHER OR NOT
LIVING WITH FAMILY

Marital Status	Number	Percentage
Single	99	50.80
Married	96	49.20
Total	195	100.00
Living with Family		
Yes	74	37.90
No	117	60.00
Unknown	4	2.10
Total	195	100.00

TABLE 7

FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS
BY PARTICIPATION IN ORIENTATION PROGRAM

Participation in Orientation Program	Number	Percentage
Yes	59	30.30
No	134	68.70
Unknown	2	1.00
Total	195	100.00

TABLE 8

FREQUENCY AND PERCENTAGE DISTRIBUTION OF
RESPONDENTS BY HOUSING ACCOMMODATION

Accommodation	Number	Percentage
University Dormitory	44	22.60
University Apartment	34	17.40
Private Apartment or House	84	43.10
Room in a House	29	14.80
Other	4	2.10
Total	195	100.00

TABLE 9

FREQUENCY AND PERCENTAGE DISTRIBUTION OF
RESPONDENTS BY PROGRAMS OF STUDY

Programs of Study	Number	Percentage
Agriculture	18	9.20
Biological Sciences	23	11.70
Education	12	6.20
Humanities	8	4.10
Medicine	6	3.10
Physical Sciences	24	12.30
Engineering	59	30.30
Social Sciences	28	14.40
Other	17	8.70
Total	195	100.00

United States. This leaves a very small number who rely on

loan or other means to finance their studies (Table 10).

TABLE 10

FREQUENCY AND PERCENTAGE DISTRIBUTION OF
RESPONDENTS BY SOURCES OF FINANCIAL
SUPPORT

Sources of Financial Support	Number	Percentage
Scholarship, Fellowship, or Grant	112	57.40
Loan	6	3.20
Home	34	17.40
Employment in United States	31	15.90
Other	10	5.10
Unknown	2	1.00
Total	195	100.00

Ninety-nine per cent of the respondents have their
mother tongue other than English (Table II), yet 87 per cent
of them consider their competency in the use of English
language from excellent to fair (Table 12), and 96 per cent
regard their subject area preparation to pursue study in the
United States from excellent to fair (Table 13). Further,
47 per cent of them hold a Bachelor's degree; 43 per cent,
a Master's degree, and the rest includes the holders of a
Doctoral degree and unknowns. Only one-third of the
respondents earned their highest degree now held in the
United States, and the rest elsewhere (Table 14).

Table 15 shows that most of the respondents were
apparently raised by reasonably well educated parents. For
instance, 40 per cent of the fathers hold a Bachelor's
degree or higher, 30 per cent are high school graduates,
21 per cent elementary school graduates, and only 5 per
cent received no formal education at all. Mothers, on the
other hand, are relatively less educated than the fathers.
For example, only 10 per cent of them hold a Bachelor's
degree or higher, 40 per cent are high school graduates,
28 per cent elementary school graduates, and 16 per cent
received no formal education at all. Further, most of the
respondents come from better class homes in their countries.
For example, 81 per cent of them consider their families
belonging to the middle class stratum in their societies,

TABLE 11

FREQUENCY AND PERCENTAGE DISTRIBUTION OF
RESPONDENTS BY MOTHER TONGUE

Mother Tongue	Number	Percentage
English	3	1.5
Non-English	192	98.5
Total	195	100.00

TABLE 12

FREQUENCY AND PERCENTAGE DISTRIBUTION OF
RESPONDENTS BY COMPETENCY IN
ENGLISH LANGUAGE

Competency in English Language	Number	Percentage
Excellent	32	16.40
Good	82	42.10
Fair	56	28.70
Poor	25	12.80
Total	195	100.00

TABLE 13

FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS
BY PREPARATION IN SUBJECT AREA

Preparation in Subject Area	Number	Percentage
Excellent	32	16.40
Good	110	56.40
Fair	45	23.10
Poor	8	4.10
Total	195	100.00

TABLE 14

FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS BY THE
HIGHEST DEGREE HELD AND WHETHER EARNED IN UNITED STATES
OR ELSEWHERE

Highest Degree Held	Number	Percentage
Bachelor's	91	46.60
Master's	83	42.60
Doctor's	14	7.20
Other	4	2.10
Unknown	3	1.50
Total	195	100.00

Earned in United States		
Yes	65	33.30
No	127	65.20
Unknown	3	1.50
Total	195	100.00

TABLE 15

FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS
BY EDUCATION OF PARENTS

Level of Education	Father		Mother	
	Number	Percentage	Number	Percentage
No Formal Schooling	10	5.10	31	15.90
Elementary School	40	20.50	55	28.20
High School	59	30.30	77	39.50
Bachelor's Degree	56	28.70	13	6.70
Master's Degree	14	7.20	3	1.50
Doctor's Degree	6	3.10	2	1.00
Other	2	1.00		
Unknown	8	4.10	14	7.20
Total	195	100.00	195	100.00

12 per cent come from upper class homes, and the proportion
of those who come from lower class homes is infinitesmimal
(Table 16).

TABLE 16

FREQUENCY AND PERCENTAGE DISTRIBUTION OF RESPONDENTS
BY SOCIAL STATUS OF FAMILY

Social Status of Family	Number	Percentage
Lower Class	8	4.10
Middle Class	157	80.50
Upper Class	24	12.30
Unknown	6	3.10
Total	195	100.00

The procedures of collecting data and an analysis of
the respondents according to their personal characteristics
have been presented in this chapter. The following chapter
contains an explanation of the statistical analysis of the
data.

CHAPTER V

ANALYSIS OF THE DATA

After the collection of the data, the next task was
to analyze them in terms of the hypotheses which were formu-
lated for testing. For this purpose, the identification
of appropriate statistical tests is essential. This is
dependent upon the nature of the research data and the
assumptions inherent in the use of the tests themselves.

The Choice of the Statistical Tests

The field of statistics has developed to an extent
that there are now, for almost all research designs, alterna-
tive statistical tests available which might be used in
order to come to a decision about a hypothesis. Having
alternative tests, there is need of some rational basis for
choosing among them.

The first question to answer was whether to use
parametric statistical tests or nonparametric statistical
tests. A parametric statistical test is a test which makes
certain assumptions about the parameters of the population
from which the research sample is drawn. A nonparametric
statistical test, on the other hand, is a test which does not
make any assumptions about the parameters of the population
from which the research sample is drawn.

The most powerful tests are those which have the strongest or most extensive assumptions. The parametric tests, for example, the t or F tests, have a variety of strong assumptions underlying their use. When those assumptions are valid, these tests are the most likely of all tests to reject the null hypothesis when it is false. These assumptions are:[1]

1. The observations must be independent. That is, the selection of any one case from the population for inclusion in the sample must not bias the chances of any other case for inclusion, and the score which is assigned to any case must not bias the score which is assigned to any other case.

2. The observations must be drawn from normally distributed populations.

3. The populations must have the same variance (or, in special cases, they must have a known ratio of variances).

4. The variables involved must have been measured in <u>at least</u> an interval scale, so that it is possible to use the operations of arithmetic (adding, subtracting, dividing, multiplying, finding means, etc.) on the scores.[2]

[1]Sidney Siegel, <u>Nonparametric Statistics</u> (New York, 1956), pp. 19-20.

[2]There are four types of scales usually employed to measure variables: (1) When numbers or other symbols are used to identify the groups to which various objects belong, these numbers or symbols constitute a <u>nominal</u> or classificatory scale. (2) When objects can be placed in a category

5. In the case of the analysis of variance (the F test), another condition is added to those already given. In the customary analysis of variance, the means of these normal and homoscedastic (possessing equal variances) populations must be linear combinations of effects due to columns and/or rows. That is, the effects must be additive.

These assumptions underlie the use of a parametric statistical test, and their validity determines the meaningfulness of the probability statement arrived at by it. Since the data of the present investigation do not meet all the above conditions excepting number 1, the parametric techniques of hypothesis testing are not suited for their analysis.

Parametric statistical tests, which use means and standard deviations (i.e., which require the operations of arithmetic on the original scores), should not be used with data in a nominal or ordinal scale. The properties of a nominal or ordinal scale are not isomorphic to the numerical system known as arithmetic. When only the rank order of scores is known, means and standard deviations found on the

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with some kind of relation to each other and a complete rank ordering is possible, it is an ordinal scale. (3) When a scale has all the characteristics of an ordinal scale, and when in addition the distances between any two numbers on the scale are of known size, it is an interval scale. (4) When a scale has all the characteristics of an interval scale, and in addition has a true zero point as its origin, it is a ratio scale.

scores themselves are in error to the extent that the successive intervals (distances between classes) on the scale cannot be claimed to be equal. When parametric techniques of statistical inference are used with such data, decisions about hypotheses are questionable. Probability statements derived from the application of parametric statistical tests to nominal or ordinal data are in error to the extent that the data measurement system is not isomorphic to the arithmetic system.

Research in behavioral sciences can use only nominal and ordinal scales in measuring objects, persons, traits, or observations, and cannot employ interval and ratio scales which stipulate precise and exact measurement possible only in physical sciences, a prerequisite to the use of the parametric statistical tests. The data for this investigation have been measured mostly in ordinal scale and some in nominal scale, and therefore should be analyzed by the nonparametric methods.

Two assumptions are associated with most nonparametric statistical tests; i.e., that the observations are independent and that the variable under study has underlying continuity. But these assumptions are fewer and weaker, and therefore the conclusions arrived at are also more general. Thus, the nonparametric tests are less powerful (the power of a test being defined as the probability of rejecting the null hypothesis when it is in fact false). A statistical test is a

good one if it has a small probability of rejecting the null hypothesis when it is true, but a large probability of rejecting the null hypothesis when it is false.

It is possible to avoid the dilemma of having to choose between power and generality by selecting a statistical test which has broad generality and then increasing its power to that of the most powerful test available by enlarging the size of the sample. Thus, one can avoid having to meet the strong assumptions of the powerful parametric tests, without losing power by simply choosing a nonparametric test and drawing a larger sample. This factor was kept in mind while determining the size of the sample for this research.

In brief, the decision to use nonparametric statistical tests for the analysis of the data of the present investigation was made for the following reasons:[3]

1. Probability statements obtained from most non-parametric statistical tests are exact probabilities, regardless of the shape of the population distribution from which the random sample is drawn. In other words, they do not assume that the scores under analysis were drawn from a population distributed in a certain way; e.g., from a normally distributed population.

2. Nonparametric statistical tests are available to treat data which are inherently in rank as well as data whose

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[3] Ibid., pp. 32-33.

seemingly numerical scores have the strength of rank. Parametric statistical tests cannot treat them.

3. Nonparametric statistical tests are exceedingly useful with small samples. If a sample contains as few as six cases, there is no alternative to using a nonparametric statistical test.

4. There are suitable nonparametric statistical tests for treating samples made up of observations from several different populations. There are no parametric statistical tests that can handle such data without stipulating obviously unrealistic assumptions.

5. Nonparametric statistical tests are available to treat data which are simply classificatory; i.e., are measured in a nominal scale. Parametric statistical tests cannot treat them.

6. Nonparametric statistical tests possess computational simplicity.

Procedures for Testing Hypotheses

Having decided on the general nature of the statistical methods for analyzing the data, the next step was to identify the specific tests in the nonparametric techniques to test the various null hypotheses of the study and to effect the requisite transformation of the data for this purpose.

Hypothesis I. There is no relationship among the academic, personal, and social adjustment of foreign non-European graduate students.

This hypothesis calls for the measurement of association among three variables-- academic, personal, and social adjustment of the respondents. For this purpose, the Kendall coefficient of concordance (W), a multivariate correlation measure, was considered as the most appropriate test. This statistic expresses the degree of over-all agreement among multiple variables measured in, or transformed to, ranks. The use of coefficient of concordance requires that the variables be measured in at least an ordinal scale so that the objects or individuals under study may be ranked in ordered series. The coefficient of concordance is an index of the divergence of the actual agreement shown in the data from the maximum possible (perfect) agreement.

W bears a linear relation to the average of Spearman rank correlation coefficients (γ_s-- a bivariate correlation measure), for all pairs of variables, and can be computed by solving the following equation:

$$\gamma_{s_{av}} = \frac{\kappa W - 1}{\kappa - 1}$$

where:

$r_{s_{av}}$ = the average of the Spearman rank correlation coefficients for all possible pairs of variables in the study.

κ = number of variables.

W may also be calculated by another formula not necessitating the computation of the Spearman rank correlation coefficients. However, the formula given above was used for the following reasons:

1. The number of variables in this study is very small (only three). Besides, the computer program for Spearman rank correlation facilitated the calculations.

2. The Spearman rank correlation coefficients for the pairs of the variables helped in analyzing the composition of W.

When N is larger than 7, the values of W approximate the chi-square distribution. The probability of occurrence, under null hypothesis, of an obtained value of W may be determined by finding X^2 by the formula given below. Then the probability associated with the value of X^2 may be determined for N-1 degrees of freedom by reference to the table containing critical values of chi-square.

$$X^2 = \kappa (N-1)W$$

When the degrees of freedom are more than 30, the X^2 value needs to be transformed into t ratio by using the following formula:

$$\sqrt{2X^2} - \sqrt{2df - 1}$$

and the probability of that t value may be determined by reference to the table containing critical values of t.

In order to compute W, therefore, it was necessary to calculate first the Spearman rank correlation coefficients to measure association between academic and personal adjustment, academic and social adjustment, and personal and social adjustment. The Spearman rank correlation coefficient, sometimes called rho, has been represented here by the symbol γ_s.

The second section of the inventory contains statements in a sequence according to the area of adjustment. The first sixteen statements represent the academic problems, the next sixteen the personal problems, and the last seven, the social problems. Quantification of the data for statistical treatment was the next logical step, which was accomplished in the following manner:

On the Severity Scale, "Great difficulty" was assigned a value of 4, "Some difficulty," a value of 3, "Little difficulty," a value of 2, and "No difficulty," a value of 1. The values for the first sixteen items signified by the check marks in each inventory return were added and then divided by 16. The resultant value was designated as Academic Adjustment Difficulty Index for each respondent. Similar calculations gave 195 Academic Adjustment Difficulty Indexes for all the respondents.

From a similar treatment of the values for the next sixteen items were obtained 195 Personal Adjustment Difficulty Indexes for all the respondents. Likewise, the manipulation of values in the same way for the last seven

items resulted in 195 Social Adjustment Difficulty Indexes for all the respondents.

Now the data were transformed into a quantitative form suitable for further statistical treatment. The Spearman rank correlation coefficient was calculated to measure the nature and degree of association between academic and personal adjustment of the respondents. The following steps are involved in its calculation:

Let Academic Adjustment be represented by X, and Personal Adjustment by Y:

1. Rank the difficulty indexes for the X variable from 1 to N. Rank the difficulty indexes for the Y variable from 1 to N.

2. List the N subjects. Give each subject's rank on the X variable and his rank on the Y variable next to his entry.

3. Determine the value of d (difference) for each subject by subtracting his Y rank from his X rank. Square this value to determine each subject's d^2. Sum the d^2's for the N cases to determine $\Sigma \ d^2$.

4. Since the proportion of the ties in the difficulty indexes for both X and Y variables is large, the following formula to compute the Spearman rank correlation coefficient (γ_s) is appropriate:

$$\gamma_s = \frac{\Sigma x^2 + \Sigma y^2 - \Sigma d^2}{2 \sqrt{\Sigma x^2 \Sigma y^2}}$$

When:
$$\Sigma x^2 = \frac{N^3 - N}{12} - \Sigma T_x$$

$$\Sigma y^2 = \frac{N^3 - N}{12} - \Sigma T_y$$

T is the correction factor for ties, that is:

$$T = \frac{(t^3 - t)}{12}$$

where t = the number of scores tied at a given rank, and the subscripts x and y in T_x and T_y denote the appropriate variables.

ΣT indicates the summation of all groups of ties for each variable.

5.   Since N is larger than 10, the significance of the obtained value of γ_s (i.e., whether the obtained value of γ_s indicates an association between the X and Y variables in the population) under the null hypothesis may be tested by the Student's t as follows:

$$t = \gamma_s \sqrt{\frac{N - 2}{1 - \gamma_s^2}}$$

In other words, for large N, the value defined by the above formula is distributed as Student's t with df = N - 2. Thus, the probability under the null hypothesis of any obtained value of γ_s may be determined by computing the t

associated with that value, and then determining the proba-

bility of that t by reference to the table containing critical

values of t.

Following the same procedure, the Spearman rank

correlation coefficients were calculated to determine the

nature and degree of association between academic and social

adjustment, and personal and social adjustment of the respond-

ents. Thus, the three Spearman rank correlation coefficients

provided the ingredients for the computation of W.

Hypothesis 2. Difficulty of adjustment is not
related to the length of time taken in attaining
adjustment.

This hypothesis calls for the determination of

relationship between the difficulty level of academic,

personal, and social adjustment and the length of time taken

in attaining adjustment. For this purpose, the Spearman

rank correlation was considered as the most appropriate test.

In this hypothesis, there are four variables involved:

academic adjustment, personal adjustment, social adjustment,

and the time taken in attaining each type of adjustment.

The difficulty indexes for the academic, personal, and

social adjustment were calculated earlier in connection with

the testing of Hypothesis I. The duration indexes for each

type of adjustment were calculated as follows:

On the Duration Scale, "Temporary (a semester)" was

assigned a value of I, "Prolonged (a year or two)," a value

of 2, and "Permanent (never ending)," a value of 3. The
values for the first sixteen items signified by the check
marks in each inventory return were added and then divided
by 16. The resultant value was designated as Academic
Adjustment Duration Index for each subject. Similar calcu-
lations gave 195 Academic Adjustment Duration Indexes for
all the subjects. Similarly, on the basis of the next
sixteen items were calculated 195 Personal Adjustment
Duration Indexes for all the subjects. And on the basis of
the next seven items were calculated 195 Social Adjustment
Duration Indexes for all the subjects.

Following the procedure outlined earlier, the
Spearman rank correlation coefficients were calculated to
determine the nature and degree of association between the
pairs of variables listed below:

1. Academic Adjustment Difficulty Indexes and Academic
    Adjustment Duration Indexes.

2. Personal Adjustment Difficulty Indexes and Personal
    Adjustment Duration Indexes.

3. Social Adjustment Difficulty Indexes and Social
    Adjustment Duration Indexes.

To test this hypothesis, the Spearman rank correlation
has been used, taking two variables at a time. Of all the
statistics based on ranks, the Spearman rank correlation was
the earliest to be developed and is perhaps the best known

today. Its efficiency, when compared with the most powerful

parametric correlation, the Pearson γ, is about 91 per cent.[4]

> Hypothesis 3. There is no relationship between
> the academic, personal, and social adjustment of
> foreign non-European graduate students and the
> usefulness of student personnel services as per-
> ceived by them.

This hypothesis seeks to determine whether or not the

usefulness of student personnel services as perceived by

foreign non-European graduate students has any bearing on

their academic, personal, and social adjustment. For this

purpose, the Spearman rank correlation was considered as

the most appropriate test.

There are four variables in this hypothesis:

academic adjustment, personal adjustment, social adjustment,

and the usefulness of student personnel services. The

difficulty indexes for the academic, personal, and social

adjustment were calculated earlier in connection with the

testing of Hypothesis I. The Usefulness Indexes for student

personnel services were calculated as follows:

On the Usefulness Scale, "Most Useful" was assigned

a value of 3, "Somewhat useful," a value of 2, "Least useful,"

a value of I, and "Unavailable," a value of 0. The values

for all the 33 items in section three signified by the check

marks in each inventory return were added and then divided by

---

[4]Ibid., pp. 202, 213.

33. The resultant value was designated as Usefulness Index for each subject. Similar calculations gave 195 Usefulness Indexes for all the subjects.

Following the procedure outlined earlier, the Spearman rank correlation coefficients were calculated to determine the nature and degree of association between the pairs of variables listed below:

1. Academic Adjustment Difficulty Indexes and Usefulness Indexes.

2. Personal Adjustment Difficulty Indexes and Usefulness Indexes.

3. Social Adjustment Difficulty Indexes and Usefulness Indexes.

> Hypothesis 4. Severity of problems is not related to the length of time taken in their resolution.

This hypothesis purports to conduct an item analysis. It seeks to determine the relationship between the severity level of academic, personal, and social problems and the length of time taken in their resolution. For this purpose, the Spearman rank correlation was considered as the most appropriate test.

There are four variables involved in this hypothesis: severity level of academic problems, severity level of personal problems, severity level of social problems, and time taken in problem resolution.

The second section of the inventory contains state-
ments in a sequence according to the area of adjustment.
The first sixteen statements represent the academic problems,
the next sixteen, the personal problems, and the last seven,
the social problems. The values for the respective state-
ments signified by the check marks on the Severity Scale
in all inventory returns were added and then divided by
195 (N). The resultant value was designated as Problem
Severity Index. Thus, there were calculated 16 Academic
Problems Severity Indexes, 16 Personal Problems Severity
Indexes, and 7 Social Problems Severity Indexes.

Similarly, the values for the respective statements
signified by the check marks on the Duration Scale in all
inventory returns were added and then divided by 195 (N).
The resultant value was designated as Problem Duration
Index. Thus, there were calculated 16 Academic Problems
Duration Indexes, 16 Personal Problems Duration Indexes,
and 7 Social Problems Duration Indexes.

Following the procedure outlined earlier, the Spearman
rank correlation coefficients were calculated to determine
the nature and degree of association between the pairs of
variables listed below:

1. Academic Problems Severity Indexes and Academic Problems
   Duration Indexes.

2. Personal Problems Severity Indexes and Personal Problems Duration Indexes.

3. Social Problems Severity Indexes and Social Problems Duration Indexes.

Hypothesis 5. There is no difference among the academic, personal, and social problems in terms of the degree of their severity, and the length of time taken in their resolution.

This hypothesis in essence seeks to find answer to two questions: (1) Are the types of academic, personal, and social problems intrinsically different from one another in terms of severity level? and (2) Do those types of problems also differ inherently from one another in terms of the length of time taken in their resolution? To ascertain whether or not there are significant differences among the three types of problems in these two respects, Kruskal-Wallis one-way analysis of variance by ranks was considered to be the most appropriate statistic.

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. Sample values almost invariably differ somewhat, and the question is whether the differences among the samples signify genuine population differences or whether they represent merely chance variations such as are to be expected among several random samples from the same population. The Kruskal-Wallis technique tests the null hypothesis that the k samples come

from the same population or from identical populations with respect to averages. The test assumes that the variable under study has an underlying continuous distribution. It requires at least ordinal measurement of that variable. The Kruskal-Wallis test seems to be the most efficient of the non-parametric tests for k independent samples. It has a power efficiency of 95.5 per cent, when compared with the F test, the most powerful parametric test.[5]

The data for this hypothesis meet all these conditions. They have been transformed into an order earlier (in connection with the testing of Hypothesis 4) which is suitable for the application of the Kruskal-Wallis test. To find answer to question No. 1, the Academic Problems Severity Indexes, the Personal Problems Severity Indexes, and the Social Problems Severity Indexes constituted the three samples. To find answer to question No. 2, the Academic Problems Duration Indexes, the Personal Problems Duration Indexes, and the Social Problems Duration Indexes constituted the three samples. The following steps are involved in the calculation of the Kruskal-Wallis one-way analysis of variance by ranks:

1. Rank all of the observations for the k samples in a single series, assigning ranks from 1 to N.

2. Distribute these ranks in the corresponding k samples. Determine the value of R (the sum of the ranks) for each of the k samples.

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[5] Ibid., pp. 184-194.

3. Because of tied observations, the value of H (the statistic used in the Kruskal-Wallis Test) was computed by using the following formula:

$$H = \frac{\dfrac{12}{N(N + 1)} \displaystyle\sum_{j = 1}^{k} \dfrac{R_j^2}{n_j} - 3(N + 1)}{1 - \dfrac{\sum T}{N^3 - N}}$$

where:

k = number of samples

nj = number of cases in j^{th} sample

N = $\sum n_j$, that is, the number of cases in all combined

R_j = sum of ranks in j^{th} sample

$\displaystyle\sum_{j = 1}^{K}$ indicates the summation of the k samples

T = $(t^3 - t)$, when t is the number of tied observations in a tied group of scores

$\sum T$ indicates the summation of all groups of ties

4. The method for assessing the significance of the observed value of H depends on K (the number of samples) and the size of the samples. When the number of samples is at least 3 and there are more than 5 cases in each of the various samples, the sampling distribution of H approximates the chi

square distribution with df = k-1. Then the probability of the obtained value of H may be assessed by reference to the table containing critical values of chi-square.

> Hypothesis 6. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students from varied geographical regions.

This hypothesis seeks to ascertain whether or not there are significant differences in the adjustment pattern of foreign non-European graduate students from the Far East, South Asia, the Middle East, Africa, and Latin America. The data for this hypothesis fell in five independent groups.

When the data of research consist of frequencies in discrete groups, the X^2 test may be used to determine the significance of the differences among the independent groups. The measurement involved may be on a nominal or ordinal scale. As the data for this hypothesis meet these conditions, the X^2 test was considered most appropriate.

The assumption implicit in this test is that groups differ with respect to some characteristic and therefore with respect to the relative frequency with which group members fall in several categories. To determine the significant differences among the groups, one counts the number of cases from each group which fall in the various categories, and compares the proportion of cases from each group in the various categories with the proportion of cases from the other groups.

For this hypothesis, the respondents from the Far East, South Asia, the Middle East, Africa, and Latin America constituted the five discrete groups. The two categories chosen were "high adjustment" and "low adjustment" levels in terms of academic, personal, and social adjustment. Thus the testing of this hypothesis required three 2 x 5 contingency tables and the calculation of three X^2's--one for academic, personal, and social adjustment each.

In order to determine the frequencies for the cells in the 2 x 5 contingency table for academic adjustment, the Academic Adjustment Difficulty Indexes were arranged in an ascending order with the lowest value at the top and the highest value at the bottom. Thirty per cent from the top were selected to comprise the "high adjustment" group, and 30 per cent from the bottom were selected to form the "low adjustment" group. Thus, each group contained 58 subjects, making up a total of 116 subjects for both the groups. These 116 subjects were categorized in the ten cells according to the adjustment levels and the geographical regions, and were included in the calculation of the X^2. The 40 per cent of the subjects in the middle of the distribution were excluded from the analysis of the data because they were considered to be non-discriminating. Now the data were rendered in a form suitable for the calculation of the X^2. The following procedure was used:

1. Cast the observed frequencies in a k X r contingency table, in which k stands for the columns (groups) and r stands for the rows (categories of classification).

2. Determine the expected frequency under the null hypothesis for each cell by finding the product of the marginal totals common to the cell and dividing this product by N. (N is the sum of each group of marginal totals. It represents the total number of independent observations for the hypothesis.)

3. Compute X^2 by using the formula:

$$X^2 = \sum_{i=1}^{\gamma} \sum_{j=1}^{k} \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Where:

O_{ij} = observed number of cases categorized in the ith row of the jth column.

E_{ij} = number of cases expected under the hypothesis to be categorized in the ith row of the jth column.

$\sum_{i=1}^{k} \sum_{j=1}^{\gamma}$ indicates the summation of all (k) columns and (γ) rows, i.e., the summation of all cells.

The values of X^2 yielded by the above formula are distributed approximately as chi-square with df = (k-1)(r-1), where k = the number of columns and r = the number of rows in the contingency table.

4. Determine the probability of the obtained value of X^2 by reference to the table containing critical values of chi-square.

5. For X^2 tests with degrees of freedom larger than 1 (that is, when either k or r is larger than 2), fewer than 20 per cent of the cells should have an <u>expected</u> frequency of less than 5, and no cell should have an <u>expected</u> frequency of less than 1. When these requirements were not met by the data in the form in which they were originally collected, the appropriate categories were combined so as to increase the expected frequencies in the various cells.

Following the same procedure, the frequencies for the cells in two 2 x 5 contingency tables for personal and social adjustment were determined, and the two X^2's were calculated.

The "high adjustment" and "low adjustment" groups in terms of academic, personal, and social adjustment were used again and again in the calculation of X^2's to test all the remaining hypotheses.

   Hypothesis 7. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied lengths of residence in the United States.

This hypothesis seeks to ascertain whether or not there are significant differences in the adjustment pattern of foreign non-European graduate students who have resided in the United States for about a semester, one to two years, and more than two years. The data for this hypothesis fell

in three independent groups. The two categories chosen
were "high adjustment" and "low adjustment" levels in terms
of academic, personal, and social adjustment. Thus, the
testing of this hypothesis required three 2 x 3 contingency
tables and the calculation of three X^2's--one for academic,
personal, and social adjustment each.

The procedure of calculation was the same as outlined
earlier.

> Hypothesis 8. There is no difference in
> academic, personal, and social adjustment of
> foreign non-European graduate students in
> terms of their age upon entering the United
> States.

This hypothesis seeks to ascertain whether or not
there are significant differences in the adjustment pattern
of foreign non-European graduate students who were under 20
years, 20 to 24 years, 25 to 30 years, and over 30 years of
age at the time of entering the United States. The data for
this hypothesis fell in four discrete groups. The two
categories chosen were "high adjustment" and "low adjustment"
levels in terms of academic, personal, and social adjustment.
Thus, the testing of this hypothesis required three 2 x 4
contingency tables and the calculation of three X^2's--one for
academic, personal, and social adjustment each.

The procedure of calculation was the same as outlined
earlier.

Hypothesis 9. There is no difference in
academic, personal, and social adjustment of
foreign non-European graduate students with
varied programs of study.

This hypothesis seeks to ascertain whether or not

there are significant differences in the adjustment pattern

of foreign non-European graduate students who pursue

different programs of study including agriculture, biological

sciences, education, humanities, medicine, physical sciences,

engineering, social sciences, and others. The data for this

hypothesis fell in nine independent groups. The two categories

chosen were "high adjustment" and "low adjustment" levels

in terms of academic, personal, and social adjustment. Thus,

the testing of this hypothesis required three 2 x 9 contin-

gency tables and the calculation of three X^2's--one for

academic, personal, and social adjustment each.

The procedure of calculation was the same as outlined

earlier.

Hypothesis 10. There is no difference in
academic, personal, and social adjustment of
foreign non-European graduate students with
varied sources of financial support.

This hypothesis seeks to ascertain whether or not there

are significant differences in the adjustment pattern of

foreign non-European graduate students who supported their

education mostly through (a) scholarship, fellowship, or

grant, (b) loan, (c) money from home, (d) employment in the

United States, or (e) other means. The data for this

hypothesis fell in five independent groups. The two categories

chosen were "high adjustment" and "low adjustment" levels in

terms of academic, personal, and social adjustment. Thus,

the testing of this hypothesis required three 2 x 5

contingency tables and the calculation of three X^2's--one

for academic, personal, and social adjustment each.

The procedure of calculation was the same as outlined

earlier.

> Hypothesis II. There is no difference in
> academic, personal, and social adjustment of
> foreign non-European graduate students with
> varied educational backgrounds.

This hypothesis involves a two-part analysis of the

data. It seeks to ascertain whether or not there are sig-

nificant differences in the adjustment pattern of foreign

non-European graduate students in terms of the academic

degrees held and whether the highest degree held was earned

in the United States or elsewhere.

The data for the first part fell in two independent

groups: (1) those who held the Bachelor's degree, and

(2) those who held the Master's degree. The data for the

second part also fell in two independent groups: (1) those

who earned the highest degree in the United States, and

(2) those who earned the highest degree elsewhere. The two

categories chosen for each part were "high adjustment" and

"low adjustment" levels in terms of academic, personal, and

social adjustment. Thus, the testing of each part of this

hypothesis required three 2 x 2 contingency tables and the

calculation of three X^2's--one for academic, personal, and social adjustment each, making up a total of six X^2's.

The procedure of calculation was the same as outlined earlier except that it incorporated a correction for discontinuity. When X^2 is calculated for a 2 x 2 contingency table and therefore has df = 1, a correction for discontinuity, suggested by Yates, should be applied to the formula presented earlier. The correction consists of reducing the absolute values of $O_1 - E_1$ and $O_2 - E_2$ by .5 before squaring. The reason for applying the correction for discontinuity is that, whereas the observed numbers are discrete, the distribution of X^2 is continuous. The correction for discontinuity markedly improves the approximation of the distribution of the computed X^2 to the chi-square distribution. The value of X^2 without the correction would be somewhat inflated and hence misleading.

> Hypothesis 12. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied home backgrounds.

This hypothesis attempts to ascertain whether or not there are significant differences in the adjustment pattern of foreign non-European graduate students from lower class, middle class, and upper class homes. The data for this hypothesis fell in three independent groups. The two categories chosen were "high adjustment" and "low adjustment" levels in terms of academic, personal, and social adjustment.

Thus, the testing of this hypothesis required three 2 x 3 contingency tables and the calculation of three X^2's--one for academic, personal, and social adjustment each. The procedure of calcuation was the same as outlined earlier.

> Hypothesis 13. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students enrolled on the four campuses.

The purpose of this hypothesis is to ascertain whether or not there are significant differences in the adjustment pattern of foreign non-European graduate students enrolled on the Chapel Hill, Raleigh, and Greensboro campuses of the University of North Carolina and at Duke University. The data for this hypothesis fell in four independent groups. The two categories chosen were "high adjustment" and "low adjustment" levels in terms of academic, personal, and social adjustment. Thus, the testing of this hypothesis required three 2 x 4 contingency tables and the calculation of three X^2's--one for academic, personal, and social adjustment each. The procedure of calculation was the same as outlined earlier.

In this chapter, the procedures of analyzing the data have been described and explained. The following chapter reports the findings that ensue from the testing of hypotheses 1 through 5.

CHAPTER VI

ADJUSTMENT OF FOREIGN NON-EUROPEAN GRADUATE STUDENTS

This chapter reports findings of an investigation
into the adjustment problems of foreign non-European graduate
students along with their multifarious ramifications. The
research concerned itself with such aspects as the identifica-
tion of adjustment problems, the difficulty level of
adjustment, the length of time taken in attaining adjustment,
and the role of student personnel services in adjustment.
The research also sought to identify the effects of certain
selected personal traits on the adjustment of foreign non-
European graduate students. These findings constitute the
subject matter of the following chapter. The .05 level of
significance has been considered adequate to reject the null
hypotheses in this study.

Adjustment Problems

To identify the adjustment problems of foreign non-
European graduate students in terms of their severity, a
descriptive analysis was conducted. The problems of academic,
personal, and social type were arranged according to the
degree of their severity from the maximum to the minimum,
with the help of Problem Difficulty Indexes (Tables 17, 18,
19). Likewise, they were also arranged according to the

length of time taken in their resolution from the maximum to the minimum, with the help of Problem Duration Indexes (Tables 20, 21, 22).

Academic problems

Table 17 lists the academic problems according to the degree of their severity. It is evident from the list that the most severe academic problems that the foreign non-European graduate students report involve oral and written communication as well as competency in the use of English language. Table 20 shows that almost the same problems top the list in terms of the length of time taken in their resolution. Therefore, it appears that the foreign non-European graduate students often come to the United States ill-equipped in terms of effective oral and written communication and competency in the use of English language, and they find it extremely difficult to overcome these handicaps.

Personal problems

Table 18 contains the list of personal problems according to the degree of their severity, as reported by foreign non-European graduate students. The most severe personal problems pertain to home sickness, adequate housing, enough funds, food, and finding companionship with the opposite sex. Table 21 indicates that almost the same problems occupy the top positions in the list in terms of

TABLE 17

ACADEMIC PROBLEMS ARRANGED ACCORDING TO
DEGREE OF SEVERITY FROM
MAXIMUM TO MINIMUM

1. Participating in class discussion   Maximum Severity

2. Giving oral reports

3. Understanding lectures

4. Taking appropriate courses that

   satisfy your objectives

5. Taking notes in class

6. Preparing written reports

7. Taking standardized tests like

   Graduate Record Examination,

   Miller Analogy Test, and others

8. Writing essay type examinations

9. Understanding American Educa-

   tional system

10. Understanding examination procedures

11. Competing with American students

    for grades

12. Maintaining satisfactory academic record

13. Understanding textbooks

14. Taking objective tests

15. Using library effectively

16. Getting adequate credit for academic

    work done outside the United States   Minimum Severity

TABLE 18

PERSONAL PROBLEMS ARRANGED ACCORDING TO DEGREE OF
SEVERITY FROM MAXIMUM TO MINIMUM

1. Feeling homesick   Maximum Severity

2. Finding adequate housing

3. Having enough funds for school

   expenses

4. Getting used to American food

5. Getting dollar exchange from

   home government

6. Finding companionship with the

   opposite sex

7. Meeting medical expenses

8. Finding part-time work

9. Experiencing racial discrimination

10. Problems concerning immigration

    regulations

11. Becoming ill frequently

12. Living in university residence hall

13. Being permitted to work by the

    immigration office

14. Problems related to your religious

    beliefs

15. Getting visa extended

16. Finding little time to do school work

    due to part-time employment   Minimum Severity

the length of time taken in their resolution. Therefore,
it may be concluded that these are the most severe personal
problems and are almost of a continuous nature.

Social problems

Table 19 lists the problems of a social nature accord-
ing to the degree of their severity. Becoming used to
American social customs, making personal friends with
American students, being accepted by the social groups, and
inhibited participation in campus activities are the most
severe social problems that the foreign non-European graduate
students report. Table 22 indicates that almost the same
problems are also at the top of the list in terms of the
length of time taken in their resolution. Therefore, it
seems that these social problems are the most severe ones
and they defy their resolution almost indefinitely.

The remaining portion of this chapter presents
findings that emanate from the testing of hypotheses 1 through
5.

> Hypothesis 1. There is no relationship among
> the academic, personal, and social adjustment of
> foreign non-European graduate students.

The Kendall coefficient of concordance (W) and the
Spearman rank correlation coefficients (r_s) were calculated
to test this hypothesis.

TABLE 19

SOCIAL PROBLEMS ARRANGED ACCORDING
TO DEGREE OF SEVERITY FROM
MAXIMUM TO MINIMUM

1. Becoming used to American   Maximum Severity

    social customs

2. Making personal friends with

    American students

3. Participating freely in extra-

    curricular activities on the

    campus

4. Making personal friends with

    other foreign students

5. Being accepted in social or

    recreational groups away from

    campus

6. Being accepted in student groups

    on the campus

7. Feeling welcome at college

    functions   Minimum Severity

TABLE 20

ACADEMIC PROBLEMS ARRANGED ACCORDING TO LENGTH OF
TIME TAKEN IN THEIR RESOLUTION FROM
MAXIMUM TO MINIMUM

1. Giving oral reports   Maximum Time

2. Participating in class discussion

3. Taking notes in class

4. Taking appropriate courses that

    satisfy your objectives

5. Preparing written reports

6. Understanding lectures

7. Writing essay type examinations

8. Competing with American Students

    for grades

9. Understanding American education

    system

10. Understanding textbooks

11. Taking standardized tests like

    Graduate Record Examination, Miller

    Anology Test, and others

12. Maintaining satisfactory academic

    record

13. Understanding examination procedures

14. Using library effectively

15. Taking objective tests

16. Getting adequate credit for academic work

    done outside the United States   Minimum Time

TABLE 21

PERSONAL PROBLEMS ARRANGED ACCORDING TO LENGTH
OF TIME TAKEN IN THEIR RESOLUTION FROM
MAXIMUM TO MINIMUM

1. Feeling homesick   Maximum Time

2. Getting used to American food

3. Having enough funds for school expenses

4. Finding adequate housing

5. Finding companionship with the opposite

    sex

6. Getting dollar exchange from home

    government

7. Finding part-time work

8. Problems concerning immigration

    regulations

9. Meeting medical expenses

10. Experiencing racial discrimination

11. Problems related to your religious

    beliefs and practices

12. Getting visa extended

13. Living in university residence hall

14. Being permitted to work by the

    immigration office

15. Becoming ill frequently

16. Finding little time to do school work

    due to part-time employment   Minimum Time

TABLE 22

SOCIAL PROBLEMS ARRANGED ACCORDING TO LENGTH
OF TIME TAKEN IN THEIR RESOLUTION
FROM MAXIMUM TO MINIMUM

1. Becoming used to American   Maximum Time

   social customs

2. Making personal friends with

   American students

3. Being accepted in social or

   recreational groups away from

   campus

4. Participating freely in extra-

   curricular activities on the

   campus

5. Being accepted in student groups

   on the campus

6. Making personal friends with

   other foreign students

7. Feeling welcome at college functions   Minimum Time

The Kendall Coefficient of Concordance (W)

The Kendall coefficient of concordance (W) for academic, personal, and social adjustment:

$$W = 0.65$$

Test of significance (X^2) = 379.70

Test of significance (t)= 7.83

Degrees of freedom = 194

$$p < .001$$

With such a highly significant W, the null hypothesis is rejected, and it is concluded that there is a strong positive association among the academic, personal, and social adjustment. This means that the foreign non-European graduate students who are academically well adjusted, are also personally as well as socially well adjusted, and vice versa.

Spearman Rank Correlation Coefficient (r_s)

The Kendall coefficient of concordance has expressed the degree of over-all association among the three variables. The Spearman rank correlation coefficients were used to analyze the composition of the W, by measuring the relationship between two variables at a time. The following three Spearman rank correlation coefficients were calculated for the computation of W:

Academic and personal adjustment

$$r_s = 0.43$$

Test of significance (t) = 6.69

Degrees of freedom = 193

$$p < .001$$

Academic and social adjustment

$$r_s = 0.46$$

Test of significance (t) = 7.28

Degrees of freedom = 193

$$p < .001$$

Personal and social adjustment

$$r_s = 0.54$$

Test of significance (t) = 8.86

Degrees of freedom = 193

$$p < .001$$

With a highly significant r_s for academic and personal adjustment, the null hypothesis is rejected, and it is concluded that there is a strong positive association between the two variables. This means that the foreign non-European graduate students who are academically well adjusted are also personally well adjusted, and vice versa.

Next, with a highly significant r_s for academic and social adjustment, the null hypothesis is rejected, and it

is concluded that there is a strong positive association between the two variables. This means that the foreign non-European graduate students who are academically well adjusted are also socially well adjusted, and vice versa.

Finally, with a highly significant r_s for personal and social adjustment, the null hypothesis is rejected, and it is concluded that there is a strong positive association between the two variables. This means that the foreign non-European graduate students who are personally well adjusted are also socially well adjusted, and vice versa.

An examination of the t values associated with the three correlation coefficients reveals that the relationship between the pairs of the three variables is very strong. This implies that the foreign non-European graduate students who are academically well adjusted are also personally as well as socially well adjusted, and vice versa.

In the final analysis, it may be stated that the conclusions drawn from the Kendall coefficient of concordance are confirmed by those drawn from the Spearman rank correlation coefficients. These conclusions validate the point that the human being is an integrated whole, and that adjustment or lack of it in one aspect of his life has repercussions on other aspects of his life as well.

Hypothesis 2. Difficulty of adjustment is not related to the length of time taken in attaining adjustment.

The Spearman rank correlation coefficients (r_s) were calculated to test this hypothesis.

Academic adjustment--difficulty and length of time taken in adjustment

$$r_s = 0.55$$

Test of significance (t) = 9.06

Degrees of freedom = 193

$$p < .001$$

Personal adjustment--difficulty and length of time taken in adjustment

$$r_s = 0.57$$

Test of significance (t) = 9.60

Degrees of freedom = 193

$$p < .001$$

Social adjustment--difficulty and length of time taken in adjustment

$$r_s = 0.56$$

Test of significance (t) = 9.39

Degrees of freedom = 193

$$p < .001$$

With a highly significant r_s for difficulty and length of time taken in attaining academic adjustment, the null hypothesis is rejected, and it is concluded that there is a strong positive relationship between the two variables. This means that the foreign non-European graduate students who find academic adjustment more difficult also take longer time in attaining it, and vice versa.

Next, with a highly significant r_s for difficulty and length of time taken in attaining personal adjustment, the null hypothesis is rejected, and it is concluded that there is a strong positive relationship between the two variables. This means that the foreign non-European graduate students who find personal adjustment more difficult also take longer time in attaining it, and vice versa.

Finally, with a highly significant r_s for difficulty and length of time taken in attaining social adjustment, the null hypothesis is rejected, and it is concluded that there is a strong positive relationship between the two variables. This means that the foreign non-European graduate students who find social adjustment more difficult also take longer time in attaining it, and vice versa.

> Hypothesis 3. There is no relationship between the academic, personal, and social adjustment of foreign non-European graduate students and the usefulness of student personnel services as perceived by them.

The Spearman rank correlation coefficients (r_s) were calculated to test this hypothesis.

Academic adjustment and usefulness
of student personnel services

$$r_s = 0.16$$

Test of significance (t) = 2.30

Degrees of freedom = 193

$$p < .05$$

Personal adjustment and usefulness of
student personnel services

$$r_s = 0.09$$

Test of significance (t) = 1.25

Degrees of freedom = 193

$$p > .05$$

Social adjustment and usefulness of
student personnel services

$$r_s = 0.02$$

Test of significance (t) = 0.33

Degrees of freedom = 193

$$p > .05$$

With a significant r_s for academic adjustment and
usefulness of student personnel services, the null hypothesis
is rejected, and it is concluded that there is a positive
relationship between the two variables. This means that the
foreign non-European graduate students who perceive student

personnel services as useful tend to have higher academic adjustment, and vice versa.

Next, with the r_s for personal adjustment and usefulness of student personnel services not being significant, the null hypothesis is sustained, and it is concluded that the student personnel services apparently have no bearing on the personal adjustment of foreign non-European graduate students.

Finally, with the r_s for social adjustment and usefulness of student personnel services not being significant, the null hypothesis is sustained, and it is concluded that the student personnel services apparently have no bearing on the social adjustment of foreign non-European graduate students.

From the above discussion, it may be concluded that the student personnel services help the foreign non-European graduate students in their academic adjustment, but fail to assist them in their personal or social adjustment. This may partly be because of the nature of the personal and social problems of the foreign non-European graduate students, and partly because of the inadequacy of the student personnel services to cope with them.

Hypothesis 4. Severity of problems is not related to the length of time taken in their resolution.

The Spearman rank correlation coefficients (r_s) were calculated to test this hypothesis.

Academic problems - severity and length of
<u>time taken in their resolution</u>

$$r_s = 0.92$$

Test of significance (t) = 9.04

Degrees of freedom = 14

$$p < .001$$

Personal problems - severity and length of
<u>time taken in their resolution</u>

$$r_s = 0.92$$

Test of significance (t) = 8.86

Degrees of freedom = 14

$$p < .001$$

Social problems - severity and length of
<u>time taken in their resolution</u>

$$r_s = 0.82$$

Test of significance (t) = 8.86

Degrees of freedom = 5

$$p < .001$$

With a highly significant r_s for severity of academic problems and the length of time taken in their resolution, the null hypothesis is rejected, and it is concluded that there is a strong positive relationship between the two variables. This means that the more severe academic problems take longer time for their resolution, and vice versa.

Next, with a highly significant r_s for severity of personal problems and the length of time taken in their resolution, the null hypothesis is rejected, and it is concluded that there is a strong positive relationship between the two variables. This means that the more severe personal problems take longer time for their resolution, and vice versa.

Finally, with a highly significant r_s for severity of social problems and the length of time taken in their resolution, the null hypothesis is rejected, and it is concluded that there is a strong positive relationship between the two variables. This means that the more severe social problems take longer time for their resolution, and vice versa.

> Hypothesis 5. There is no difference among the academic, personal, and social problems in terms of (a) the degree of their severity, and (b) the length of time taken in their resolution.

The Kruskal-Wallis one-way analysis of variance by ranks (H) was used to test both (a) and (b) parts of this hypothesis.

Degree of Severity

Differences among academic, personal, and social problems

$$H = 6.36$$

Test of significance (X^2) = 6.36

Degrees of freedom = 2

$$p < .05$$

Difference between academic and personal problems

$$H = 4.95$$

Test of significance (X^2) = 4.95

Degrees of freedom = 1

$$p < .05$$

Difference between academic and social problems

$$H = 3.76$$

Test of significance (X^2) = 3.76

Degrees of freedom = 1

$$p > .05$$

Difference between personal and social problems

$$H = 0.25$$

Test of significance (X^2) = .25

Degrees of freedom = 1

$$p > .05$$

Severity Mean for academic problems = 1.78

Severity Mean for personal problems = 1.48

Severity Mean for social problems = 1.57

With a significant H for the differences among academic, personal, and social problems, the null hypothesis is rejected, and it is concluded that these types of problems differ significantly from one another in terms of the degree of their severity. An examination of the Severity Means for the three types of problems indicates that, relatively speaking, the academic problems are most severe and the personal problems least severe, with social problems occupying the middle position.

In order to gain additional insight into the precise nature of the difference between the three types of problems, the differences between pairs of academic, personal, and social problems were analyzed. With a significant H for the difference between academic and personal problems, the null hypothesis is rejected, and it is concluded that the two types of problems differ significantly from one another in terms of the degree of their severity. The Severity Means for these two types of problems suggest that the academic problems are more severe than the personal problems.

Next, the H for the difference between academic and social problems not being significant, the null hypothesis is sustained, and it is concluded that the two types of problems do not differ significantly from one another in terms of the degree of their severity. However, the Severity Means for these two types of problems suggest that probably the academic problems are slightly more severe than the social problems.

Finally, the H for the difference between personal
and social problems not being significant, the null hypo-
thesis is sustained, and it is concluded that the two types
of problems do not differ significantly from one another
in terms of the degree of their severity. However, the
Severity Means for these two types of problems suggest that
probably the social problems are slightly more severe than
the personal problems.

In conclusion, it may be stated that, by and large,
the academic problems are somewhat more severe than either
personal or social problems, and that the social problems
are somewhat more severe than the personal problems. This
may be because, perhaps, the academic problems are more
pressing, constant, inescapable, and slow in resolution.

Time Taken in Problem Resolution

Differences among academic, personal, and social problems

$$H = 7.15$$

Test of significance $(X^2) = 7.15$

Degrees of freedom $= 2$

$$p < .05$$

Difference between academic and personal problems

$$H = 6.29$$

Test of significance (X^2) = 6.29

Degrees of freedom = 1

$$p < .05$$

Difference between academic and social problems

$$H = 0.79$$

Test of significance (X^2) = 0.79

Degrees of freedom = 1

$$p > .05$$

Difference between personal and social problems

$$H = 0.59$$

Test of significance (X^2) = 0.59

Degrees of freedom = 1

$$p > .05$$

Duration Mean for academic problems = .90

Duration Mean for personal problems = .76

Duration Mean for social problems = .82

With a significant H for the differences among academic, personal, and social problems, the null hypothesis is rejected, and it is concluded that these types of problems differ significantly from one another in terms of the length

of time taken in their resolution. An examination of the Duration Means for the three types of problems suggests that, relatively speaking, the academic problems take longest time in their resolution and the personal problems shortest time, with social problems falling in the middle.

In order to gain additional insight into the precise nature of the difference between the three types of problems, the differences between pairs of academic, personal, and social problems were analyzed. With a significant H for the difference between academic and personal problems, the null hypothesis is rejected, and it is concluded that the two types of problems differ significantly from one another in terms of the length of time taken in their resolution. The Duration Means for these two types of problems suggest that the academic problems take longer time in their resolution than the personal problems.

Next, the H for the difference between academic and social problems not being significant, the null hypothesis is sustained, and it is concluded that the two types of problems do not differ significantly from one another in terms of the length of time taken in their resolution. However, the Duration Means for these two types of problems suggest that probably the academic problems take slightly longer time in their resolution than the social problems.

Finally, the H for the difference between personal and social problems not being significant, the null hypothesis

sustained, and it is concluded that the two types of problems
do not differ significantly from one another in terms of
the length of time taken in their resolution. However, the
Duration Means for these two types of problems suggest that
probably the social problems take slightly longer time for
their resolution than the personal problems.

In conclusion, it may be stated that, generally speak-
ing, the academic problems take somewhat longer time for
their resolution than either personal or social problems, and
that the social problems take somewhat longer time than the
personal problems. This may be because of the possible
reasons alluded to earlier.

Conclusions

On the basis of the discussion presented in this
chapter, the following conclusions are drawn:

1. The most severe academic problems concern giving
oral reports, participating in class discussions, taking
notes in class, understanding lectures, taking appropriate
courses of study, and preparing written reports. These
problems require a long period of time for their resolution.

2. The most severe personal problems concern home
sickness, adequate housing, enough funds, food, and finding
companionship with the opposite sex. These problems require
a long period of time for their resolution.

3. The most severe social problems concern becoming used to American social customs, making personal friends with American students, being accepted by the social groups, and inhibited participation in campus activities. These problems require a long period of time for their resolution.

4. There seems to exist a strong positive relationship among the academic, personal, and social adjustment of foreign non-European graduate students.

5. The foreign non-European graduate students who find academic, personal, or social adjustment more difficult also take longer time in attaining it.

6. The student personnel services are of some help to foreign non-European graduate students in their academic adjustment. However, their usefulness for personal or social adjustment seems to be lacking.

7. The academic, personal, and social problems that are more severe take longer time in their resolution.

8. Academic, personal, and social problems differ significantly among themselves in terms of their severity. The academic problems are slightly more severe than either personal or social problems, and the social problems are slightly more severe than the personal problems.

9. Academic, personal, and social problems differ significantly among themselves in terms of the length of time taken in their resolution. The academic problems take slightly longer time for their resolution than either

personal or social problems, and the social problems take
slightly longer time for their resolution than the personal
problems.

The following chapter reports the findings stemming
from the analysis of the data for hypotheses 6 through 13.

CHAPTER VII

ADJUSTMENT AS RELATED TO SELECTED VARIABLES

This chapter reports findings concerning adjustment
of foreign non-European graduate students as related to such
variables as geographical regions, length of residence in
the United States, age upon entering the United States,
programs of study, source of financial support, educational
background, home background, and the campus where enrolled.
The findings with respect to the hypotheses 6 through 13
have been presented here.

> Hypothesis 6. There is no difference in
> academic, personal, and social adjustment of
> foreign non-European graduate students from
> varied geographical regions.

In order to test this hypothesis, X^2 was used (Tables
23, 24, 25--Appendix A).

Academic adjustment

$$X^2 = 23.81$$

$$\text{Degrees of freedom} = 4$$

$$p < .001$$

Personal adjustment

$$X^2 = 11.76$$

Degrees of freedom = 4

$$p < .05$$

Social adjustment

$$X^2 = 3.99$$

Degrees of freedom = 4

$$p > .05$$

The X^2 for academic adjustment is highly significant. This indicates that the students from the selected geographical regions differ significantly in their academic adjustment. An examination of Table 23 indicates that the students from the Far East, South Asia, and Latin America have mainly contributed to the magnitude of the difference. Comparatively speaking, the students from South Asia make better academic adjustment than those from the Far East and Latin America. This may be, perhaps, because the former generally come with adequate knowledge of English, whereas the latter are usually deficient in this respect.

The X^2 for personal adjustment is also significant. This indicates regional differences in terms of personal adjustment. It is evident from Table 24 that the students from Africa make a poor personal adjustment. Further, the X^2 for social adjustment is not significant. Therefore,

there seem to be no regional differences with respect to social adjustment. This may be, perhaps, because they all are culturally different, and therefore are accepted or rejected by Americans in equal measure.

Hypothesis 7. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied lengths of residence in the United States.

In order to test this hypothesis, X^2 was used (Tables 26, 27, 28 - Appendix A).

Academic adjustment

$$X^2 = 0.83$$

$$\text{Degrees of freedom} = 2$$

$$p > .05$$

Personal adjustment

$$X^2 = 2.21$$

$$\text{Degrees of freedom} = 2$$

$$p > .05$$

Social adjustment

$$X^2 = 0.36$$

$$\text{Degrees of freedom} = 2$$

$$p > .05$$

The three X^2 are not significant. Therefore, the null hypothesis is sustained, and it is concluded that the length of residence in the United States seems to have no bearing on the academic, personal, and social adjustment of foreign non-European graduate students.

> Hypothesis 8. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students in terms of their age upon entering the United States.

In order to test this hypothesis, X^2 was used (Tables 29, 30, 31 - Appendix A).

Academic adjustment

$$X^2 = 8.29$$

Degrees of freedom = 3

$$p < .05$$

Combined categories: $X^2 = 5.87$

Degrees of freedom = 2

$$p > .05$$

Personal adjustment

$$X^2 = 4.19$$

Degrees of freedom = 3

$$p > .05$$

Combined categories: X^2 = 2.43

Degrees of freedom = 2

p > .05

Social adjustment

X^2 = 5.37

Degrees of freedom = 3

p > .05

Combined categories: X^2 = 4.35

Degrees of freedom = 2

p >.05

In calculating X^2's for this hypothesis, it was noticed that in more than 20 per cent of the cells there were less than 5 expected frequencies. This violates the assumptions of the X^2 test. Therefore, the category "Less than 20 years" was combined with the "20 to 24 years" to raise the size of the low expected frequencies and to meet the assumptions of the X^2 test. Prior to this adjustment, the X^2 for academic adjustment alone was significant at less than .05 level, and the others were not significant. However, after the adjustment, it also ceased to be significant. With all the three X^2's not being significant, the null hypothesis is sustained, and it is concluded that the age upon entering the United States apparently has no bearing on the academic, personal, and social adjustment of foreign non-European graduate students.

Hypothesis 9. There is no difference in academic, personal, and social adjustment of foreign non-Eureopean graduate students with varied programs of study.

In order to test this hypothesis, X^2 was used (Tables 32, 33, 34--Appendix A).

Academic adjustment

$$X^2 = 23.34$$

Degrees of freedom = 8

$$p < .01$$

Combined categories: $X^2 = 21.96$

Degrees of freedom = 5

$$p < .001$$

Personal adjustment

$$X^2 = 7.86$$

Degrees of freedom = 8

$$p > .05$$

Combined categories: $X^2 = 6.34$

Degrees of freedom = 5

$$p > .05$$

Social adjustment

$$X^2 = 7.02$$

Degrees of freedom = 8

$$p > .05$$

$$\text{Combined categories:} \quad X^2 = 5.85$$
$$\text{Degrees of freedom} \quad = 5$$
$$p \quad > \quad .05$$

In calculating X^2's for this hypothesis, some categories were combined to raise the size of the low expected frequencies and to meet the assumptions of the X^2 test. For example, "Agriculture" was combined with "Engineering," "Medicine" with "Biological Sciences," and "Education" with "Social Sciences." These categories were combined because of the similarities in the disciplines. Prior to this adjustment, the X^2 for academic adjustment alone was significant at less than .01 level, and the others were not significant. However, after the adjustment, it became significant at less than .001 level, but the significance level of the others did not change.

The highly significant X^2 for academic adjustment indicates that the programs of study have a definite bearing on the academic adjustment of the foreign non-European graduate students. An examination of Table 32 shows that the students in agriculture, engineering, and physical sciences, relatively speaking, make better academic adjustment than those in the social sciences. Perhaps, this may be due to the need for a higher degree of proficiency in English language in the social sciences.

The insignificant X^2's for personal and social adjustment imply that programs of study evidently have no bearing on the personal and social adjustment of foreign non-European graduate students.

> Hypothesis 10. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied sources of financial support.

In order to test this hypothesis, X^2 was used (Tables 35, 36, 37 - Appendix A).

Academic adjustment

$$X^2 = 11.77$$

Degrees of freedom = 4

$$p < .05$$

Combined categories: $X^2 = 10.35$

Degrees of freedom = 3

$$p < .05$$

Personal adjustment

$$X^2 = 3.66$$

Degrees of freedom = 4

$$p > .05$$

Combined categories: $X^2 = 3.63$

Degrees of freedom = 3

$$p > .05$$

Social adjustment

$$X^2 = 6.51$$

Degrees of freedom = 4

$$p > .05$$

Combined categories: $X^2 = 5.37$

Degrees of freedom = 3

$$p > .05$$

In calculating X^2's for this hypothesis, the category "Loan" was combined with the "Other" to raise the size of the low expected frequencies and to meet the assumptions of the X^2 test. The category "Loan" was combined with the "Other" because it had very few frequencies. Prior to this adjustment, the X^2 for academic adjustment alone was significant at less than .05 level, and the others were not significant. However, after the adjustment, it still remained significant at less than .05 level, but there was no change in the significance level of the others.

The significant X^2 for academic adjustment indicates that the source of financial support has some bearing on the academic adjustment of the foreign non-European graduate students. Table 35 shows that, relatively speaking, those students who support themselves through employment in the United States make better academic adjustment than those who get money from home. This may be because, perhaps, the

former have a greater sense of responsibility than the latter.

The X^2's for personal and social adjustment are not significant. This means that the source of financial support seems to have no bearing on personal and social adjustment of foreign non-European graduate students.

> Hypothesis II. There is no difference in academic, personal, and social adjustment of foreign non-European, graduate students with varied educational backgrounds.

This hypothesis examined the effect of two variables on academic, personal, and social adjustment: (a) the degree held, and (b) whether it was earned in the United States or elsewhere.

In order to test part A of this hypothesis, X^2 was used (Tables 38, 39, 40--Appendix A).

Academic adjustment

$$X^2 = 0.08$$

Degrees of freedom = I

$$p > .05$$

Yates correction: $X^2 = 0.01$

$$p > .05$$

Personal adjustment

$$X^2 = 7.37$$

Degrees of freedom = 1

$$p < .01$$

Yates correction: $X^2 = 6.35$

$$p < .05$$

Social adjustment

$$X^2 = 1.16$$

Degrees of freedom = 1

$$p > .05$$

Yates correction: $X^2 = 0.77$

$$p > .05$$

In calculating X^2's for this part of the hypothesis,
Yates correction for discontinuity was made because of one
degree of freedom. The X^2 for personal adjustment alone
was found to be significant at less than .05 level. Table
39 shows that, relatively speaking, the students who hold
Master's degree make better personal adjustment than those
who hold Bachelor's degree. This may be, perhaps, because
the former are more mature than the latter. The X^2's for
academic and social adjustment are not significant. It is
quite possible that industriousness, perseverance, and
dedication are a greater asset to academic adjustment than

holding of a Master's degree. And, certainly holding of a higher degree seems to have no relevance to one's social adjustment.

In order to test part B of this hypothesis, X^2 was used (Tables 41, 42, 43--Appendix A).

Academic adjustment

$$X^2 = 3.68$$

Degrees of freedom = 1

$$p > .05$$

Yates correction: $X^2 = 2.95$

$$p > .05$$

Personal adjustment

$$X^2 = 0.16$$

Degrees of freedom = 1

$$p > .05$$

Yates correction: $X^2 = 0.04$

$$p > .05$$

Social adjustment

$$X^2 = 0.07$$

Degrees of freedom = 1

$$p > .05$$

Yates correction: $X^2 = 0.004$

$p > .05$

In calculating X^2's for this part of the hypothesis, Yates correction for discontinuity was made because of one degree of freedom. All the three X^2's are not significant. Therefore, it may be concluded that prolonged exposure to American education system seems to have no bearing on academic, personal, and social adjustment.

Hypothesis 12. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied home backgrounds.

In order to test this hypothesis, X^2 was used (Tables 44, 45, 46--Appendix A).

Academic adjustment

$X^2 = 4.21$

Degrees of freedom = 2

$p > .05$

Combined categories and

Yates correction: $X^2 = 1.92$

Degrees of freedom = 1

$p > .05$

Personal adjustment

$$X^2 = 4.78$$

Degrees of freedom = 2

$$p > .05$$

Combined categories and

Yates correction: $X^2 = 2.14$

Degrees of freedom $= 1$

$$p > .05$$

Social adjustment

$$X^2 = 4.62$$

Degrees of freedom = 2

$$p > .05$$

Combined categories and

Yates correction: $X^2 = 2.04$

Degrees of freedom $= 1$

$$p > .05$$

In calculating X^2's for this hypothesis, the category "Lower Class" was combined with "Middle Class" to raise the size of the low expected frequencies and to meet the assumptions of the X^2 test. The reason for combining the "Lower class" with "Middle Class" was that the frequencies in the "Lower Class" category were very few. Because of the

combination of the two categories, the contingency table was reduced to 2 x 2 with one degree of freedom. Hence, Yates correction for discontinuity was made in calculating X^2's.

All the three X^2's are not significant. Therefore, the null hypothesis is sustained, and it is concluded that the home background of foreign non-European graduate students does not seem to have any bearing on their academic, personal, and social adjustment.

> Hypothesis 13. There is no difference in academic, personal, and social adjustment of foreign non-European graduate students enrolled on the four campuses.

In order to test this hypothesis, X^2 was used (Tables 47, 48, 49--Appendix A).

Academic adjustment

$$X^2 = 8.86$$

Degrees of freedom = 3

$$p < .05$$

Combined categories: $X^2 = 2.91$

Degrees of freedom = 2

$$p > .05$$

Personal adjustment

$$X^2 = 1.42$$

Degrees of freedom = 3

$$p > .05$$

Combined categories: $X^2 = 1.42$

Degrees of freedom = 2

$$p > .05$$

Social adjustment

$$X^2 = 1.06$$

Degrees of freedom = 3

$$p > .05$$

Combined categories: $X^2 = 0.17$

Debrees of freedom = 2

$$p > .05$$

In calculating X^2's for this hypothesis, the category, "Greensboro" was combined with the "Chapel Hill" to raise the size of the low expected frequencies and to meet the assumptions of the X^2 test. The reason for combining the "Greensboro" with "Chapel Hill" was that the frequencies in the "Greensboro" category were very few. Besides, the Greensboro campus has a greater degree of affinity with the Chapel Hill campus than with any other.

All the three X^2 are not significant. Therefore, the
null hypothesis is sustained, and it is concluded that the
campus where the foreign non-European graduate students
study (Chapel Hill, Duke, Greensboro, or Raleigh) seems to
have no bearing on their academic, personal, and social
adjustment.

Conclusions

On the basis of the discussion presented in this
chapter, the following conclusions are drawn:

1. The students from South Asia generally make
better academic adjustment than those from the Far East or
Latin America. However, in respect of personal and social
adjustment, there seem to exist no significant regional
differences.

2. The length of residence in the United States has
been found to have no bearing on the academic, personal, and
social adjustment of foreign non-European graduate students.

3. The age upon entering the United States has been
found to have no bearing on the academic, personal, and
social adjustment of foreign non-European graduate students.

4. The students in agriculture, engineering, and
physical sciences generally make better academic adjustment
than those in the social sciences. However, in respect of
personal and social adjustment, the programs of study do not
seem to make any difference.

5. The students who are self-supporting generally make better academic adjustment than those who get money from home. However, in respect of personal and social adjustment, the source of financial support seems to make no difference.

6. The students with Master's degree tend to make better personal adjustment than those with Bachelor's degree. However, in respect of academic and social adjustment, the possession of Bachelor's or Master's degree has been found to make no difference.

Further, prolonged exposure to American education system also has been found to have no bearing on academic, personal, and social adjustment of foreign non-European graduate students.

7. The home background of foreign non-European graduate students has been found to have no bearing on their academic, personal, and social adjustment.

8. The campus where the foreign non-European graduate students are enrolled for education has been found to have no bearing on their academic, personal, and social adjustment.

CHAPTER VIII

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

Summary

Being somewhat cognizant of the plight of foreign
non-European students, being vaguely aware of their problems
through experience and empathy, and being guided by the re-
view of the literature, the researcher undertook this study,
restricting it to graduate students enrolled at Chapel Hill,
Greensboro, and Raleigh campuses of the University of North
Carolina and at Duke University.

Statement of the problem

The purpose of this study was to identify the adjust-
ment problems experienced by foreign non-European graduate
students enrolled in selected universities in the State of
North Carolina and to investigate the relationships between
the adjustment problems and the selected variables of
educational and home backgrounds,the nature of financial
support, the types of academic programs pursued, the age
upon entering the United States, the length of residence in
the United States, the campus of enrollment, and the useful-
ness of student personnel services available to foreign
graduate students. Further, the study sought to discover
any discernible differences in the adjustment pattern of

foreign non-European graduate students from selected

geographical regions. Finally, the study had as its objective

to suggest measures that could contribute to the alleviation

of the adjustment problems of foreign non-European graduate

students.

Statement of the hypotheses

In order to research the problem stated above, the

following null hypotheses were formulated:

Hypothesis 1:   There is no relationship among the

academic, personal, and social adjustment of foreign non-

European graduate students.

Hypothesis 2:   Difficulty of adjustment is not

related to the length of time taken in attaining adjustment.

Hypothesis 3:   There is no relationship between the

academic, personal, and social adjustment of foreign non-

European graduate students and the usefulness of student

personnel services as perceived by them.

Hypothesis 4:   Severity of problems is not related to

the length of time taken in their resolution.

Hypothesis 5:   There is no difference among the academic,

personal, and social problems in terms of (a) the degree of

their severity, and (b) the length of time taken in their

resolution.

Hypothesis 6:   There is no difference in academic,

personal, and social adjustment of foreign non-European

graduate students from varied geographical regions.

Hypothesis 7: There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied lengths of residence in the United States.

Hypothsis 8: There is no difference in academic, personal, and social adjustment of foreign non-European graduate students in terms of their age upon entering the United States.

Hypothesis 9: There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied programs of study.

Hypothesis 10: There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied sources of financial support.

Hypothesis 11: There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied educational backgrounds.

Hypothesis 12: There is no difference in academic, personal, and social adjustment of foreign non-European graduate students with varied home backgrounds.

Hypothesis 13: There is no difference in academic, personal, and social adjustment of foreign non-European graduate students enrolled on the four campuses.

The procedures of the investigation

      In order to collect data for this study a foreign
student problems inventory was devised. The subjects for this
study represented the Far East, South Asia, the Middle East,
Africa, and Latin America, and were selected through strati-
fied, disproportionate, random sampling procedures. The copies
of the inventory were sent by mail, and 195 completed returns
were received, which constituted 52.14 per cent of the sample.
A limited number of respondents were also interviewed to
determine the veracity of the inventory responses.

Analysis of the data

      Because of the data for this study being in ordinal and
nominal scales, the nonparametric tests were used to analyze
them. To test Hypothesis 1, the Kendall coefficient of con-
cordance (W), a multivariate correlation measure, and the
Spearman rank correlation coefficient (r_s), a bivorate correla-
tion measure, were used. Hypotheses 2, 3 and 4 were also
tested by the Spearman rank correlation. The Kruskal-Wallis
one-way analysis of variance by ranks (H) was used to test
Hypothesis 5. Finally, Hypotheses 6 through 13 were tested
by the X^2 test. In order to apply the X^2 test, the "low ad-
justment" and "high adjustment" groups were identified in
respect of academic, personal, and social adjustment.

      In summary, the total analysis of the data for this
study involved the following main statistical operations:

Type of Test	Number of Calculations
The Kendall coefficient of concordance (W)	1
The Spearman rank correlation coefficients (r_s)	12
The Kruskal-Wallis one-way analysis of variance by ranks (H)	8
x^2	27

Conclusions

From the analysis of the data, the following conclusions have been drawn:

1. The most severe academic problems concern giving oral reports, participating in class discussions, taking notes in class, understanding lectures, taking appropriate courses of study, and preparing written reports. These problems require a long period of time for their resolution.

2. The most severe personal problems concern home sickness, adequate housing, enough funds, food, and finding companionship with the opposite sex. These problems require a long period of time for their resolution.

3. The most severe social problems concern becoming used to American social customs, making personal friends with American students, being accepted by the social groups, and inhibited participation in campus activities. These problems require a long period of time for their resolution.

4. There seems to exist a strong positive relation-
ship among the academic, personal, and social adjustment of
foreign non-European graduate students.

5. The foreign non-European graduate students who
find academic, personal, and social adjustment more diffi-
cult also take longer time in attaining it.

6. The student personnel services are of some help
to foreign non-European graduate students in their academic
adjustment. However, their usefulness for personal or
social adjustment seems to be lacking.

7. The academic, personal, and social problems that
are more severe take longer time in their resolution.

8. Academic, personal, and social problems differ
significantly among themselves in terms of their severity.
The academic problems are slightly more severe than either
personal or social problems, and the social problems are
slightly more severe than the personal problems.

9. Academic, personal, and social problems differ
significantly among themselves in terms of the length of
time taken in their resolution. The academic problems take
slightly longer time for their resolution than either per-
sonal or social problems, and the social problems take
slightly longer time for their resolution than the personal
proglems.

10. The students from South Asia generally make better
academic adjustment than those from the Far East or Latin

America. However, in respect of personal and social adjustment, there seem to exist no significant regional differences.

11. The length of residence in the United States has been found to have no bearing on the academic, personal, and social adjustment of foreign non-European graduate students.

12. The age upon entering the United States has been found to have no bearing on the academic, personal, and social adjustment of foreign non-European graduate students.

13. The students in agriculture, engineering, and physical sciences generally make better academic adjustment than those in the social sciences. However, in respect of personal and social adjustment, the programs of study do not seem to make any difference.

14. The students who are self-supporting generally make better academic adjustment than those who get money from home. However, in respect of personal and social adjustment, the source of financial support seems to make no difference.

15. The students with Master's degree tend to make better personal adjustment than those with Bachelor's degree. However, in respect of academic and social adjustment, the possession of Bachelor's or Master's degree has been found to make no difference.

Further, prolonged exposure to American education system also has been found to have no bearing on academic, personal, and social adjustment of foreign non-European graduate students.

16. The home background of foreign non-European graduate students has been found to have no bearing on their academic, personal, and social adjustment.

17. The campus where the foreign non-European graduate students are enrolled for education has been found to have no bearing on their academic, personal, and social adjustment.

Implications

By providing answers to numerous questions raised at the inception of the study, it has made a salient contribution to the knowledge about the adjustment problems of foreign non-European graduate students. From the conclusions drawn through this research, the following implications are warranted:

1. Foreign students should be thoroughly tested for their competency in the use of English language prior to their departure from their home country. The issuance of the admission letter should be contingent upon demonstrated linguistic proficiency in English. This is particularly crucial for the students coming from such areas as Latin America and the Far East where English is not so widely

taught in schools, and for those students who plan to study in the area of social sciences. Further, American universities and colleges should offer remedial programs in English language especially designed for foreign students after they arrive here, to remove their deficiencies.

2. American professors who have foreign students in their classes need to be oriented to their problems, and be made aware of their potential for their abatement. The foreign students are often shy in making oral reports or participating in class discussions because of their language deficiency, accents, and a general sense of diffidence in the new environment. They are also not familiar with the American system of teaching and the pronunciations of their American professors, especially in the initial stage of their education in this country. They need their sympathetic understanding, encouragement, and assistance. American professors can greatly help them in mitigating their academic problems. The significance of this suggestion cannot be overemphasized in view of the fact that the academic problems have been found to be more severe and more persistent than any other type.

3. The student personnel services have been found to be of some help to foreign non-European graduate students in their academic adjustment, but not in their personal and social adjustment. These services need to be equipped and strengthened to render assistance to them in their personal

and social adjustment as well. This is particularly impera-
tive in view of the fact that there has been found to be a
very strong positive association among their academic,
personal, and social adjustment. Alleviation of their
personal and social problems would release their time and
energy to concentrate on their academic tasks.

4. This study offers a basis for the American
universities and colleges to reexamine their admissions
policies and requirements for foreign non-European students.
They may consider to develop different sets of policies and
requirements to suit the special needs and peculiar problems
of foreign students coming from diverse regions of the world
for varied programs of study.

5. On the basis of the findings of this investigation,
the American universities and colleges may adopt a policy of
apprising the prospective foreign students about the problems
they might possibly encounter during their study in this
country. This would partially spare them from despair,
disillusion, and frustrations.

Recommendations for Further Research

This study has answered numerous questions, but it
has also discovered numerous questions. For example:

1. Why are the academic problems of foreign non-
European graduate students more severe and more persistent
than their personal and social problems?

2. Why does the length of residence in the United States not have a bearing on academic, personal, and social adjustment of foreign non-European graduate students?

3. Why does the age not have a bearing on academic, personal, and social adjustment of foreign non-European graduate students?

4. Why does the educational background not have a bearing on academic, personal, and social adjustment of foreign non-European graduate students?

5. Why does the home background not have a bearing on academic, personal, and social adjustment of foreign non-European graduate students?

Speculative answers to these questions are devoid of rational explanations. Answers derived through research are needed.

So far the studies conducted have been of a molar nature embracing a wide spectrum of foreign students' problems. What is needed now are the molecular studies focusing on specific aspects of a problem of a specific group of foreign students.

Studies designed to investigate the usefulness of different types of student personnel services available to foreign students are particularly needed. This would result in the maintenance of an effective student personnel services program.

So far the emphasis in this study has been on foreign non-European graduate students only. However, the investigation of the problems of foreign non-European undergraduate students on similar lines would be an equally valuable field for research.

Finally, the whole area of personality as related to adjustment of foreign non-European students is completely unexplored as yet. This offers an extremely promising and fascinating field for research. This would require the use of more sophisticated and refined research techniques.

BIBLIOGRAPHY

Akka, Rouben I. "The Middle Eastern Student on the American
        College Campus," The Journal of the American College
        Health Association, XV (February, 1967), 215-254.

Baker, Robert H. "The Evaluation of Credentials and Admis-
        sion of Foreign Students," The Graduate Student:
        Proceedings of the Fifth Annual Meeting of the Council
        of Graduate Schools in the United States, Washington,
        D. C. (December, 1965), 112-118.

Bang, C. H. "Student Housing Melting Pot," Proceedings of
        the Seventeenth Annual Conference of the Association
        of College and University Housing Officers,
        University Park, Pennsylvania (1965), 206-214.

Becker, Tarmar Shfiron. "Perceptions and Attitudinal Changes
        Among Foreign Students on the UCLA Campus,"
        Dissertation Abstract, XXVII (10), 3519.

Berte, Neal R. "An Analytical Study of the Foreign Student
        Program at the University of Cincinnati," Disserta-
        tion Abstract, XXVII (6), 1532.

Bloland, Paul A. "Developing American-Foreign Student
        Relationships," The Journal of College Student
        Personnel, VIII (November, 1967), 397-401.

Boddy, Francis M. "Special Problems of the Foreign Students,"
        The Graduate Student: Proceedings of the Fifth Annual
        Meeting of the Council of Graduate Schools in the United
        States, Washington D. C. (December, 1965), 118-121.

Borhanmanesh, Mohamad. "A Study of Iranian Students in
        Southern California." Unpublished Doctoral disserta-
        tion, University of California, Los Angeles, 1965.

Bosco, Frederick J. "The Orientation Institute for Latin
        American Students," The Catholic Educational Review,
        LXV (April, 1967), 250-251.

Bridgers, Furman A. "The Team Approach to the Foreign Student
        Program," National Association for Foreign Student
        Affairs Newsletter, XVIII (January, 1967), 1-3.

Burke, Jack D.   "The Status and Problem of Foreign Students
        in the United States," Unpublished report, University
        of Pennsylvania, March, 1966.

Burroughs, Franklin T.   "Foreign Students at UCLA: A Case
        Study in Cross-Cultural Education," Dissertation
        Abstract, XXV (3), 1711.

Chi, Christopher.   "A Comparative Study of English Proficiency
        of Chinese Students with Students from Other Countries."
        College Student Personnel Abstracts, II (1967), 171.

Chou, Frank Hua-Tsin.   "A Study of the Foreign Student
        Program at the University of Georgia, 1948-1949,"
        Dissertation Abstract, XXI (8), 2158.

Clubine, Eugene L.   "The Rehabilitation of the Foreign Casual-
        ty," Detroit Convention Abstracts. Washington, D. C.:
        American Personnel and Guidance Association, 1968.

Coan, Clark.   "A Survey of the Housing of Foreign Students at
        the University of Kansas," International Student Studies
        No. 20.   University of Kansas (August, 1966), 37.

"Culture Shock: An Exploration in Observation," College
        Student Personnel Abstracts, II (1967), 171-172.

Davis, James Louis.   "A Survey of Present and Former Foreign
        Students Regarding the Effects of Their Residence in
        the International House of New York," Dissertation
        Abstract, XXVI (4), 1990.

Dremuk, Richard.   "Will We Be Admitting Foreign Students in
        1975?"   The Journal of the Association of College
        Admissions Counselors, XI (1966), 4-8.

Frey, James S.   "The Evaluation of Foreign Student Cre-
        centials: A Proposal," College Student Personnel
        Abstracts, I (1966), 133.

Galichia, Sharon.   "The Factors Influencing an Adequate Social
        Adjustment of a Foreign National to the United States,"
        International Student Studies No. 19, University of
        Kansas (July, 1966).

Garside, Jayne G.   "A Cross-Cultural Comparison of Personality,"
        Dissertation Abstract, XXVI (10), 5864.

Gezi, Kalil I.   "Factors Associated with Student Adjustment
        in Cross-Cultural Contact," California Journal of
        Educational Research, XVI (May, 1965), 129-136.

Green, Donald G. "Characteristics of International Alumni, Cornell University, 1935-1959," Dissertation Abstract, XXV (6), p. 3352.

Guglielmo, Hector. "Rights and Obligations of Foreign Students in an American University," Dissertation Abstract, XXVIIII (4), 1237.

Hagey, Abdulla Rashid. "Academic and Social Adjustment of Middle Eastern Students Attending Oregon Colleges and Universities," Dissertation Abstract, XXIX (12), 4282.

Halasz, Sari C. "Foreign Graduate Student Study, UCLA--India, Japan, the Philippines, and Taiwan (Fall 1959 through Spring 1965)," Graduate Division Admissions Section, University of California, Los Angeles (July, 1966), 46.

Hassan, A. M. A. "Social Interaction Between Foreign Students and Americans in a Mid-Western Community," Dissertation Abstract, XXII (7), 2492.

Hattari, Purificacion M. "Relationship of Selected Personal and Social Factors to the Academic Achievement of Foreign Students," Dissertation Abstract, XXVIII (4), 1297.

Heilpurn, Florence F. "A Case Study of the Effects of Visiting in American Homes on the Opinions of a Selected Group of Students from Abroad," Dissertation Abstract, XXVI (8), 4864.

Hennes, Mary E. "Insights into Foreign Student Counseling at UCLA and the New Immigration Law." Paper read at American College Health Association, San Diego, May, 1966.

Hill, Jarvis H. "An Analysis of a Group of Indonesian, Thai, Pakistani, and Indian Students' Perceptions of Their Problems While Enrolled at Indiana University," Dissertation Abstract, XXVII (7), 2007.

Ho, Genevieve Po-Ai. "Factors Affecting Adaptation to American Dietary Pattern by Students from the Oriental Countries," Dissertation Abstract, XXII (11), 3977.

Howell, John J. "On the Meaning of SAT Scores Obtained by Foreign Students of Non-English Language Background," College and University, XXXXIII (Winter, 1968), 225-232.

Johnson, George A. "Foreign Student Admissions: Another Approach," The Journal of the Association of College Admissions Counselors, XI (1966), 3.

Kaplan, Robert B. "English Proficiency--Criterion for Admission," National Association for Foreign Students Affairs Newsletter, XX (December, 1968), 4-5.

Kinger, Robert M. Handbook for Foreign Student Advisers on Emergency Situations Involving Foreign Students, Revised Edition. Washington, D. C.: The National Association for Foreign Students Affairs, 1967.

Klein, M. H., Miller, M. H., and Alexander, A. "Adaptation of the Foreign Student to the American Experience." Paper read at American Psychiatric Association, Detroit, May, 1967.

Koo, May. "American Students' Contacts with and Attitudes Towards Foreign Students," Dissertation Abstract, XXIII (12), 4605.

Lara, Emilia V. "The Effect of Previous Study of English on the Academic Performance of Forty Foreign Students at the University of Kansas," International Student Studies, No. 17. University of Kansas (February, 1966), 19.

Lloyd, Wesley P. "Socio-Academic Problems of Graduate Students from Other Lands," The Graduate Student: Proceedings of the Fifth Annual Meeting of the Council of Graduate Schools in the United States. Washington, D. C. (December, 1965), 121-126.

Mitchell, Joy A. H. "The Foreign Students in the Graduate School at George Peabody College for Teachers, 1956-1962," Dissertation Abstract, XXIII (10), 3691.

Moghrabi, Kamel M. "An Analysis of Factors that Influence the Degree of Success or Failure of Foreign Students at Texas A. and M. University," Dissertation Abstract, XXVII (10), 3232.

Mulligan, Agnes C. "Evaluating Foreign Credentials," College and University, XXXXI (Spring, 1966), 307-313.

National Association for Foreign Student Affairs. "Guidelines: Academic and Personal Advising," College Student Personnel Abstracts, II (1966), 219.

National Association for Foreign Student Affairs. "Guidelines: American-Foreign Student Relationships," Field Service Publications, G-9, NAFSA (January, 1967), 11.

National Association for Foreign Student Affairs. "Guide-
    lines: Housing of Foreign Students," Field Service
    Publications, NAFSA (March, 1967), 12.

Nelson, Donald T. "The Impact of Foreign Undergraduate
    Students Upon American Undergraduate Students,"
    Dissertation Abstract, XXVII (7), 2010.

Owen, W. F. and Colwell, J. L. "Orientation for Foreign
    Students," International Educational and Cultural
    Exchange (Winter, 1968), 48-54.

Parakarn, Smarn. "A Study of Academic Achievement of Foreign
    Students at Kansas State University, Summary and
    Conclusions," College Student Personnel Abstracts,
    II (1966), 4-8.

Paraskevopoulos, John. "Research on Foreign Students at
    the University of Illinois," College and University,
    XXXXIII (1968), 513-524.

Paraskevopoulos, J. and Dremuk, R. "Grading Patterns for
    Foreign Students: A Faculty Survey," College
    Student Personnel Abstracts, IV (1969), 450.

Santos, Antusa P. "A Study of the Problems Faced by Foreign
    Students at Indiana University with Implications for
    Action," Dissertation Abstract, XX (9), 3580.

Shaffer, R. H. and Dowling, R. R. "Foreign Students and
    Their American Student Friends," College Student
    Personnel Abstracts, I (1966), 220.

Shattuck, Gerald M. "Between Two Cultures: A Study of the
    Social Adaptation of Foreign Students to an American
    Academic Community," College Student Personnel
    Abstracts, II (1966), 45.

Siegel, Sidney. Nonparametric Statistics. New York:
    McGraw-Hill Book Company, 1956.

Smith, Eugene H. "Campus Activism and Foreign Students,"
    International Educational and Cultural Exchange,
    IV (Winter, 1969), 39-44.

Spriestersback, D. C. "Admission of the Foreign Graduate
    Student," The Graduate Student: Proceedings of the
    Fifth Annual Meeting of the Council of Graduate
    Schools in the United States, Washington, D. C.
    (December, 1965), 46-50.

Sugimoto, Roy A. "The Relationship of Selected Predictive Variables to Foreign Student Achievement at the University of California, Los Angeles," Dissertation Abstract, XXVIII (1), 65.

Sweeney, Loe J. "Administration of Foreign Student Admissions," College and University, XXXXII (Summer, 1967), 433-446.

"The Overseas Selection of Foreign Students," Education and World Affairs (April, 1966), 34.

Walker, B. R. and Alcorn, J. D. "Critical Requirements of Foreign Student Advisers," The Journal of College Student Personnel, IX (May, 1968), 190-192.

Westcott, Nina Agerwala. "A Position-Analysis of the Foreign Student Adviser as Reflected by Foreign Student Advisers and Administrators," Dissertation Abstract, XXVIII (3), 945.

Wee, Joe Liat. "A Study of Students from Other Lands Who Received Master's Degrees in Educational Administration from Teachers College, Columbia University, 1950-1962," Dissertation Abstract, XXV (1), 259.

Wilkening, Walter Theodore. "Factors Associated with Adjustment of Foreign Students Studying Extension Education at Selected Land Grant Institutions," Dissertation Abstract, XXVI (7), 3732.

Zadeh, Jarrahi, and Eichman, W. J. "The Problems of Middle Eastern Students and Their Adjustment to American Colleges." Paper read at the American Orthopsychiatric Association, 1968.

Zain, Elias K. "A Study of the Academic and Personal-Social Difficulties Encountered by a Selected Group of Foreign Students at the University of Oregon," Dissertation Abstract, XXVI (8), 4352.

APPENDIX A

TABLES 23 to 49

TABLE 23

FREQUENCY OF RESPONDENTS BY LEVEL OF ACADEMIC
ADJUSTMENT AND GEOGRAPHICAL REGIONS

Academic Adjustment	Geographical Regions					Total
	Far East	South Asia	Middle East	Africa	Latin America	
High	13	28	10	3	4	58
Low	26	5	12	3	11	57
Total	39	33	22	6	15	115

$x^2 = 23.81$ $df = 4$ $p < .001$

TABLE 24

FREQUENCY OF RESPONDENTS BY LEVEL OF PERSONAL
ADJUSTMENT AND GEOGRAPHICAL REGIONS

Personal Adjustment	Geographical Regions					Total
	Far East	South Asia	Middle East	Africa	Latin America	
High	21	15	8	0	14	58
Low	18	18	7	8	6	57
Total	39	33	15	8	20	115

$x^2 = 11.76$ $df = 4$ $p < .05$

TABLE 25

FREQUENCY OF RESPONDENTS BY LEVEL OF SOCIAL
ADJUSTMENT AND GEOGRAPHICAL REGIONS

Social Adjustment	Geographical Regions					Total
	Far East	South Asia	Middle East	Africa	Latin America	
High	15	17	9	3	14	58
Low	23	13	9	4	8	57
Total	38	30	18	7	22	115

$X^2 = 3.98$ $df = 4$ $p > .05$

TABLE 26

FREQUENCY OF RESPONDENTS BY LEVEL OF ACADEMIC ADJUST-
MENT AND LENGTH OF RESIDENCE IN UNITED STATES

Academic Adjustment	Length of Residence			Total
	About a Semester	One-to-two years	More than two years	
High	19	23	16	58
Low	19	18	19	56
Total	38	41	35	114

$X^2 = 0.83$ $df = 2$ $P > .05$

TABLE 27

FREQUENCY OF RESPONDENTS BY LEVEL OF PERSONAL ADJUSTMENT
AND LENGTH OF RESIDENCE IN UNITED STATES

| Personal Adjust-ment | Length of Residence | | | Total |
	About a semester	One-to two years	More than two years	
High	18	21	17	56
Low	22	14	21	57
Total	40	35	38	113

X^2 = 2.21   df = 2   p > .05

TABLE 28

FREQUENCY OF RESPONDENTS BY LEVEL OF SOCIAL ADJUST-
MENT AND LENGTH OF RESIDENCE IN UNITED STATES

| Social Adjust-ment | Length of Residence | | | Total |
	About a semester	One-to two years	More than two years	
High	20	21	15	56
Low	20	19	18	57
Total	40	40	33	113

X^2 = 0.36   df = 2   p > .05

TABLE 29

FREQUENCY OF RESPONDENTS BY LEVEL OF ACADEMIC ADJUSTMENT
AND AGE UPON ENTERING UNITED STATES

Academic Adjustment	Age				Total
	Less than 20 years	20-24 years	25-30 years	Over 30 years	
High	3	29	22	4	58
Low	5	14	30	8	57
Total	8	43	52	12	115

$X^2 = 8.29$ df = 3   p < .05
$*X^2 = 5.87$ df = 2   p > .05

TABLE 30

FREQUENCY OF RESPONDENTS BY LEVEL OF PERSONAL ADJUSTMENT
AND AGE UPON ENTERING UNITED STATES

Personal Adjustment	Age				Total
	Less than 20 years	20 - 24 years	25 - 30 years	Over 30 years	
High	2	28	24	4	58
Low	4	17	29	6	56
Total	6	45	53	10	114

$X^2 = 4.19$ df = 3   p > .05
$*X^2 = 2.43$ df = 2   p > .05

*Combined categories

TABLE 31

FREQUENCY OF RESPONDENTS BY LEVEL OF SOCIAL ADJUSTMENT
AND AGE UPON ENTERING UNITED STATES

Social Adjustment	Age				Total
	Less than 20 years	20 - 24 years	25 - 30 years	Over 30 years	
High	3	26	26	3	58
Low	4	15	28	8	55
Total	7	41	54	11	113

$X^2 = 5.37$ df = 3   p > .05
$*X^2 = 4.36$ df = 2   p > .05

TABLE 32

FREQUENCY OF RESPONDENTS BY LEVEL OF ACADEMIC ADJUSTMENT
AND PROGRAMS OF STUDY

Academic Adjustment	Programs of Study									Total
	Agriculture	Biological Sciences	Education	Humanities	Medicine	Physical Sciences	Engineering	Social Sciences	Others	
High	5	2	3	2	0	15	24	5	2	58
Low	4	7	3	4	2	3	14	13	8	58
Total	9	9	6	6	2	18	38	18	10	116

$X^2 = 23.34$ df = 8   p < .01
$*X^2 = 21.96$ df = 5   p < .001

*Combined categories

TABLE 33

FREQUENCY OF RESPONDENTS BY LEVEL OF PERSONAL ADJUSTMENT AND PROGRAMS OF STUDY

Personal Adjustment	Programs of Study									Total
	Agriculture	Biological Sciences	Education	Humanities	Medicine	Physical Sciences	Engineering	Social Sciences	Others	
High	5	7	6	1	2	9	17	9	2	58
Low	4	7	2	4	2	5	18	9	7	58
Total	9	14	8	5	4	14	35	18	9	116

$X^2 = 7.86$ $df = 8$ $p > .05$
$*X^2 = 6.34$ $df = 5$ $p > .05$

TABLE 34

FREQUENCY OF RESPONDENTS BY LEVEL OF SOCIAL ADJUSTMENT AND PROGRAMS OF STUDY

Social Adjustment	Programs of Study									Total
	Agriculture	Biological Sciences	Education	Humanities	Medicine	Physical Sciences	Engineering	Social Sciences	Others	
High	3	9	3	2	2	11	14	9	5	58
Low	4	9	1	3	3	3	19	10	6	58
Total	7	18	4	5	5	14	33	19	11	116

$X^2 = 7.02$ $df = 8$ $p > .05$
$*X^2 = 5.85$ $df = 5$ $p > .05$

*Combined categories

TABLE 35

FREQUENCY OF RESPONDENTS BY LEVEL OF ACADEMIC
ADJUSTMENT AND SOURCES OF FINANCIAL
SUPPORT

| Academic Adjust- ment | Sources of Financial Support | | | | | Total |
	Scholarship, Fellowship, or Grant	Loan	Home	Employ- ment in U. S.	Others	
High	33	2	8	15	0	58
Low	34	3	13	4	4	58
Total	67	5	21	19	4	116

X^2 = 11.77 $\qquad$ df = 4 $\qquad$ p < .05
*X^2 = 10.35 $\qquad$ df = 3 $\qquad$ p < .05

TABLE 36

FREQUENCY OF RESPONDENTS BY LEVEL OF PERSONAL
ADJUSTMENT AND SOURCES OF FINANCIAL SUPPORT

| Personal Adjust- ment | Sources of Financial Support | | | | | Total |
	Scholarship, Fellowship, or Grant	Loan	Home	Employ- ment in U. S.	Others	
High	35	1	7	13	2	58
Low	32	2	13	8	3	58
Total	67	3	20	21	5	116

X^2 = 3.66 $\qquad$ df = 4 $\qquad$ p > .05
*X^2 = 3.62 $\qquad$ df = 3 $\qquad$ p > .05

*Combined categories

TABLE 37

FREQUENCY OF RESPONDENTS BY LEVEL OF SOCIAL ADJUSTMENT
AND SOURCES OF FINANCIAL SUPPORT

| Social Adjustment | Sources of Financial Support | | | | | Total |
	Scholarship, Fellowship, of Grant	Loan	Home	Employment in U. S.	Others	
High	36	0	7	12	3	58
Low	39	2	9	4	4	58
Total	75	2	16	16	7	116

X^2 = 6.51   df = 4   p > .05
*X^2 = 5.37   df = 3   p > .05

*Combined categories

TABLE 38

FREQUENCY OF RESPONDENTS BY LEVEL OF ACADEMIC
ADJUSTMENT AND ACADEMIC DEGREE HELD

Academic Adjustment	Academic Degree		Total
	Bachelor's Degree	Master's Degree	
High	25	28	53
Low	25	25	50
Total	50	53	103

$X^2 = 0.08$ $df = 1$ $p > .05$
$*X^2 = 0.008$ $p > .05$

TABLE 39

FREQUENCY OF RESPONDENTS BY LEVEL OF PERSONAL
ADJUSTMENT AND ACADEMIC DEGREE HELD

Personal Adjustment	Academic Degree		Total
	Bachelor's Degree	Master's Degree	
High	19	35	54
Low	32	20	52
Total	51	55	106

$X^2 = 7.37$ $df = 1$ $p \lessapprox .01$
$*X^2 = 6.35$ $p < .05$

*Yates correction

TABLE 40

FREQUENCY OF RESPONDENTS BY LEVEL OF SOCIAL
ADJUSTMENT AND ACADEMIC DEGREE HELD

Social Adjustment	Academic Degree		Total
	Bachelor's Degree	Master's Degree	
High	23	30	53
Low	27	23	50
Total	50	53	103

$X^2 = 1.16$ $df = 1$ $p > .05$
$*X^2 = 0.77$ $p > .05$

TABLE 41

FREQUENCY OF RESPONDENTS BY LEVEL OF ACADEMIC
ADJUSTMENT AND WHETHER THE ACADEMIC DEGREE
EARNED IN UNITED STATES OR ELSEWHERE

Academic Adjustment	Degree Earned in United States or Elsewhere		Total
	U. S. Degree	Non U.S. Degree	
High	14	43	57
Low	24	34	58
Total	38	77	115

$X^2 = 3.68$ $df = 1$ $p > .05$
$*X^2 = 2.95$ $p > .05$

*Yates correction

TABLE 42

FREQUENCY OF RESPONDENTS BY LEVEL OF PERSONAL ADJUSTMENT
AND WHETHER THE ACADEMIC DEGREE EARNED
IN UNITED STATES OR ELSEWHERE

| Personal Adjustment | Degree Earned in United States or Elsewhere | | Total |
	U. S. Degree	Non U. S. Degree	
High	19	38	57
Low	17	40	57
Total	36	78	114

x^2 = 0.16   df = 1   p > .05
*x^2 = 0.04   p > .05

TABLE 43

FREQUENCY OF RESPONDENTS BY LEVEL OF SOCIAL ADJUSTMENT
AND WHETHER THE ACADEMIC DEGREE EARNED
IN UNITED STATES OR ELSEWHERE

| Social Adjustment | Degree Earned in United States or Elsewhere | | Total |
	U. S. Degree	Non U. S. Degree	
High	16	42	58
Low	17	40	57
Total	33	82	115

x^2 = 0.07   df = 1   p > .05
*x^2 = 0.00   p > .05

*Yates correction

TABLE 44

FREQUENCY OF RESPONDENTS BY LEVEL OF ACADEMIC
ADJUSTMENT AND HOME BACKGROUND

Academic Adjust-ment	Home Background			Total
	Lower Class	Middle Class	Upper Class	
High	1	45	11	57
Low	4	49	5	58
Total	5	94	16	115

X^2_2 = 4.21   df = 2   p > .05
*X^2_2 = 1.92   df = 1   p > .05

TABLE 45

FREQUENCY OF RESPONDENTS BY LEVEL OF PERSONAL
ADJUSTMENT AND HOME BACKGROUND

Personal Adjust-ment	Home Background			Total
	Lower Class	Middle Class	Upper Class	
High	1	48	9	58
Low	4	49	3	56
Total	5	97	12	114

X^2 = 4.78   df = 2   p > .05
*X^2 = 2.14   df = 1   p > .05

*Combined categories and Yates correction

TABLE 46

FREQUENCY OF RESPONDENTS BY LEVEL OF SOCIAL
ADJUSTMENT AND HOME BACKGROUND

| Social Adjust-ment | Home Background | | | Total |
	Lower Class	Middle Class	Upper Class	
High	2	45	10	57
Low	6	47	4	57
Total	8	92	14	114

$X^2 = 4.62$ df = 2   p > .05
$*X^2 = 2.04$ df = 1   p > .05

TABLE 47

FREQUENCY OF RESPONDENTS BY LEVEL OF ACADEMIC
ADJUSTMENT AND CAMPUS WHERE ENROLLED

| Academic Adjust-ment | Campus | | | | Total |
	Chapel Hill	Duke	Greens-boro	Raleigh	
High	13	11	0	34	58
Low	15	6	7	30	58
Total	28	17	7	64	116

$X^2 = 8.86$ df = 3   p < .05
$**X^2 = 2.91$ df = 2   p > .05

*Combined categories and Yates correction
**Combined categories

TABLE 48

FREQUENCY OF RESPONDENTS BY LEVEL OF PERSONAL
ADJUSTMENT AND CAMPUS WHERE ENROLLED

| Personal Adjust-ment | Campus | | | | Total |
	Chapel Hill	Duke	Greensboro	Raleigh	
High	13	13	3	29	58
Low	17	9	4	28	58
Total	30	22	7	57	116

$X^2_2 = 1.42$ df = 3   p > .05
$*X^2 = 1.42$ df = 2   p > .05

TABLE 49

FREQUENCY OF RESPONDENTS BY LEVEL OF SOCIAL
ADJUSTMENT AND CAMPUS WHERE ENROLLED

| Social Adjust-ment | Campus | | | | Total |
	Chapel Hill	Duke	Greensboro	Raleigh	
High	16	13	1	28	58
Low	16	12	3	27	58
Total	32	25	4	55	116

$X^2_2 = 1.06$ df = 3   p > .05
$*X^2 = .17$ df = 2   p > .05

*Combined categories

APPENDIX B

FOREIGN STUDENT PROBLEMS INVENTORY, LETTERS,

AND LIST OF CONSULTANTS

THE UNIVERSITY OF NORTH CAROLINA AT GREESNBORO

School of Education

Dear fellow foreign graduate student:

You would agree with me that foreign students face numerous problems during their study in the United States which impede their success. In many cases, the university authorities are unaware of these problems. The purpose of the proposed study is to identify these problems and to suggest possible solutions so that those foreign students who may come in the future may not have to face them. Your completion of the enclosed questionnaire would be an effort in this direction.

It is imperative that you be as frank and objective as possible in your responses. Your answers will be treated as confidential. You need not write your name in the question if you so desire.

For this common cause, may I request your assistance of completing the questionnaire and returning it to me in the self-addressed and stamped envelope at your earliest convenience. Needless to say, I will be extremely grateful to you for your kind help.

Sincerely yours,

Sarla Sharma
A foreign graduate student

PERSONAL DATA QUESTIONNAIRE

Please fill in the information:

1. Name:_____
      First   Middle   Last

2. Sex: Male_____ Female_____

3. Home country:_____

4. When did you come to the United States?_____

5. Your age when you came to the United States:_____

6. Marital Status: Single _____Married_____

   If married, is your family with you? Yes____ No_____

7. Did you participate in any formal orientation program
   about the United States in your country or in this
   country? Yes_____ No_____

8. What kind of housing accommodation do you have?

   a. University dormitory_____
   b. University apartment_____
   c. Private apartment or house_____
   d. Room in a house_____
   e. Other:_____

9. Indicate the broad area of your study:

   a. Agriculture_____   e. Medicine_____
   b. Biological Sciences___   f. Physical sciences____
   c. Education_____   g. Engineering_____
   d. Humanities_____   h. Social Sciences_____
                                  i. Other_____

10. Indicate the major source (more than 50 per cent) of
    your financial support:

    a. Scholarship, fellowship, or grant_____
    b. Loan_____
    c. Home_____
    d. Employment in the United States_____
    e. Other_____

11. Is your mother tongue English? Yes_____ No_____

12. How would you rate your competency in the use of English language when you came to the United States?

    a. Excellent_____   b. Good_____
    c. Fair_____   d. Poor_____

13. How was your preparation in the subject area to pursue your program of study in the United States?

    a. Excellent_____   b. Good_____
    c. Fair_____   d. Poor_____

14. Indicate the highest academic degree you now possess and the country you got it from:

	Degree	Country
a. Bachelor's	_____	_____
b. Master's	_____	_____
c. Doctor's	_____	_____
d. Other	_____	_____

15. Occupation of parents:

Father_____
Mother_____

16. Education of parents:

Father		Mother
_____	No formal school	_____
_____	Elementary	_____
_____	High School	_____
_____	Bachelor's degree	_____
_____	Master's degree	_____
_____	Doctor's degree	_____
_____	Other	_____

17. How would you rate the social status of your family in your country?

    a. Lower class _____
    b. Middle class_____
    c. Upper class_____

Foreign Students Problems Inventory

DIRECTIONS: This is a list of problems which foreign students often face while studying in the United States. Please read the list carefully and specify the problems that have caused or are causing you difficulty. Indicate the severity and the duration of each problem by placing a check mark on the appropriate space against each item.

	Severity			Duration		
	Great dif-fi-cul-ty	Some dif-fi-cul-ty	Lit-No tle diffi- dif-culty fi- culty	Tempo- rary (a se- mester)	Pro- longed (a year. or two)	Perma- nent (never ending)
1. Taking appropriate courses that satisfy your objectives	___	___	___ ___	___	___	___
2. Understanding lectures	___	___	___ ___	___	___	___
3. Understanding textbooks	___	___	___ ___	___	___	___
4. Participating in class discussion	___	___	___ ___	___	___	___
5. Taking notes in class	___	___	___ ___	___	___	___
6. Giving oral reports	___	___	___ ___	___	___	___
7. Preparing written reports	___	___	___ ___	___	___	___
8. Using library effectively	___	___	___ ___	___	___	___
9. Understanding American Educa- tional system.	___	___	___ ___	___	___	___
10. Understanding examination procedures.	___	___	___ ___	___	___	___
11. Getting adequate credit for academic work done outside the United States.	___	___	___ ___	___	___	___
12. Competing with American students for grades.	___	___	___ ___	___	___	___
13. Taking objective tests	___	___	___ ___	___	___	___
14. Writing essay type examinations	___	___	___ ___	___	___	___

		Great dif-fi-cul-ty	Some dif-fi-cul-ty	Lit-tle dif-fi-culty	No dif-fi-cul-ty	Tempo-rary (a se-mester	Pro-longed (a year or two)	Perma-nent (never ending)
15.	Taking standardized tests like Graduate Record Examination, Miller Analogy Test, and others	___	___	___	___	___	___	___
16.	Maintaining satisfactory academic record	___	___	___	___	___	___	___
17.	Having enough funds for school expenses.	___	___	___	___	___	___	___
18.	Getting dollar exchange from home government.	___	___	___	___	___	___	___
19.	Problems concerning immigration regulations	___	___	___	___	___	___	___
20.	Getting visa extended.	___	___	___	___	___	___	___
21.	Being permitted to work by the immigration office.	___	___	___	___	___	___	___
22.	Finding part-time work.	___	___	___	___	___	___	___
23.	Finding little time to do school work due to part-time employment.	___	___	___	___	___	___	___
24.	Finding adequate housing	___	___	___	___	___	___	___
25.	Living in university residence hall.	___	___	___	___	___	___	___
26.	Getting used to American Food	___	___	___	___	___	___	___
27.	Becoming ill frequently.	___	___	___	___	___	___	___
28.	Meeting medical expenses	___	___	___	___	___	___	___
29.	Experiencing racial discrimination	___	___	___	___	___	___	___
30.	Facilities related to your religious beliefs and practices	___	___	___	___	___	___	___
31.	Finding companionship with the opposite sex.	___	___	___	___	___	___	___
32.	Feeling homesick	___	___	___	___	___	___	___
33.	Being accepted in social or recreational groups away from campus	___	___	___	___	___	___	___

	Great dif-fi-cul-ty	Some dif-fi-cul-ty	Lit-tle dif-fi-culty	No dif-fi-cul-ty	Tempo rary (a se-mester	Pro-longed (a year or two)	Perma-nent (never ending
34. Feeling welcome at college functions	—	—	—	—	—	—	—
35. Being accepted in student groups on the campus	—	—	—	—	—	—	—
36. Making personal friends with American students	—	—	—	—	—	—	—
37. Becoming used to American social customs	—	—	—	—	—	—	—
38. Making personal friends with other foreign students	—	—	—	—	—	—	—
39. Participating freely in extra-curricular activities on the campus	—	—	—	—	—	—	—

40. What other problems have you experienced:

a._____ b._____ c._____
d._____ e._____ f._____

41. List three most troublesome problems you have faced as a student in the United States. Write them in the descending order of severity.

a._____

b._____

c._____

42. Suggest possible solutions to these three problems:

a._____

b._____

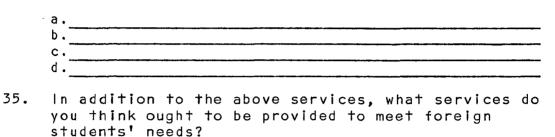c._____

Questionnaire Concerning Student Personnel Services

The following are the student personnel services generally provided by a university. Indicate your experience of these services at your institution.

	Most useful	Somewhat useful	Least useful	Unavailable
1. Sending of pre-orientation material to prospective students abroad.	____	____	____	____
2. Giving entrance examinations	____	____	____	____
3. Giving English proficiency tests	____	____	____	____
Acquainting foreign students with:				
4. Registration procedures	____	____	____	____
5. Library facilities	____	____	____	____
6. Types and locations of student personnel services available on the campus.	____	____	____	____
7. School rules and regulations	____	____	____	____
8. Community resources	____	____	____	____
9. Recreational facilities	____	____	____	____
10. Special English classes	____	____	____	____
11. Remedial reading and study clinic	____	____	____	____
12. Speech and hearing clinic.	____	____	____	____

		Most useful	Somewhat useful	Least useful	Unavailable
13.	Counseling services suggesting an individual program for each student based on his interests and needs	___	___	___	___
14.	Giving help in connection with passport and visa extensions	___	___	___	___
15.	Giving assistance with alien registration	___	___	___	___
16.	Helping secure permission to work from the immigration office.	___	___	___	___
17.	Helping locate housing accommodation	___	___	___	___
18.	Supervising off-campus housing accommodation	___	___	___	___
19.	Foreign student loan service	___	___	___	___
20.	Foreign student employment service	___	___	___	___
21.	Foreign student scholarship aids	___	___	___	___
22.	Psychological clinic	___	___	___	___
23.	Speaker's bureau	___	___	___	___
24.	Hospitality club	___	___	___	___
25.	Educational tours	___	___	___	___
26.	Health services	___	___	___	___
27.	Providing for religious discussions	___	___	___	___
28.	Providing for religious worship	___	___	___	___
29.	Foreign student center	___	___	___	___
30.	International house	___	___	___	___
31.	International club	___	___	___	___
32.	International festivals	___	___	___	___
33.	International student conferences	___	___	___	___

34. In your institution, there may be additional services available which are not included in this check list. Please indicate them below:

   a._____
   b._____
   c._____
   d._____

35. In addition to the above services, what services do you think ought to be provided to meet foreign students' needs?

   a._____
   b._____
   c._____
   d._____

36. Other comments:

Dear Fellow Foreign Graduate Student:

A Few weeks ago, I sent you a
questionnaire along with a self-
addressed stamped envelope. I am waiting
for the return of your completed question-
naire. I shall be extremely grateful to
you for your early response as it will
expedite my work.

Sincerely yours,

Sarla Sharma
School of Education
UNC at Greensboro 27412

THE UNIVERSITY OF NORTH CAROLINA

AT GREENSBORO

Dear

    I am a graduate student completing the doctoral pro-
gram in Counseling and Guidance at the University of North
Carolina at Greensboro. I am interested in conducting a
study in the area of academic, personal, and social adjust-
ment of foreign graduate students in the institutions of
higher learning in the State of North Carolina. Dr. Harold
J. Mahoney, Professor of Education, is Chairman of my
Doctoral Committee. He and other members of the Committee
support and encourage my interest in this area of investi-
gation. To the best of my knowledge, no such study has yet
been conducted in the State of North Carolina. In my judg-
ment, the findings of such a study would be of great value
to foreign students as well as their advisers.

    In order that I may initiate this study, I need to
communicate with foreign graduate students currently en-
rolled in your University. I would appreciate it, therefore,
if you would kindly forward to me a list of their names,
local addresses, and the countries they represent. I am
enclosing herewith a self-addressed, stamped return envelope
for your convenience.

    Last spring I had preliminary correspondence with you
in regard to my project. You were very gracious in your en-
couragement and positive response. Needless to say, I shall
be immensely grateful to you for your kind help. I will
send you a summary of the findings on the completion of the
study.

                      Sincerely yours,

Endorsed by:

Dr. Harold J. Mahoney
Professor of Education   Sarla Sharma
                  c/o Dr. Harold J. Mahoney

LIST OF CONSULTANTS

1. Dr. Avinash Desai
2. Mr. Humberto Diaz
3. Mr. Ahmed Hammza
4. Mr. Yuan-Huang Hsu
5. Mr. Kun Ha Kim
6. Mr. Cyril Nwosu
7. Dr. P. Suwattee
8. Dr. M. S. Venkataramani