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## **An Evaluation of Adequacy of Selected Services, Conditions and Opportunities in Meeting the Academic and Personal Needs of International Students at New York City Technical College.**

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AN EVALUATION OF ADEQUACY OF SELECTED SERVICES, CONDITIONS  
AND OPPORTUNITIES IN MEETING THE ACADEMIC AND PERSONAL  
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TECHNICAL COLLEGE

by

Ranjani H. Selvadurai

A Major Applied Research Project presented in  
partial fulfillment of the requirements  
for the degree of Doctor of Education

Nova University

October, 1987

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Abstract of a Major Applied Research Project Presented  
to Nova University in Partial Fulfillment of the  
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The purpose of the study was to evaluate the adequacy of selected services, conditions and opportunities to international students in the academic areas of; proficiency in the English language, academic advisement, instructional practices, format of examinations and grading practices as well as in areas; finances, cultural adjustment and personal problems. Attempt was also made to determine how international students differed in perceptions of the adequacy of services, conditions and opportunities offered to the international student clientele by the college based on seven personal characteristics.

The population surveyed consisted of international students (157) except the twenty students who participated

in establishing the reliability of the questionnaire, enrolled for Spring semester 1987. A survey was conducted in the classrooms via a questionnaire developed based on the results of a previous needs assessment study. An eighty-nine (89%) percent response was obtained from the survey.

Research questions were analysed using frequencies, mean weighted scores and percentage variances. A mean weighted score of less than 2.5 on a scale of excellent = 4, good = 3, fair = 2 and unsatisfactory = 1 was considered to indicate a need for improvement of services. Thirty-three null hypotheses were formulated, tested and analysed using Chi squares at .05 level of significance. The group/s in the variables contributing to the significant difference in respondents' opinions between or among the groups was determined by using percentage variances. Suggestions and recommendations made in the open-ended component of the questionnaire were summarized in four major areas.

In every category surveyed pertaining to academic services student expectations were not reached even to minimal levels. Two areas namely; assistance for financial aid and information regarding immigration and tax laws of the United States, attained minimal satisfactory levels in personal services. Statistical analysis indicated that groups in variables age, time lived in United States and type of financial support did not differ significantly

between or among the groups pertaining to academic and personal services for international students provided by the college. However, a significant difference in the respondents' opinions between or among groups regarding serving the academic needs of international students by the college was seen in the variables sex, national origin and native language. Group I (males) indicating adequacy of services and Group III (Middle Eastern/Asian) indicating inadequacy of services; Group II (Spanish/French) and Group V (Other) indicating adequacy of services and Group III (Hindi/Arabic) and Group IV (Chinese) indicating inadequacy of services respectively, contributed to the significant difference in respondents opinions.

In reference to personal services, a significant difference in respondents' opinions in serving the personal needs of international students by the college, was seen between or among the groups in the variables, proficiency in reading of English, proficiency of speaking of English and native language. The groups contributing to the significant difference of respondents' opinions were, Group II (those good in reading of English) showing inadequacy of services, Group I (those excellent in reading of English) indicating inadequacy of services, Group IV (those poor in speaking English) indicating adequacy of services and Group I (those with excellent level of speaking in English

indicating inadequacy of services; Group II (Spanish/French) and Group IV (Chinese) indicating adequacy of services and Group IV (Chinese) showing inadequacy of services respectively.

Based on the findings of the study a plan was developed for achieving a desired change in serving the academic and personal needs of international students at New York City Technical College. Reexamination of the admission policies with reference to proficiency in English and addition of more sections in the ESL Program were also recommended. It was further recommended that a Foreign Students Advisors Office be established at the college and to tap the experiences and expertise of the international faculty and those of National Association for Foreign Student Affairs. The establishment of an Orientation Program, endeavors for involvement of international students in the community, mainstreaming the international students and internationalization of some programs at New York City Technical College were also recommended.

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## Chapter 1

### INTRODUCTION

International studies were first introduced into the American higher education system due to the impact of societal factors and not because institutions deemed these studies to be inherently valuable (Obong, 1984). There are many reasons why administrators in colleges and universities as well as those in governmental agencies and private organizations welcome international students and scholars. They express a belief in the universal value of education and seek to further international understanding and good will through the dissemination of knowledge. Proponents of higher education recognize that education is not only a means of permitting students to pursue academic and personal goals, but also an instrument in the economic, social and political development of emerging countries (Fersh, 1981). In addition, international students are admitted to colleges and universities in United States to offset the decline in enrollment (Edles, 1980).

Within the past decade there has been a steady increase in international involvement by United States junior and community colleges (Fersh, 1981). International students are considered a source of diversity, enlightenment

and revenue. Educators at colleges are participating in activities designed to increase awareness and understanding of other countries on the part of students, faculty and the community (Dzierlenga, 1981). Faculty and student exchange programs, foreign language competency requirements, cooperative relationships with foreign institutions and internationally focused curriculum offerings exemplify the interest in internationalizing the community college. International students bring with them special needs; and it is the responsibility of institutions to adequately serve these needs (Fersh, 1981).

#### Statement of the Problem

The increase in enrollment of international students has been evident throughout the years at New York City Technical College. This increase in enrollment has been basically attributed to the diversity of curricula, especially in the technologies offered at the college and the comparatively low tuition. Although throughout the years this trend had prevailed, it has been evident that the problems of this sector of the student population were accentuated at New York City Technical College. Hence, this study was undertaken to determine the adequacy of services, opportunities and conditions in satisfying the academic and personal needs of international students at New York City Technical College.

### Background and Significance

The value of diversified and extended post-secondary education to those who work to solve international problems has been reflected by the increasing number of international students in the United States. Within the last decade there has been a steady increase in international involvement by community colleges (Andrews, 1984). This has been represented through technical assistance, active encouragement of enrollment of international students, sponsorship of travel programs, revision of curricula and membership in consortia for international students (Fersh, 1981). Based on studies conducted, members of the Community/Junior College Committee of the National Association for Foreign Student Affairs (NAFSA), had substantiated the impression that international students are enrolling in community and junior colleges in rapidly growing numbers (Diener, 1980).

The primary mission of New York City Technical College is to meet the needs of its various urban constituencies through rich and diversified curricula which emphasize career education. With the advent of the open admissions policy the college has extended its horizons in serving a more global society by welcoming foreign students. During the past ten years there has been a steady increase in international involvement by community and technical colleges. New York City Technical College, originally called

New York City Community College has attracted foreign students throughout the years. This has been attributed to its location, diversity of curricula and low tuition. With the change of its name to an urban technical college, and the addition of many programs in the technologies, the institution has further attracted international students especially from Middle Eastern countries.

The international students at New York City Technical College are required to pay a higher tuition fee than resident students. Due to fiscal and federal assistance constraints, international student waivers for tuition have also been removed at the institution. Although approximately 150 to 175 students from different countries have been enrolled at the college per semester, to date a full-time Foreign Student Advisor has not been appointed. The consensus of the international student clientele and some of the faculty is that administrators of the college have the same obligation toward international students as they do to domestic students. Therefore, the sensitivity towards academic and personal needs of international students at the college should be consciously increased.

In a previous study on international students at New York City Technical College, Selvadurai (1984) identified the five most important academic and three most important personal needs of international students enrolled at the institution.

The most important academic needs of international students identified in the previous study were:

1. To increase proficiency in spoken and written English.
2. To understand the academic requirements of the college.
3. To adjust to instructional practices of the college.
4. To understand the format of examinations.
5. To understand grading practices adopted by the college.

The three personal needs identified as most important were:

1. To ameliorate financial problems.
2. To understand and adjust to cultural differences.
3. To obtain adequate personal counseling.

The purpose of the study was to determine the adequacy of selected services, opportunities and conditions at New York City Technical College in satisfying the needs of its international student clientele. The services, opportunities and conditions offered by the college; for improvement of proficiency in English, to secure adequate academic advisement, to obtain an understanding of the instructional delivery system, to follow the format of examinations and grading practices of the institution were evaluated. The services provided to help alleviate financial

problems, overcome cultural differences and receive adequate personal counseling were also evaluated in the study. Differences in student perceptions of the adequacy of college services on the basis of age, sex, time lived in the United States, level of proficiency in English, country of national origin, native language and source of financial support were determined. A plan to make appropriate changes to ameliorate the problems of international students at the college and seek better avenues to cater to these needs was developed based on the findings of the study.

#### Research Questions and Hypotheses

The basic research questions addressed in the study were as follows:

1. Does New York City Technical College provide adequate services, opportunities and conditions to satisfy the academic needs of international students in regard to; proficiency in English language, academic advisement, instructional practices, format of examinations and grading practices?
2. Does New York City Technical College provide adequate services, opportunities and conditions to satisfy the personal needs of international students in regard to; finances, cultural adjustment and personal problems?



An attempt was also made in the study to determine how international students differed in their perceptions of the adequacy of college services, opportunities and conditions to international students based on the following characteristics:

1. Age
2. Sex
3. Time lived in the United States
4. Level of proficiency in English
5. National origin
6. Native language
7. Type of financial support

In addition, suggestions for improving services, opportunities and conditions for international students were requested from the respondents. The null hypotheses tested each based on the variables age, sex, time lived in the United States, level of proficiency in English, national origin, native language and type of financial support were:

$1H_0$ : Perceptions of international students at New York City Technical College do not differ concerning services for improvement of proficiency in English.

$2H_0$ : Perceptions of international students at New York City Technical College do not differ in reference to services provided by the ESL Program.

- 3H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding consideration, understanding and patience of instructors towards deficiencies in English.
- 4H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ in reference to cooperation extended by American students towards improvement of spoken English.
- 5H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding assistance provided through academic counseling for curriculum programming.
- 6H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ in reference to orientation to the academic setting provided by the college.
- 7H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ concerning availability and cooperation of academic advisors.
- 8H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding academic advisement provided for transfer into four-year programs.

- 9H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding classroom atmosphere and format of instruction to facilitate learning for students with a foreign educational background.
- 10H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ concerning type of examinations given at the college for students with a foreign educational background.
- 11H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding grading practices at the college for students with a foreign educational background.
- 12H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ concerning the relevance of curricula at the college to job needs in the home countries.
- 13H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding rapport with faculty.
- 14H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ in reference to assistance provided through tutoring.

- 15H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ in reference to opportunities available to to discuss course-work with American students and peers.
- 16H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding assistance provided by the college in obtaining financial aid.
- 17H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding assistance provided by the college in securing work-permits and part-time jobs.
- 18H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding policies and procedures of the college on tuition fees.
- 19H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding policies and procedures of student activity fees.
- 20H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ in reference to information provided by the college on cost of tuition.

- 21H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding information provided by the college on cost of personal expenses.
- 22H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ concerning information provided by the college on cost of housing.
- 23H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ concerning information provided by the college on cost of health care.
- 24H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding the availability of extracurricular activities at the college to learn culture and customs of United States.
- 25H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding assistance provided by the college to encourage the introduction to and involvement in the community.
- 26H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding opportunities for cross-cultural activities in the form of seminars and clubs.

- 27H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ in reference to respect for individual customs, culture and beliefs by the college community.
- 28H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ concerning personal counseling provided by the college with reference to immigration and tax laws of the United States.
- 29H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding personal counseling extended by the college in health care.
- 30H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ in reference to personal counseling in housing extended by the college.
- 31H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding personal counseling provided by the college in child care.
- 32H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding the experience and knowledge of personal counselors.

33H<sub>0</sub>: Perceptions of international students at New York City Technical College do not differ regarding personal counseling provided by the college to adapt to living in New York City.

#### Definition of Terms

The following operational definitions were provided for use of terms that were unique to the present study.

Academic Needs: Needs in improving; proficiency in English, academic advisement, understanding format of examinations and grading practices of New York City Technical College.

ESL Program: English as a Second Language Program at New York City Technical College which is mandated for students with a foreign educational background, who are unsuccessful at the placement tests in English at New York City Technical College.

Financial Support: Funds in dollars available to international students for tuition and personal expenses. The categories of financial support in the study were support from home government, sponsorship by parents and from personal savings.

International Students: Students with visa status designated as S and T at New York City Technical College.

Personal Needs: Needs in reference to finances, cultural adjustment and personal problems at New York City Technical College.

S and T Visas: Student and Temporary visas respectively for use in United States by international students.

#### Limitations of the Study

A study involving human behavior inevitably has certain limitations. A limitation of the study was that only adequacy of selected services, opportunities and conditions in satisfying selected academic and personal needs of international students at New York City Technical College were evaluated. These services may be significantly different at other two-year and technical colleges. The findings of the study should not be generalized, as the needs of international students at other institutions may differ significantly.

The content and scope of the questionnaire items were limited to feedback from twenty-five students from the target population in a previous study. Another sample of the target population could possibly have prioritized different academic and personal needs. The panel of experts, input and recommendations affecting the questionnaire were limited by the range of experience and expertise of its members. Although there may be other academic and non-academic needs of international students, the study was limited to evaluating the adequacy of services, opportunities and conditions pertaining to five academic and three personal needs of international students at New York City Technical College.



### Basic Assumptions

In the present study it was assumed that the utilization of a sample from the target population in designing the questionnaire increased the validity of the instrument. Further, it was assumed that a questionnaire resulting from the use of opinions from a sample of the target population was more valid than a standardized questionnaire. In the present study it was assumed that services provided by colleges are based on the needs of students, and that quality and accessibility of these services have some influence on student evaluation of the college or university they attend. It was also assumed in the present study that international students at New York City Technical College based responses to items of the questionnaire on accurate recall of their experiences and were frank and candid in responding.

## Chapter 2

### REVIEW OF RELATED LITERATURE

The migration of students from one country to another for educational purposes is a phenomenon which has a long history. However, it was not until end of World War II that many nations began to push education as a national priority with a conscious intent to strengthen the economic growth, maintain political stability and to increase national prestige. Throughout the years United States has emerged as a major host nation to international students. This responsibility in the development of an international community via the medium of education has resulted in the expansion of international dimensions of American higher education.

#### Serving the Needs of International Students

The population of international students has grown substantially with over 2,500 institutions today enrolling almost 300,000 students. Although the advantages of educational interchange would be considered of value in public policy making, there remain differences of opinion about institutional responsibilities to foreign students and the students' obligations in return (Dalili, 1986).

Kincaid (1951) based on studies on seven campuses in California reports that international students at these institutions are satisfied with services provided to them in reference to English language, finances, housing, course of study and grades. On these campuses the areas of deficiency in serving the needs of international students are found to be mainly pertaining to extracurricular activities. Moore (1965) states that international students have concerns with regard to differences in the educational systems, adjustment to the American culture, academic performance, inadequate resources and deficiencies in the English language.

In congruent with views of Moore (1965), Rising and Coop (1968) were of opinion that lack of proficiency in English language is an impediment to the academic success of most international students in United States. It was also identified that problems associated with adjustment to American diet patterns and etiquette by international students. Lack of good academic advice, financial difficulties, insufficient orientation and lack of social and personal guidance are found to be major problems of international students in United States (Ursua, 1969). Shepard (1970) strongly emphasizes the inadequacies of pre-departure information and on campus orientation to most international students in United States.

It is difficult to draw generalizations about the experiences of international students or of schools enrolling them. International students often place greater emphasis on academic and professional goals than on non-academic matters. Those enrolled in junior and community colleges frequently rate themselves lower in social and academic adjustment than do their counterparts in four-year colleges (Lee et al., 1981). The need for assistance in orientation to the academic setting and in the use of English language has been emphasized by international students in two-year colleges (Hagey and Hagey, 1972; Kurtz, 1981; Selvadurai, 1984).

Over the decades studies have been conducted by researchers to identify needs of international students and the services available for these students at institutions of higher learning. An important barrier cited in literature for international students to overcome is language. A majority of international students come from countries where English is not the native language. The language problem recently has been highlighted by the action of the Iranian government in abolishing the requirement of a language proficiency examination, before leaving the country for students who intend to pursue studies abroad. This action in turn has an impact on institutions of higher education in United States that enroll such international students.

Johnson (1971), based on a study on foreign students at the University of Tennessee claims proficiency in English language is the most frequent problem encountered by students. Financial difficulties, separation from family and homesickness also loom high as problems identified while contact with home country and discrimination are less frequently mentioned problems. In concert with the findings of Johnson (1971), Breuder (1971) reports that international students in colleges in the State of Florida identified amelioration of financial problems as an important need.

Win (1971), based on a study on Indian and Japanese students at the University of Southern California contends that academic problems followed by problems pertaining to finances, housing, religion and interpersonal relationships are most frequently identified by international students. Moghrabi (1972), asserts that international students at the University of Nebraska find proficiency in English as the most common problem and that emotional anxiety among foreign students is commonly due to a lack of social life and linguistic problems. Moghrabi (1972), further indicates that financial problems are found to be a concern of a majority of international students at the University of Nebraska. Gabriel (1973), attributes deficiencies in proficiency in the English language of international students to difficulties in understanding lectures, expressing ideas and writing reports and that these problems

however become less important for international students after the first year of academic sojourn.

Han (1975), reports from studies on international students at the University of Southern California that English language, finances and making friendships with American students to be the most serious problems encountered by these students. Collins (1976), describes that the major problems in order of importance for international students at Howard University are in the areas of social and recreational activities, finances, living conditions, employment, home and family, personal and psychological relations, courtship, sex and marriage. Stafford (1978), finds that the major problems of international students at the University of North Carolina pertained to adjustment, homesickness, living conditions, social relationships with the opposite sex, proficiency in English language and finances. Von Dorpowski (1977), perceives that the most crucial problems for Oriental, Latin American and Middle-Eastern students in United States are financial support and lack of proficiency in English. English language deficiencies are most predominant among Chinese students (Perkins, 1977). In a study of Iranian students at the State University of Oklahoma, Moftakhar (1976) states that several problems are created for international students due to inaccurate information about colleges prior to arrival in United States.

De Perez and Maria (1985), based on studies on Spanish speaking international students at the University of Cincinnati report that the greatest adjustment problems result from the lack of social contact with Americans. Some differences in adjustment problems are attributed to age, length of time in United States and gender of students. Language has become the first academic barrier especially for international students in two-year colleges in United States (Hagey and Hagey, 1974; Eddy, 1979; and Kurtz, 1981). It is their contention that although most international students are successful in passing a Standardized English Proficiency Examination, they have difficulties in functioning satisfactorily in an academic setting.

The National Association for Foreign Student Affairs (1979:10) cautions on the reliability of Standardized English Proficiency Examinations with reference to international students by stating:

It should be recognized that Standardized Tests are useful indicators, but they are less reliable and valid for students from other cultural and linguistic backgrounds than for students of United States.

It is therefore, important for international students to be confident in language skills to interact with native speakers and compete in an academic program. Proficiency in English is a strong predictor of satisfaction in progress toward achieving both primary and secondary goals of international students (Lee et al., 1981). It is essential

for personnel in sponsoring agencies and those in colleges of higher education to provide opportunities for international students to participate in intensive English language and pre-academic training programs.

International students are often faced with difficulties in adjusting to the style of American education. A majority of these students have received education under the British or French Systems and have not been accustomed to frequent testing, nor to the multiple choice format of examinations usually adopted in United States. Furthermore, international students have been conditioned to listen to instructors rather than speak in class. Often these students are taken off guard by the more collegial relationships between students and faculty in United States (IIE, 1978; Garcia, 1986). Degree requirements, course structure, course content and academic standards may be quite different in United States from those in the home country. Poor academic performance and frequent changing of major fields of study have been attributed to inadequate and poor advising (Hagey and Hagey 1974; Eddy, 1979; Craig, 1981; Wakim, 1986). Based on studies on adjustment problems of international students in selected colleges in North Carolina, Shama (1978) indicates problems associated in understanding lectures, taking notes, participating in class and peer discussions and in writing reports.



With reference to the evaluation process, foreign students are often not accustomed to frequent testing and have only experienced taking essay oriented examinations. The quick thinking multiple choice and short answer examinations are reported to often create psychological barriers and tension among these students. Course structure, course content and academic standards have been identified as impediments to achieving academic goals of international students in United States (Eddy, 1979; Stafford, 1978; Wray, 1981; Craig, 1981).

The relevance of American curricula to international students' academic needs has also been argued from several perspectives. Some have argued that international students, although certainly welcome to study in the United States should not expect the system to make accommodations for them. On the other hand, those who support a policy of curriculum modification have argued that an institution with a relatively high enrollment of international students has obligations towards curriculum modification. Without proper counseling international students have entered inappropriate programs and have been placed in two-year institutions when they actually belonged in four-year colleges and vice versa. Wray (1981), stresses the importance of adequate counseling being initiated by sponsoring agencies before the students arrive in the United States. Poor academic performance, changing of majors and complications involved in the

transfer process from two-year to four-year programs have been attributed to poor academic counseling. Additionally, based on studies on international students at State University of Oregon Hagey and Hagey (1974), identify poor academic advisement as a major contributor for failure to graduate on schedule. These findings are substantiated by those of Rising and Coop (1968), Win (1971) and Wray (1981).

Academic advisement which may not be a vital factor to the academic success of a native student is crucial to that of a foreign student (NAFSA, 1979). Hence, the progress of international students should be carefully supervised throughout the academic sojourn. The administrators at Rockland County Community College provide such a format; each international student is under the personal guidance of a faculty member or mentor. This mentor who has knowledge and experience pertaining to the needs of international students, maintains a close contact with the student and aids in designing a course of study related to interests and career needs of the student.

Financial difficulties loom high among the problems of international students and employment is nearly impossible for them due to restrictive immigration laws. Although some students obtain work permits, these are generally for off campus jobs that often lead to competition with native students (Eddy, 1979; Mukolu, 1984; Selvadurai, 1984; Obong, 1984). The percentage of international students

in United States with any form of financial assistance is less than those who come supported by outside agencies (NAFSA, 1979). Knowles (1977), reports that the largest amount of financial support given to international students in United States come from the institutions where they study. For graduate students, this assistance usually takes the form of Teaching and Research Fellowships. Students who receive some form of financial support still need additional funds to remain in the United States.

Admission of foreign students into American colleges and universities is contingent upon adequate financing. Although the financial commitment of American colleges and universities to the support of international students is impressive, financial problems are often cited by international students attending these institutions. Reduced financial assistance to international students has accentuated due to two reasons; namely as a result of the decrease in assistance provided by the federal government, private and international agencies and by increasing pressures placed on these institutions by minority group students who often need financial assistance. As a result the administrators of colleges face the necessity of reducing financial commitment to foreign students.

The financial needs of students especially those of international students present major problems with regard to achieving their educational goals. The needs sometimes

become so severe that the effects are usually manifested in social, psychological and physiological behavior of students. In fact there is substantial evidence that financial problems become more important as the school year progresses (Giammarella, 1986).

Sponsorship sources have been studied in relation to academic performance. According to Hountra (1956), sponsored students have better academic performance than self-supporting students. This view is further supported by Pavri (1963) and Chongolee (1978), who emphasize that students who had some kind of financial support performed better than self-supporting students. Contrary to these views Ohuche (1967), found no difference in academic performance between Nigerian students who had government scholarships and those who were self-supportive. Pruitt (1977), found that sponsorship is related to social adjustment of international students to the United States environment and that government sponsored students have better adjustment than those who were self-supporting. On the contrary Hull (1978), noted that self-supporting students were more likely to interact with United States nationals.

Acculturation is the adoption of another's culture as a result of continued contact with it. Acculturation for many international students involves the process of orientation to a new cultural environment and adjustment to different social patterns which present great difficulties

to these students (Knowles, 1977). Understanding American culture and adjusting to the climate have created some problems for international students (Wray, 1981). These students are often unaware of cultural differences in building friendships and dating etiquette. Prejudices, impatience, and religious and political attitudes on the part of both native and foreign students often interfere with socialization. Students of some nationalities experience greater and different adaptation difficulties than others (Lee et al., 1981).

In the analysis of migration assimilation and adjustment patterns of Puerto Rican students in New York City Glazer (1963), notes that family structure, housing, religion, social habits, sexual mores and relationships with other ethnic groups constituted the major problems of acculturation. Essien (1975), asserts that social relations of male Nigerian students with black and white students in the United States indicate that a majority of Nigerian students did not interact adequately with white Americans in various social situations, but interacted with black Americans. Tajfel and Dawson (1968), emphasize that racial discrimination in American colleges and universities is clear. In addition, the experience of a foreign student is believed to increase race and culture discrimination because the international students are more likely to have fellow countrymen as their closest friends.

Tajfel and Dawson (1968), further emphasize that international students who claim discrimination are less likely to be satisfied with academic performance in United States and are less likely to recommend American education to their countrymen. Johnson (1971), suggests that international students are more student than foreign; hence similar services should be extended to both native and international students.

Mortimer and Byce-Laporte (1981), emphasize the need for social contact for international students and found that race has become an exceedingly important factor in the social adjustment process of international students.

According to Craig (1981), one of the major factors contributing to difficulties in acculturation is the student's legal status as an alien implying to most native peers that the student is transient in American society. Understanding, American behavior and adjusting to it may be a difficult task to these students. Socialization in a new culture is not a continuation of the developmental process initiated in the home country (Eddy, 1979).

Personal counseling is a need of international students that appear prominently in studies pertaining to international students. Han (1975), indicates the need for assistance to international students in housing, health services, child care and religious services varied depending on the geographic location the international students select

to pursue their studies. Lack of personal guidance is a major problem for international students to encounter in United States (Ursua, 1969). Shama (1978), is of opinion that homesickness, housing, food patterns and companionship to be the greatest problems of international students in United States.

Administrators in institutions of higher learning have the responsibility to assist students become effective members of society and to realize that each student has specific needs, aspirations, purposes and goals, particular limitations and background experiences. For student services to be effective and useful they must become an integral part of the total educational program.

Services for students include not only the academic activities of the classroom, but also all other activities that provide for growth and development in social, emotional, mental and physical areas. Such services provided should be grounded in a systematic knowledge of psychology especially on the study of motivation and structure of personality. The student must be assisted not only in learning how to meet problems more effectively, but also to develop an attitude of acceptance in which to feel deeply and more truly satisfied with the adjustment. According to Wellman, (1975), the need for a systematic approach to the development and evaluation of student service programs has been recognized for many years.

Satisfaction with student services in an institution of higher education depends on the effectiveness of the Program and how well it is supported. Effective student services make a difference in student performance and behavior (Misner, 1963). Le Francois (1972), proposes the notion that needs are states of deficiency or lack which give rise to drives which in turn will move the organism towards activities that will reduce the needs. The needs can be identified through the techniques of needs assessment.

It is the realization of educators in colleges and universities that realistic approaches be made in satisfying student needs especially those of the international student clientele. In many universities the Division of Student Affairs offers international students advisory services on non-academic needs such as immigration information, housing, social and personal matters. The Student Crisis Center provides services in order to help students who may experience pressures that affect academic work, have difficulties in adjusting to campus environment or have personal problems which may interfere with or hinder successful work at the college (Bille, 1978).

Efforts have been made to access the services available to international students. Wilkening (1965), made efforts to determine the appropriateness of services available to international students in culture and extension education in selected institutions.



Ninety-three percent of the students surveyed was satisfied with the progress made toward stated objectives for studies. Trabue (1968), indicates that the primary concern of student services at institutions should not rest only on academic and intellectual development of the student; rather it should also include the total personal growth and development of the student.

Student personnel services in higher education need to be especially perceptive to the environment from which the students arrive, focussing attention on unique needs and problems (Ralph et al., 1965). As educators in colleges emphasize academic excellence, they become obliged to also recognize the special psychosocial problems of the student population. In light of this, the first step of student services should be to take measures to establish special programs for students and the second step should be to make endeavors to plan these programs to meet the needs of students. International student service programs in educational institutions should focus on the students' subjective interpretation of experiences, needs, problems and on the institutional values, expectations and provisions that create the unique educational environment of the student (Ralph et al., 1965). Hagey (1968), finds that most of the non-academic needs of international students are not taken into consideration by institutions in which they are enrolled.

Davis and Hanson (1961), are of opinion that most international students especially those from African countries are satisfied with the services pertaining to academic areas. However, these students express inadequacies in services extended to them in non-academic areas such as living conditions, finances, social relations and acculturation. It is the contention of a majority of students that problems could be reduced or eliminated if effective services are available to serve these needs. Based on comparative studies of needs of American and international students Tan (1967) and Culha (1974) indicate that most needs of both groups of students were similar. However, an obvious difference between the two groups relate to the security scale which has its basis in culture and guidance services. The international students further sought assistance in alleviating language deficiencies.

Das (1979), is of the opinion that personal and social needs of foreign students are often neglected. Johnson (1971), reports the concern of institutions of higher education of providing effective services in reference to food, placement and counseling especially to international students. Nelson (1972), stresses the importance for active involvement of members of the community and international students in social activities. This could result in good public relations between the students and the local community. Student services can serve

the foreign students in terms of social relationships by allowing them to explore feelings and stimulate behavior which could lead to positive adjustment. Garcia (1986), based on the studies conducted at the University of Pittsburgh affirms the services that need most attention for foreign students are library services and help in understanding lecture format and grading. Fapohunda (1976), contends that present foreign students need more assistance in services from colleges than their predecessors. The planning of programs for international students require sensitivity and skill (Lee et al., 1981). They stress that foreign students be given an early and accurate idea about their options. Maghrabi (1972), states that colleges should be more concerned about services such as food, placement, housing and counseling to assist the increasing number of the international student clientele. Brown (1978), indicates that international student services in colleges should be extended mainly in the areas of financial aid.

Most international students from rural settings meet different life situations in urban settings and they experience more genuine threats to their existence, and thus express behaviorally a number of safety needs. International students greatly appreciate efforts to assure them that their safety is guaranteed at the institutions they attend. One of the ways of demonstrating this is to provide adequate housing arrangements for these students.

Most international students seem happier living in university residence hall rather than in a roominghouse. This however, is not common for all international students. Some prefer to live in apartments, fraternities or sorority houses or board with families in the local community. The international students' housing arrangement have a strong bearing on the quality of the adjustment to academic and social life (NAFSA, 1979).

International students frequently become dissatisfied and alienated because of a feeling emphasizing a lack of belongingness. Institutions of higher education should assume the obligation of creating and maintaining a wholesome atmosphere that will create a mutual understanding among international and non-international students by establishing strong international services. This could be accomplished through campus friend programs, international clubs, international coffee hours and social events with members in the community. Adams (1973), is of opinion that many unsatisfied needs tend to negatively affect the personalities of some international students which in turn lead to feelings of inadequacies. He further affirms that failure to meet certain biological and psychological needs of international students often lead to detrimental effects on academic performance.

In an ideal system of services, the foreign student's program begins overseas with accurate and comprehensive

information regarding the institution, its policies and regulations (NAFSA, 1979). The personnel responsible for the admission of foreign students should seek information with regard to the candidate's intellectual capabilities and emotional adaptability. Assessment should be made of what the institution is able to offer in terms of the foreign student's needs. Wakim (1986), studied the relevance of academic programs to serve the needs of international students at Boston University. Based on these findings Wakim (1986), contends that prior preparation of students while in the home country is an important factor that affects the academic pursuit at a foreign university.

Competency in English must not be the sole determining criterion for admission. However, sufficient training in English must be offered to those who need it. An essential service for international students is the establishment of a variety of intensive English courses to be taken before or concurrently with the academic study. Most educators especially those in community and junior colleges are making endeavors to improve this service through English as a Second Language (ESL) Programs. Many institutions which enroll relatively few foreign students would not find it economically feasible to provide such programs. For these reasons some groups of colleges have already joined and established language training programs in an endeavor to effectively service foreign students.

## Chapter 3

### PROCEDURES AND METHODOLOGY

The study, descriptive in nature, was based on the processes of both needs assessment and evaluation. A survey was conducted to determine the perceptions of international students of the adequacy of selected services, opportunities and conditions in satisfying their needs by New York City Technical College. In addition, an attempt was made to determine the extent international students differed in perceptions of the adequacy of college services on the basis of selected personal characteristics. Based on the findings of the survey a plan was developed to accomplish changes desired in college services in more effectively addressing the needs of international students at New York City Technical College.

#### Population

The population surveyed consisted of international students (157) in different ethnic groups with Student (S) and Temporary (T) visa classification, except the twenty students who participated in testing the reliability of the questionnaire. The international students enrolled at the college for Spring 1987 semester were surveyed in the study.

### Instrumentation

Five academic and three personal needs of international students at New York City Technical College were identified in a previous study by Selvadurai (1984). On the basis of these needs a questionnaire was developed for use in the study to determine the extent to which services, opportunities and conditions at New York City Technical College are conducive to the satisfaction of these needs (Appendix B). Demographic data were acquired through the use of a personal data sheet incorporated as an addendum to the questionnaire. The instrument was validated for content, readability and style by a panel of five judges consisting of three faculty members, and the Foreign Student Advisors of two major educational institutions in the New York area. In addition, the questionnaire was presented to a Research Specialist at New York City Technical College for examination and refinement of the instrument. The questionnaire was administered to twenty international students at New York City Technical College and the test-retest method was applied and the reliability of the instrument was ascertained.

The first fifteen items of the questionnaire (Appendix B ) were designed to obtain information from the respondents regarding the extent to which services, opportunities and conditions at New York City Technical

College satisfy five academic needs. The next eighteen items of the questionnaire (Appendix B) were designed to obtain information regarding the extent to which services, opportunities and conditions at New York City Technical College satisfy three selected personal needs. The information collected from the completed personal data sheet (Appendix B) in conjunction with the information obtained from the questionnaire were used to determine how international students at New York City Technical College differed in perceptions of the adequacy of college services on the basis of the following characteristics:

1. Age
2. Sex
3. Time lived in United States
4. Level of proficiency in English
5. National origin
6. Native language

The open-ended component of the questionnaire was designed to gather suggestions, criticisms and recommendations for the improvement of college services with an intent to more effectively satisfy the needs of the international student clientele.

#### Collection of Data

A computer printout of names of international students with Student (S) and Temporary (T) classification



including a listing of class schedules for Spring 1987 was obtained from the office of the registrar of the college. As a large proportion of the international student clientele is mandated to enroll in the English as a Second Language Program (ESL Program), the coordinator of this program was contacted and arrangements were made to conduct the survey in the ESL classrooms during Spring 1987. International students who were not enrolled in the ESL Program were surveyed in the classrooms according to class schedules.

Questionnaires, each with a cover letter (Appendix A), were distributed by instructors to foreign students and the survey was conducted in the classrooms. The general tendency for a low response rate in the mail survey was reduced in the present study by conducting the survey in the classrooms.

#### Treatment and Analysis of Data

Responses to each item related to research questions 1 and 2 were tallied based on a four point Likert scale. A score scale of excellent = 4, good = 3, fair = 2 and unsatisfactory = 1 was used. Frequencies of ratings and mean weighted scores of responses regarding services, conditions and opportunities in satisfying the academic needs and those relating to services, conditions and opportunities in satisfying the personal needs of international students were calculated and tabulated separately. A mean weighted score

of less than 2.5 on a scale of 4 to 1 was considered to indicate a need for improvement of services, opportunities, and conditions to international students.

Null hypotheses were tested using Chi squares at .05 alpha for groups in each variable. The variables were:

1. Age

Group I - 17 to 22 years

Group II - 23 to 29 years

Group III - 30 years and over

2. Sex

Group I - Male

Group II - Female

3. Time lived in United States

Group I - 1 to 2 years

Group II - 3 years or more

4. Level of Proficiency in English

a. Reading

Group I - Excellent

Group II - Good

Group III - Fair

Group IV - Poor

b. Writing

Group I - Excellent

Group II - Good

Group III - Fair

Group IV - Poor

## c. Speaking

Group I - Excellent

Group II - Good

Group III - Fair

Group IV - Poor

5. National Origin

Group I - European

Group II - Latin American/Caribbean

Group III - Middle Eastern/Asian

Group IV - Oriental

Group V - Other

6. Native Language

Group I - English

Group II - Spanish or French

Group III - Hindi or Arabic

Group IV - Chinese

Group V - Other

7. Type of Financial Support

Group I - Sponsored by Home Government

Group II - Sponsored by Parents

Group III - From Personal Savings

The completed questionnaires were separated into groups in each variable and the responses were tallied for each question. The number of respondents in each group was recorded and the Chi square for groups per question was calculated. The process was repeated for each variable. The

calculated Chi square value was compared to the critical Chi square value at .05 alpha for groups in each variable per question to ascertain significance or non-significance. Acceptance or rejection of the null hypotheses pertaining to the academic needs and that of personal needs in each variable were tabulated separately.

The rejected null hypotheses in each variable pertaining to research questions 1 and 2 were further analysed using percentages to determine which group/s in the variable contributed to the significant difference in the respondents' opinions between or among the groups. For each rejected null hypothesis, the percentage of each group in the population, the percentage of responses of adequacy of services (with ratings excellent and good) and that of inadequacy of services (with ratings fair and unsatisfactory) of the groups in each variable were calculated. For each rejected null hypothesis the group or groups contributing to the significant difference in the respondents' opinions between or among the groups in the variable pertaining to each research question was/were determined and tabulated for academic services and personal services. This was accomplished by determining the variance of percentage of adequacy of responses and that of inadequacy of responses of each group respectively, with the percentage composition of the particular group in the population.

Suggestions made by the respondents in the narrative for improving services, conditions and opportunities for international students were summarized into five areas namely; information and suggestions for improvement of services for enhancing proficiency in English, information and suggestions for improvement of services in academic counseling, information and suggestions for improvement of services in financial aid, information and suggestions for improvement of services in extracurricular activities and information and suggestions for improvement of services in personal counseling.

## Chapter 4

### PRESENTATION OF RESULTS

The data in the study were presented in four areas. Firstly, the data on the respondents' opinions pertaining to the adequacy of services, opportunities and conditions in satisfying the academic needs of international students at New York City Technical College in regard to proficiency in the English language, academic advisement, instructional practices, format of examinations and grading practices. Secondly, the data on respondents' opinions of the adequacy of services, opportunities and conditions in satisfying the personal needs of international students at New York City Technical College in regard to finances, cultural adjustment and personal problems. Thirdly, statistical data to determine whether respondents differed in opinions of the adequacy of college services on the basis of the characteristics; age, sex, time lived in the United States level of proficiency in English, national origin, native language and type of financial support. Fourthly, the suggestions made by the respondents for improving services, opportunities and conditions for international students at New York City Technical College. In the study 122 out of the 137 (89%) questionnaires were completed and returned.

Frequency of ratings and mean weighted scores of respondents' opinions of the adequacy of services, in satisfying selected academic needs of international students by New York City Technical College are presented in Table 1.

Table 1

Frequency of Ratings and Mean Weighted Scores of Respondents' Opinions in Serving Selected Academic Needs of International Students

Area Surveyed	Frequency of Ratings				Mean Weighted Score
	E	G	F	U	
Assistance for improvement in English	8	56	20	38	2.28
Services of ESL Program	8	56	14	44	2.23
Understanding of English deficiencies	8	63	17	34	2.37
Cooperation of native students for improvement of spoken English	5	65	24	28	2.39
Counseling in curriculum programming	5	55	34	28	2.30
Orientation to the academic setting	5	50	41	26	2.28
Assistance of academic advisors	5	55	43	19	2.38
Help to transfer to 4-year programs	3	58	41	20	2.36
Teaching, environment, to aid learning	7	45	50	20	2.32
Type of Exams for students with foreign educational background	2	44	50	26	2.18
Grading practices for students with foreign educational background	3	49	50	20	2.29
Curricula for home country job needs	2	47	53	20	2.25
Rapport with faculty	2	57	33	30	2.35

Table 1 (continued)

Frequency of Ratings and Mean Weighted Scores of  
Respondents' Opinions in Serving Selected  
Academic Needs of International Students

Area Surveyed	Frequency of Ratings				Mean Weighted Score
	E	G	F	U	
Availability of tutoring services	6	58	32	26	2.36
Opportunities for discussion of class- work with native students & peers	2	60	42	18	2.38
N = 122					
Score Scale: Excellent (E) = 4, Good (G) = 3, Fair (F) = 2, Unsatisfactory (U) = 1					

As presented in Table 1, with reference to services, opportunities and conditions in satisfying selected academic needs of international students at New York City Technical College, all areas surveyed indicated a mean weighted score of less than 2.5 on a score scale of 1 to 4. The mean weighted scores for the fifteen items in Table 1 ranged from a lowest score of 2.18 for format of examinations adopted by the institution for students with a foreign educational background, to a score of 2.39 for cooperation and assistance extended by American students and peers for improvement of spoken English of international students at New York City Technical College of the City University of New York.



Frequency of ratings and mean weighted scores of respondents' opinions of the adequacy of services, in satisfying selected personal needs of international students by New York City Technical College are presented in Table 2.

Table 2

Frequency of Ratings and Mean Weighted Scores of Respondents' Opinions in Serving Selected Personal Needs of International Students

Area Surveyed	Frequency of Ratings				Mean Weighted Score
	E	G	F	U	
Assistance to obtain financial aid	9	61	34	18	2.50 *
Summer job & work permit assistance	3	63	37	19	2.41
Policies and procedures for tuition	4	50	48	20	2.31
Policies for student activity fees	0	51	45	26	2.20
Pre-enrollment information on tuition	7	40	50	25	2.24
Information on personal expenses	0	60	42	20	2.33
Information on cost of housing	1	66	42	13	2.45
Information on health care	2	50	45	25	2.24
Activities to learn culture & customs	7	56	40	19	2.42
Assistance in community involvement	2	71	31	18	2.47
Cross-cultural activity opportunities	14	45	31	32	2.34
Respect for foreign culture & customs	10	45	32	35	2.25
Counseling on Immigration & Tax laws	3	77	27	15	2.56 *
Personal counseling on health care	4	46	32	40	2.11

Table 2 (continued)

Frequency of Ratings and Mean Weighted Scores of  
Respondents' Opinions in Serving Selected  
Personal Needs of International Students

Area Surveyed	Frequency of Ratings				Mean Weighted Score
	E	G	F	U	
Personal counseling on housing	0	61	38	23	2.31
Personal counseling on child care	8	50	25	39	2.22
Expertise of personal counselors	2	50	39	31	2.19
Assistance to adapt to New York City	2	50	40	30	2.20

N = 122

Score Scale: Excellent (E) = 4, Good (G) 3,  
Fair (F) = 2, Unsatisfactory (U) = 1

As shown in Table 2 in reference to satisfying personal needs two areas nameiy, assistance provided by the college for obtaining financial aid and personal counseling provided by the college in understanding Immigration and Tax laws of the United States attained mean weighted scores of 2.50 and 2.56 respectively. All other areas in satisfying personal needs of international students by New York City Technical College had mean weighted scores of less than 2.5.

A summary of acceptance or rejection of null hypotheses one to fifteen pertaining to adequacy of services in satisfying the academic needs of international students by New York City Technical College is shown in Table 3.

Table 3

Summary of Acceptance or Rejection of Null Hypotheses  
 Pertaining to Adequacy of Services in Satisfying the  
 Academic Needs of International Students at NYCTC

Variable	Null Hypotheses Tested														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Age	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sex	Y	Y	Y	Y	Y	Y	N	N	Y	Y	Y	N	Y	N	N
Time Lived in United States.	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Proficiency in English:															
Reading	Y	N	Y	Y	Y	Y	N	Y	Y	N	Y	N	Y	Y	Y
Writing	Y	N	N	Y	Y	N	Y	Y	N	Y	Y	Y	Y	Y	Y
Speaking	N	Y	Y	Y	Y	Y	N	Y	N	N	Y	N	Y	Y	Y
National Origin	Y	Y	Y	N	N	Y	Y	N	Y	N	Y	N	Y	Y	Y
Native Language	Y	Y	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y
Type of Financial Support	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Population: 122															
Level of Significance: .05															
N: Significant (null hypothesis rejected)															
Y: Non Significant (null hypothesis accepted)															

As shown in Table 3, in reference to the variable age, null hypotheses 1 to 15 were accepted. In reference to

the variable sex, null hypotheses 7, 8, 12, 14 and 15 were rejected while all other null hypotheses were accepted. For the variable time lived in the United States, all null hypotheses were accepted except null hypothesis 6. For the variable proficiency in English in reading, null hypotheses 2, 7, 10 and 12 were rejected while all other null hypotheses were accepted.

For the variable proficiency in English in writing, null hypotheses 2, 3, 6, and 9 were rejected, while all other null hypotheses were accepted. Null hypotheses 1, 8, 10 and 12 were rejected while all other null hypotheses were accepted for the variable proficiency in English in speaking. For the variable national origin, null hypotheses 4, 5, 8, 10 and 12 were rejected while the other null hypotheses were accepted. For the variable native language, null hypotheses 3, 4, 5, 6, 7, 8 and 9 were rejected while all other null hypotheses were accepted. For the variable type of financial support, null hypotheses 1 and 3 were rejected while the others were accepted.

Indicated in Table 4 is a summary of the acceptance or rejection of null hypotheses 16 to 33 based on the variables in reference to serving personal needs of international students by New York City Technical College of the City University of New York.

Table 4

Summary of Acceptance or Rejection of Null Hypotheses  
 Pertaining to Adequacy of Services in Satisfying the  
 Personal Needs of International Students at NYCTC

Variable	Null Hypotheses Tested																	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Age	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Sex	N	Y	N	N	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
Time Lived in U.S.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Prof. in English:																		
Reading	Y	N	Y	Y	Y	N	Y	N	N	N	Y	Y	Y	N	Y	Y	Y	Y
Writing	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	N	Y	N	Y	Y	N	Y	Y
Speaking	Y	N	Y	N	Y	N	N	N	Y	N	Y	Y	N	N	Y	Y	Y	Y
National Origin	Y	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	N	Y
Native Language	Y	Y	Y	Y	Y	N	Y	N	N	Y	N	Y	Y	N	Y	N	Y	Y
Type of Financial Support	N	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Population:	122																	
Level of Significance:	.05																	
N:	Significant (null hypothesis rejected)																	
Y:	Non Significant (null hypothesis accepted)																	

As indicated in Table 4, in reference to the variable age, all null hypotheses except hypothesis 29 were accepted. For the variable sex, null hypotheses 16, 18, 19, 20 and 26 were rejected while all other null hypotheses were accepted. All null hypotheses for the variable time lived in United States were accepted. For the variable proficiency in English in reading, null hypotheses 17, 21, 23, 24, 25 and 29 were rejected while all other hypotheses were accepted.

For the variable proficiency in English in writing, null hypotheses 24, 26, 28 and 31 were rejected while the other null hypotheses were accepted. Regarding the variable proficiency in English in speaking, null hypotheses 17, 19, 21, 22, 23, 25, 28 and 29 were rejected while all other null hypotheses were accepted. For the variable national origin, null hypotheses 17, 24 and 32 were rejected while the other null hypotheses were accepted. For the variable national language, null hypotheses 21, 23, 24, 26, 29 and 31 were rejected while other null hypotheses were accepted. In reference to the variable type of financial support, null hypotheses 16, 17 and 19 were rejected while all other hypotheses were accepted.

Shown in Table 5 is a summary of Group/s contributing to significant difference in respondents' opinion of academic services to international students by New York City Technical College.

Table 5

Summary of Group/s Contributing to Significant Difference  
in Respondents' Opinions of Academic Services to  
International Students by NYCTC

Variable	Items which were Significant	% Variance in Responses of Adequacy of Services	% Variance in Responses of Inadequacy of Services
Sex	7	Gp I (+9)	Gp II (+9)
	8	Gp I (+17)	
	12	Gp I (+14)	
	14	Gp I (+9)	Gp II (+9)
	15	Gp I (+6)	Gp II (+6)
Time Lived in U.S.	6	Gp II (+8)	
Prof. in Eng: Reading:	2	Gp II (+7)	
	7		Gp I (+7)
	10	Gp II (+22)	
	12	Gp II (+18)	
Writing:	2	Gp II (+12)	
	3	Gp II (+7)	
	6	Gp III (+16)	
	9	Gp IV (+6)	
Speaking:	1	Gp II (+21)	
	8	Gp II (+6)	
	10	Gp II (+14)	
	12	Gp II (+13)	
National Orig:	4		Gp IV (+17)
	5	Gp IV (+7)	Gp III (+7)
	8		Gp III (+8)
	10	Gp IV (+8)	
	12	Gp IV (+11)	
National Lang.	3		Gp IV (+12)
	4	Gp III (+6)	Gp IV (+6)
	5	Gp II (+8)	Gp III (+8)

Table 5 (continued)

Summary of Group/s Contributing to Significant Difference  
in Respondents' Opinions of Academic Services to  
International Students by NYCTC

Variable	Items which were Significant	% Variance in Responses of Adequacy of Services	% Variance in Responses of Inadequacy of Services
	6	Gp V (+6)	
	7	Gp II (+6)	Gp III (+6)
	8	Gp II (+12)	
	9	Gp V (+10)	
Type of Financial Support	1 3	Gp III (+7)	Gp I (+7)

As indicated in Table 5 for the variable sex, null hypotheses 7, 8, 12, 14 and 15 were rejected. The groups contributing towards rejection of null hypotheses 7, 14 and 15 were Group I (male) and Group II (female). Group I contributed in the rejection of these null hypotheses with positive percentage variances in responses (+9), (+9) and (+6) respectively towards adequacy of services, while Group II contributed towards the rejection of the three hypotheses with positive percentage variances in responses (+9), (+9) and (+6) respectively towards inadequacy of services. Group I contributed to the rejection of null hypotheses 8 and 12 with positive percentage variances in responses (+17) and (+14) towards adequacy of services.



For the variable time lived in the United States, null hypothesis 6 was rejected with Group II contributing to its rejection with a positive percentage variance in responses (+8) towards adequacy of academic services for international students.

For the variable proficiency in English in reading, null hypotheses 2, 7, 10 and 12 were rejected. Group II contributed to the rejection of null hypotheses 2, 10 and 12 with positive percentage variances in responses (+7), (+22) and (+18) respectively, towards adequacy of services. The rejection of null hypothesis 7 was contributed by Group I with a positive percentage variance in responses (+17) towards inadequacy of services.

For the variable proficiency in English in writing, null hypotheses 2, 3, 6 and 9 were rejected. Group II contributed to the rejection of null hypotheses 2 and 3 with positive percentage variances in responses (+12) and (+7) respectively towards adequacy of services. Group III contributed with a positive percentage variance in responses (+16) towards adequacy of services in the rejection of null hypothesis 6, while Group IV with a positive percentage variance in responses (+6) towards adequacy of services contributed towards the rejection of null hypothesis 9.

For the variable proficiency in English in speaking, null hypotheses 1, 8, 10 and 12 were rejected. Group II contributed towards the rejection of all the above null

hypotheses with positive percentage variances in responses (+21), (+6), (+14) and (+13) respectively towards adequacy of services.

For the variable national origin, null hypotheses 4, 5, 8, 10 and 12 were rejected. Group IV contributed towards the rejection of null hypotheses 4, 10 and 12 with positive percentage variances in responses (+17) towards inadequacy of services in the rejection of null hypothesis 4 and (+8) and (+11) towards adequacy of services in the rejection of null hypotheses 10 and 12. Group IV with a positive percentage variance in responses (+7) towards adequacy of services and Group III with a positive percentage variance in responses (+7) towards inadequacy of services contributed towards the rejection of null hypothesis 5. Group III with a positive percentage variance of responses (+8) towards inadequacy of services contributed to the rejection of null hypothesis 8.

With reference to the variable native language, null hypotheses 3, 4, 5, 6, 7, 8 and 9 were rejected. Group IV with a positive percentage variance in responses (+12) towards inadequacy of services contributed to the rejection of null hypothesis 3. Group III with a positive percentage variance in responses (+6) towards adequacy of services and Group IV with a positive percentage variance of (+6) towards inadequacy of services contributed in the rejection of null hypothesis 4. Group II with positive percentage variances in

responses (+8) and (+6) towards adequacy of services and Group III with positive percentage variance in responses (+8) and (+6) respectively towards inadequacy of services contributed to the rejection of null hypotheses 5 and 7. Group V with positive percentage variance in responses (+6) and (+10) respectively towards adequacy of services contributed towards the rejection of null hypotheses 6 and 9. Group II with a positive percentage variance in responses (+12) towards adequacy of services contributed towards the rejection of null hypothesis 8.

For the variable type of financial support, null hypotheses 1 and 3 were rejected. Group I with a positive percentage variance in responses (+7) towards inadequacy of services contributed to the significant difference in the respondents' opinions among the groups in the variable thus leading to the rejection of null hypothesis 1. Group III with a positive percentage variance in responses (+7) towards adequacy of services contributed to the significant difference in the respondents' opinions among the groups in the variable leading to the rejection of null hypothesis 3.

A summary of Group/s contributing to significant difference in respondents' opinions pertaining to personal services for international students by New York City Technical College of the City University of New York is presented in Table 6.

Table 6

Summary of Group/s Contributing to Significant Difference  
in Respondents' Opinions of Personal Services to  
International Students at NYCTC

Variable	Items which were Significant	% Variance in Responses of Adequacy of Services	% Variance in Responses of Inadequacy of Services
Age	29	Gp II (+8)	
Sex	16		Gp II (+3)
	18	Gp I (+7)	
	19	Gp I (+8)	
	20	Gp I (+15)	
	26	Gp I (+14)	
Prof. in Eng:			
Reading:	17	Gp II (+12)	
	21		Gp I (+9)
	23		Gp I (+9)
	24	Gp I (+7)	
	25	Gp III (+2)	
	29	Gp II (+10)	
Writing:	24	Gp II (+10)	
	26	Gp III (+4)	
	28	Gp II (+4)	Gp III (+4)
			Gp IV (+4)
	31	Gp III (+8)	
Speaking:	17		Gp I (+6)
	19	Gp IV (+7)	
	21		Gp I (+6)
	22		Gp I (+11)
	23	Gp IV (+8)	
	25		Gp I (+4)
	28	Gp III (+10)	Gp I (+10)
	29	Gp II (+6)	
National Origin:	17	Gp IV (+6)	
	24		Gp IV (+10)
	32	Gp II (+6)	

Table 6 (continued)

Summary of Group/s Contributing to Significant Difference  
in Respondents' Opinions of Academic Services to  
International Students at NYCTC

Variable	Items which were Significant	% Variance in Responses of Adequacy of Services	% Variance in Responses of Inadequacy of Services
Native Language	21	Gp II (+8)	
	23	Gp II (+9)	
	24		Gp IV (+8)
	26	Gp IV (+7)	
	29	Gp IV (+9)	
	31		Gp I (+6)
Financial Support:	16		Gp II (+3)
	17		Gp I (+7)
	19	Gp III (+9)	

As shown in Table 6, for the variable age Group II with a positive percentage variance in responses (+8) towards adequacy of personal services to international students at New York City Technical College contributed to the rejection of null hypothesis 29.

For the variable sex, null hypotheses 16, 18, 19, 20 and 26 were rejected. Group II with a positive percentage variance in responses of (+3) towards inadequacy of personal services to international students of the college, contributed to rejection of null hypothesis 16. Group I with a positive percentage variance in responses (+7), (+8),

(+15) and (+14) towards adequacy of personal services to international students contributed to the rejection of null hypotheses 18, 19, 20 and 26 respectively.

With reference to variable proficiency of reading in English null hypotheses 17, 21, 23, 24, 25, and 29 were rejected. Group II with positive percentage variances in responses (+12) and (+10) towards adequacy of services contributed towards the rejection of null hypotheses 17 and 29. Group I with a positive percentage variances in responses (+9) each towards inadequacy of services contributed in the rejection of null hypotheses 21 and 23. Further, Group I with a positive percentage variance in responses (+7) towards adequacy of services contributed in the rejection of null hypotheses 24. Group III with a positive percentage variance in responses (+2) towards adequacy of services contributed in the rejection of null hypothesis 25.

For the variable proficiency of writing in English null hypotheses 24, 26, 28 and 31 were rejected. Group II with a positive percentage variance in responses (+10) towards adequacy of services contributed in the rejection of null hypothesis 24. Group III with a positive percentage variances of (+4) and (+8) towards adequacy of services contributed in the rejection of null hypotheses 26 and 31. Group II with a positive percentage variance in responses (+4) towards adequacy of services and Groups III and IV each

with a positive percentage variance (+4) towards inadequacy of services contributed in the rejection of null hypothesis 28.

For the variable proficiency of speaking in English null hypotheses 17, 19, 21, 22, 23, 25, 28 and 29 were rejected. Group I with positive percentage variances in responses (+6), (+6), (+11) and (+4) towards inadequacy of services contributed towards the rejection of null hypotheses 17, 21, 22 and 25 respectively. Group IV with positive percentage variances in responses (+7) and (+8) towards adequacy of services contributed towards the rejection of null hypotheses 19 and 23. Group III with a positive percentage variance in responses (+10) towards adequacy of services and Group I with a positive percentage variance in responses of (+10) towards inadequacy of services contributed in the rejection of null hypothesis 28. Group II with a positive percentage variance (+6) towards adequacy of services contributed to the rejection of null hypothesis 29.

For the variable national origin null hypotheses 17, 24 and 32 were rejected. Group IV with a positive percentage variance in responses (+6) towards adequacy and (+10) towards inadequacy of services contributed to the rejection of null hypotheses 17 and 24 respectively. Group II with a positive percentage variance in responses (+6) towards adequacy of services contributed in the rejection of null

hypothesis 32. For the variable native language null hypotheses 21, 23, 24, 26, 29 and 31 were rejected. Group II with a positive percentage variance in responses (+8) and (+9) towards adequacy of services contributed to the rejection of null hypotheses 21 and 23. Group IV with a positive percentage variance in responses (+8) towards inadequacy of services and (+7) and (+9) towards adequacy of services contributed in the rejection of null hypotheses 24, 26 and 29. Group I with a positive percentage variance in responses (+6) towards inadequacy of services contributed to the rejection of null hypothesis 31.

With reference to the variable financial support null hypotheses 16, 17 and 19 were rejected. Group II with a positive percentage variance in responses (+) towards inadequacy of services contributed to the rejection of null hypothesis 16, while Group I with a positive percentage variance in responses (+7) towards inadequacy of services contributed to rejection of null hypothesis 17. The rejection of null hypothesis 19 was contributed by Group III with a positive percentage variance in responses (+9) towards adequacy of personal services to international students at New York City Technical College.

Distribution of the respondents of the population of international students surveyed in the study, by variable group and number is indicated in Table 7.



Table 7  
Distribution of Respondents by Variable  
Group and Number

Variable	Group	# of Respondents
Age	I: 17-22 yrs	64
	II: 23-29 yrs	32
	III: 30 yrs & over	26
Sex	I: Male	60
	II: Female	62
Time Lived in U.S.	I: 1-2 yrs	34
	II: 3 yrs or more	88
Level of Prof. in English:		
Reading:	I: Excellent	21
	II: Good	63
	III: Fair	33
	IV: Poor	5
Writing:	I: Excellent	17
	II: Good	50
	III: Fair	45
	IV: Poor	10
Speaking:	I: Excellent	21
	II: Good	46
	III: Fair	44
	IV: Poor	11
National Origin	I: European	19
	II: Latin Am/Caribb.	40
	III: Middle East/Asian	25
	IV: Oriental	25
	V: Other	13
Native Language	I: English	20
	II: Spanish/French	47
	III: Hindi/Arabic	25
	IV: Chinese	21
	V: Other	9

Table 7 (continued)  
Distribution of the Respondents by Variable  
Group and Number

Variable	Group	# of Respondents
Type of Financial Support	I: Home Gov. Sponsor	35
	II: Parent Sponsor	41
	III: Personal Savings	46

As shown in Table 7 the number of respondents in Groups I (17-22 years), II (23-29 year), and III (30 years and over), for the variable age, was 64, 32 and 26 respectively. For the variable sex, in Group I (male) and Group II (female) the number of respondents was 60 and 62 respectively. In the variable time lived in United States, 34 responded from Group I (1-2 years) while 88 responded from Group II (3 years or more). The number responded from Group I (excellent), Group II (good), Group III (fair) and Group IV (poor), for the variable level of proficiency of reading in English, was 21, 63, 33, and 5 respectively. For Groups I (excellent), II (good), III (fair) and IV (poor), for the variable level of proficiency of writing in English the number of respondents was, 17, 50, 45, and 10. For the variable level of proficiency of speaking in English the number of respondents in Group I (excellent), Group II (good), Group III (fair) and Group IV (poor) was 21, 46, 44 and 11 respectively.

The number respondents in Groups, I (European), II (Latin American/Caribbean), III (Middle Eastern/Asian), IV (Oriental) and V (Other), for the variable national origin was 19, 40, 25, 25 and 13 respectively. For the variable Native language, the number of respondents in Groups, I (English), II (Spanish/French), III (Hindi/Arabic), IV (Chinese) and V (Other) was 20, 47, 25, 21 and 9 respectively. The number of respondents in Groups, I (Sponsored by Home Government), II (Sponsored by Parents, and III (From Personal Savings), for the variable type of financial support was 35, 41 and 46 respectively.

In the narrative thirty students responded with suggestions for improvement of services for international students at New York City Technical College. The responses were summarized in five areas namely; information and suggestions for improvement of services for enhancing proficiency in English, information and suggestions for improvement of services in academic counseling, information and suggestions for improvement of services in financial aid, information and suggestions for improvement of services in extracurricular activities, and information and suggestions for improvement of services in personal counseling.

Ten students responded in reference to information and suggestions for improvement of services for enhancing proficiency in English for international students. The major

concern expressed by respondents was inadequacies of the ESL Program. The students stated that the number of sections of the courses offered per semester in the program was insufficient to accommodate the high enrollment sought in these courses. Consequently, they emphasized experiencing delays in their academic sojourn followed by a slow down in the graduation process. Eight of ten respondents were of opinion that instructors in the ESL Program should be more sensitive to deficiencies in proficiency of English. The necessity for opportunities to improve proficiency in English beyond the ESL Program through intermediate English courses and special tutoring sessions was a specific suggestion made by the respondents. The students further asserted, the implementation of a system of services for international students to obtain help for improvement of English on a continuous basis throughout the study at the college.

An area in need for improvement in service noted by six respondents was academic advisement. The students indicated the need for better services in the initial orientation to the academic setting. According to students difficulties are encountered in securing proper information regarding the curricula offered at the college and selecting the academic programs. At present no special advisors are available to assist international students at the college. The establishment of a Foreign Student advisors office with

personnel to guide the students in obtaining proper academic counseling, was imperative in the opinion of students.

Eleven students responded regarding improvement of services in financial assistance for international students at the college. The general consensus was that the college was inadequate in special services to help obtain financial assistance for international students. The lack of assistance or guidance in obtaining Summer jobs or work permits and difficulties in competing with native students for on campus part-time jobs were indicated by the respondents. The international students at New York City Technical College are mandated to pay non-resident tuition fees that are more than double the fee paid by resident students. A need for special services to alleviate financial problems through tuition waivers and scholarships at the college were emphasized by the respondents.

Five respondents commented on the activities of the International Students Club. Through activities of the club, the international students have had opportunities to meet students from other nations, international faculty, native students and faculty. Suggestions were made to organize international seminars, fairs and social events specifically designed to familiarize and introduce the international students to the local community.

In the study there were eight responses in reference to personal counseling provided by New York City

Technical College to international students. The services and information provided through personal counseling for health care, housing and cost of personal expenses were noted as inadequate at the college by the foreign students. Although child care services are available at the college, this service is hardly utilized by international students as the charges are not affordable. The respondents suggested better cafeteria services to suit diet patterns and that a part of the student activity fee be allocated for special services for international students.

## Chapter 5

### DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

#### Discussion of Results

International students have been admitted to the United States in increasing numbers, but insufficient attention has been paid for providing proper services for this student clientele by the institutions enrolling them. The experiences of international students have found to be very different from those of their native counterparts in the United States. Foreign students differ greatly as individuals but have common experiences and problems that must be addressed by colleges and universities.

A mean weighted score of less than 2.5 (on a scale of 4 to 1) for all areas of services in satisfying the academic needs of international students at New York City Technical College were obtained in the study. Hence, services, opportunities and conditions in the five major areas namely; assistance for improvement of proficiency in English, academic advisement, instructional practices, format of examinations, and grading practices researched were not adequately met by the college.

The present findings regarding inadequacies in satisfying the needs for improvement of proficiency in English for international students are in congruence with the findings of Moore (1965), Rising and Coop (1968), Johnson (1971), Hagey and Hagey (1974), Breuder (1972), Moghrabi (1972), Gabriel (1973), Han (1975), Stafford (1978), Von Dorpowski (1977), Perkins (1977), Eddy (1979), NAFSA (1979), Kurtz (1981) and Lee et al. (1981). Language as an academic barrier for international students especially for those in junior and two-year colleges were noted in the above studies. Although most foreign students have been successful in a Standardized English Proficiency Examination, the students have difficulties in functioning satisfactorily in an educational setting hindering the academic progress (Kurtz, 1981).

According to NAFSA (1979) and Lee et al. (1981), although the English Proficiency Tests may be used as an aid in the admission process of international students to colleges, they should not be used as the sole or the most important criterion in the selection of students for admission. In evaluating an applicant's performance in a Standardized English Proficiency Test a close coordination among the Admissions Officer, the teachers of the ESL Program and the Foreign Student Advisor was found to be indispensable according to the findings of the National Association for Foreign Students Affairs (1979).



Eddy (1979) and Lee et al. (1981), concurred that proficiency in spoken and written English was the greatest contributing factor to the academic success of international students and this proficiency was especially significant as the least proficient students were from developing countries that urgently need the technical and scientific competence brought back by student emissaries. Lee et al. (1981), were of opinion that self perceived English proficiency is a strong predictor of satisfaction in progress towards achieving goals as well as facilitating course-work for foreign students. Gabriel (1973), strongly attributed deficiencies in proficiency in English to difficulties in understanding lectures, writing term papers and expressing ideas for international students.

Contrary to the findings in the present study and those of other investigators in reference to services for improvement of proficiency in English Kincaid (1951), found an opposite view. Based on studies conducted at seven campuses in California Kincaid (1951), revealed that the institutions satisfactorily served the needs of international students in improving proficiency in English.

Inadequacies in all sub-areas pertaining to academic advisement were observed in the present study. These findings were similar to observations made by Hagey and Hagey (1974), Rising and Coop (1968), Win (1971), Ursua (1979), NAFSA (1979) and Wray (1981). According to NAFSA (1979),

academic advisement which may not be a vital factor to a native students's academic success is crucial to that of an international student. The association recommends that the foreign students' academic progress be carefully supervised throughout the stay in United States. Based on studies conducted on Arab students in the State of Oregon, Hagey and Hagey (1974), revealed poor acadmic advisement as a major contributor for failure to graduate on schedule. Wray (1981) observed similar findings and stressed the importance of proper academic counseling being initiated by sponsoring agencies long before the students arrive in United States. As a result of inadequate counseling students have been misguided in many ways. Some students have ended in wrong programs of study, others have been placed in two-year and junior institutions when the students rightfully belonged in four-year institutions thereby complicating the academic progress with involved transfer processes. Poor academic performance, changing of majors, complications involved in the transfer process from two-year to four-year programs have been attributed to poor academic counseling and guidance (Wray, 1981). A temptation can exist for colleges to recruit foreign students for purely financial reasons. In such circumstances the programs of the students may be mismatched, with the result that the students may develop a sense of insecurity or perform poorly and the program may get a poor reputation that is undeserved.

Contrary to the findings in the present study and those mentioned previously, Davis and Hanson (1961), observed different results. Based on studies conducted on students from African countries Davis and Hanson (1961), contended that students were satisfied with services offered in the area of academic advisement.

Inadequacies in services regarding the format of instruction at New York City Technical College to suit the needs of students with a foreign educational background was observed from the findings of the present study. The findings in the study were similar to those observed by Moore (1965), Hagey and Hagey (1974), IIE (1978), Shama (1978), Eddy (1979), Wray (1981), Craig (1981), Garcia (1986) and Wakim (1986). Most foreign students have received an early education on the theme of British or the French systems. Such systems emphasize and gear education for specialization in contrast to the general education system adopted by United States. For example under the British system a college student majoring in science is required to take all science related courses and not an array of non-science electives. When such an international student is faced with the scenario characterized by diversified requirements of a general education, this sudden change of course in academic life often leads to apprehensions and confusion. This may impede the academic progress of the student.

The classroom atmosphere and faculty-student rapport have also been reported by Craig (1981), to cause considerable difficulties for international students in colleges of United States. International students have been trained to listen to instructors rather than speak in class. Often the more collegial atmosphere maintained in classrooms at college and universities of United States may initially seem too informal and less structured to foreign students, thus slowing down the learning process. Western faculty-student relationships are based on expectations of mutual honesty and respect. Many foreign students arrive with a respect for authority far surpassing that of American peers.

Contrary to the present findings and those of many other investigators, Kincaid (1951), noted that international students on campuses surveyed that California content with course structure and instructional practices adopted by the colleges to suit international student needs.

Inadequacies of services in format of examinations and grading practices was a finding noted from the present study. The observations were in accord with those of Eddy (1979), Stafford (1978), Wray (1981) and Craig (1981). Craig (1981), emphasized that with reference to the evaluation process, international students are often not accustomed to frequent testing and have only experienced taking essay oriented examinations and the quick thinking multiple choice and short answer examinations have been

reported to often create psychological barriers and tension among these students. Stafford (1978), Wray (1981), and Craig (1981) emphasized that academic standards were impediments in achieving the academic goals of some international students in United States.

In the study, the evaluation of assistance to obtain financial aid attained a minimal weighted score of 2.5 indicating that New York City Technical College provides services to foreign students at minimum satisfactory levels to obtain financial aid. This finding was in accord with those of Kincaid (1951) and Moghrabi (1972) based on studies of international students at seven colleges in California. Kincaid (1951), indicated that these institutions satisfactorily served financial needs of the international students. Moghrabi (1972), found that a majority of international students at the University of Nebraska did not find finances to be a major problem and were content with the services provided for them by the institution.

Contrary to these views and the findings in the present study, Ursua (1969), Win (1971), Breuder (1972), Han (1975), Stafford (1978), Von Dorpowski (1977), Knowles (1977), Eddy (1979), NAFSA (1979), Mukolu (1984), Obong (1984), and Giannarella (1986) had an opposing view. The financial needs of international students have been found to present problems with regard to achieving their educational goals. Giannarella (1986), strongly asserted

that financial needs of international students become so severe at times that the effects are manifested as social, psychological and physiological behavior of students. Mukolu (1984) and Obong (1984), were of opinion that employment is nearly impossible for international students due to restrictive immigration laws. Although some students obtain work permits, these are generally for off campus jobs that often lead to competition with native students.

All areas evaluated to ascertain the adequacy of services for cultural adjustment (acculturation) of international students at New York City Technical College had mean weighted scores of less than 2.5 on a scale of 4 to 1. Hence, inadequacies of services by the college were observed pertaining to cultural adjustment. The finding was in concert with those of Moore (1965), Glazer (1963), Rising and Coop (1968), Win (1971), Essien (1975), Han (1975), Stafford (1978), Knowles (1977), Eddy (1979), Wray (1981), Lee et al. (1981), Mortimer and Byce-Laporte (1981), Craig (1981), De Perez and Maria (1985).

Knowles (1977), was of opinion that acculturation for many international students involved the process of orientation to a new cultural environment and adjustment to different social patterns presented great difficulties. The international students are often unaware of cultural differences in building friendships and dating etiquette. Prejudices, impatience, religious and political attitudes on

the part of both native and foreign students have hindered socializing. Mortimer and Byce-Laporte (1981), clearly emphasized that gregarious behavior of some groups of international students has been a great impediment to the acculturation process. According to Craig (1981), one of the factors contributing to the difficulties is the status of international students as an alien implying to most native peers that he is transient in American society. Eddy (1979), was of opinion that understanding American behavior and adjusting to it may be a difficult task to international students. Socialization in a new culture should not be considered as a continuation of the developmental process initiated in the home country.

Another area of services evaluated in the present study was personal counseling. All related areas evaluated except assistance to understand immigration and tax laws (mean weighted score = 2.56) scored less than 2.5 on a scale of 4 to 1 thus, indicating inadequacies in serving personal needs of international students. Similar findings were noted by Ursua (1969), Win (1971), Han (1975), Shama (1978) and NAFSA (1979). Deficiencies in service areas in housing, health services, child care, and religious services varied depending on the location international students select to pursue studies (Shama, 1978). Personal counseling which may not be of importance to native students is of paramount importance to international students.

In the present study with reference to the variable age, null hypotheses 1 to 15 tested were accepted. Therefore, there was no significant difference in the respondents' opinions among the three age groups regarding adequacies of academic services to international students at New York City Technical College. Contrary to the present findings, De Perez and Maria (1985), based on studies on foreign students at University of Cincinnati inferred that students of three age groups researched differed significantly in their perceptions of the adequacy of relating to academic needs. Further, if the assumption is made that most international students enrolling in junior and two-year colleges are younger than those enrolling in four-year colleges, there was evidence to indicate an opposite view to the present findings. Hagey and Hagey (1972), Kurtz (1981) and Lee et al. (1981) concurred that international students in two-year colleges have frequently called for better academic services than their counterparts in four-year colleges.

With reference to the variable sex, null hypotheses 7, 8, 12, 14, and 15 were rejected in the study. Therefore, there was a significant difference between the male and female respondents pertaining to areas surveyed under these null hypotheses. In the rejection of null hypothesis 7, 14 and 15 the significant difference in respondents' opinions between the groups of the areas surveyed in each case was



contributed by Group I (males) with positive percentage variances (+9), (+9), (+9) and (+6) in responses respectively, towards adequacy of services in the areas surveyed and Group II (females) with a positive percentage variance of (+9), (+9) and (+6) in responses respectively towards inadequacy of services in the three areas surveyed.

The three areas surveyed in null hypotheses 7, 14 and 15 were availability and cooperation of academic advisors, the assistance provided through tutoring and opportunities available to discuss class-work with American peers. The rejection of null hypotheses 8 and 12 indicating a significant difference in the respondents' opinions between the two groups was contributed by Group I with positive percentage variances (+17) and (+14) in responses towards adequacy of services regarding academic advisement for transfer into four-year programs and the relevance of curricula at the college to future job needs in the home country.

The remaining null hypotheses from 1 to 15 tested for the variable sex were accepted thus indicating that there was no significant difference between male and female respondents' opinions regarding adequacy of academic services in the areas listed in these null hypotheses. In accord with some of the findings in the present study, De Perez and Maria (1985), found that there was a significant difference in the opinions between male and female foreign

students at the University of Cincinnati regarding the adequacy of academic services offered at the institution.

For the variable time lived in the United States, only null hypothesis 6 was rejected while all other null hypotheses were accepted. Hence, there was no significant difference in the respondents' opinions between Group I (1-2 years in the United States) and Group II (3 years or over in the United States) regarding academic services, except in orientation to the academic setting provided by the college. This significant difference between the respondents' opinions in Group I and Group II in reference to orientation to the academic setting was contributed by Group II with a positive percentage variance (+8) in responses towards adequacy of this service. Different from the findings of the present study, Gabriel (1973), indicated that most academic problems of international students were better satisfied after the first year in the United States. De Perez and Maria (1985), substantiated Gabriel's views by emphasizing that international students seemed better satisfied with academic services extended by colleges depending on the length of time spent in the United States.

For the variable proficiency in English in reading, null hypotheses 2, 7, 10 and 12 were rejected. Hence, there was a significant difference in the respondents opinions among the groups regarding services surveyed in these null hypotheses. The rejection of null

hypotheses 2 and 3 indicating a significant difference of respondents' opinions among the groups was contributed by Group II (those with a good level in writing in English) with positive percentage variances of (+12) and (+7) in responses respectively towards adequacy of services provided by the ESL Program and the consideration, understanding and patience of instructors towards deficiencies in English. The rejection of null hypothesis 6 indicating a significant difference in respondents' opinions among the groups was contributed by Group III (those with a fair level in writing in English) with a positive percentage variance of (+16) in responses towards adequacy of services in the orientation to the academic setting provided by the college. The significant difference in respondents' opinions among the groups resulting from the rejection of null hypothesis 9 was contributed by Group IV (those with a poor level of writing in English) with a positive percentage variance of (+6) in responses towards adequacy in the format of instruction and classroom atmosphere at the college to facilitate learning for students with a foreign educational background. The remaining null hypotheses 1 to 15 in the variable were accepted. Hence, there was no significant difference in the respondents' opinions among the groups concerning the adequacy of services stated in these null hypotheses.

For the variable proficiency of speaking in English, null hypotheses 1, 8, 10 and 12 were rejected. Hence, there was a significant difference in the respondents' opinions among the groups in the variable regarding the adequacies of services surveyed under these null hypotheses. The null hypotheses 1, 2, 8, 10, and 12 in the study were rejected, indicating a significant difference in the respondents' opinions among the groups was contributed by Group II (those with a good level of speaking in English) towards adequacy of services. Group II showed positive percentage variances of (+21), (+6), (+14) and (+13) towards improvement of proficiency in English, advisement provided for transfer into four-year programs, in the format of examinations given at the college for students with a foreign educational background and the relevance of the curricula at the college to future job needs in the home country. The remaining null hypotheses from 1 to 15 for the variable were accepted. Hence, there was no significant difference in the respondents' opinions in the groups of the variable regarding the service areas stated in these null hypotheses.

For the variable national origin, null hypotheses 4, 5, 8, 10 and 12 were rejected. This reflected that there was a significant difference in the respondents' perceptions among the groups in the variable in reference to areas surveyed in each of these hypotheses. The rejection of null

hypothesis 4 indicating a significant difference in respondents' opinions among the groups was contributed by Group IV (Oriental) with a positive percentage variance (+17) in responses towards inadequacy of cooperation extended by American students towards improvement of spoken English. The rejection of null hypothesis 5, indicating a significant difference in respondents' opinions among the groups in the variable was contributed by Group IV (Oriental) with a positive percentage variance (+7) in responses for adequacy of assistance provided through academic counseling for curriculum programming and by the contribution of Group III (Middle Eastern/Asian) with a positive percentage variance of (+7) in responses towards inadequacy of the same service. Group III (Middle Eastern/Asian) with a positive percentage variance (+8) in responses contributed to the significant difference in respondents' perceptions among the groups in reference to inadequacy of academic advisement provided for transfer into four-year programs. In the rejection of null hypotheses 10 and 12 Group IV (Oriental) with a positive percentage variance (+8) and (+11) in responses contributed to the significant difference in the respondents' opinions toward adequacy of the type of examinations given at the college for students with a foreign educational background and relevance of curricula at the college to future job needs in the home country respectively.

In accord with some of the findings in the present study, Von Dorpowski (1977), found that international students from some nationalities specially the Latin American, Oriental and Middle-Eastern countries called for additional services in improvement of the English language. Further, services for improvement of proficiency in English language was expressed by a majority of the Chinese international students (Perkins, 1977). Based on studies to determine the adequacy of services for foreign students at the University of Southern California Win (1971), found that Indian and Japanese students were least satisfied by academic services provided by the college. On the contrary Davis and Hanson (1961), found that international students especially from African countries were satisfied with the academic services extended to them by the college.

For the variable native language, null hypotheses 3, 4, 5, 6, 7, 8 and 9 were rejected. Hence, there was a significant difference in the respondents' perceptions among the groups in the variable in reference to the areas surveyed in each of the null hypotheses. The rejection of null hypothesis 3 resulting in a significant difference in respondents' opinions was contributed by Group IV (Chinese) with positive percentage variance (+12) in responses towards inadequacy of consideration, understanding and patience of instructors towards deficiencies in English. The significant difference in the respondents' opinions in the rejection

of null hypothesis 4 was contributed by Group III (Hindi/Arabic) with a positive percentage variance of (+6) in responses towards adequacy and Group IV (Chinses) with a positive percentage variance of (+6) in responses towards inadequacy of cooperation extended by American Students towards improvement of spoken English. The rejection of null hypotheses 5 and 7 with a significant difference in respondents' opinions in each case was contributed by Group II (Spanish/French) with positive percentage variances (+8) and (+6) in responses towards adequacy and Group III (Hindi/Arabic) with a positive percentage variance in responses of (+8) and (+6) towards inadequacy of assistance provided through academic counseling for curriculum programming and availability and cooperation of academic advisors respectively. The rejection of null hypotheses 6 and 9 indicating a significant difference in respondents' opinions among the groups was contributed by Group V (Other) with positive percentage variances of (+6) and (+10) in responses towards adequacy of orientation to the academic setting and format of instruction and classroom atmosphere at the college to facilitate learning for students with foreign educational background. The rejection of null hypothesis 8 with a significant difference in respondents' opinions among the groups was contributed by Group II (Latin American/ Caribbean) with a positive percentage variance (+12) in responses towards adequacy of academic

advisement for transfer into four-year programs. The acceptance of all the remaining null hypotheses in the variable reflected that there was no significant difference in the respondents' opinions of the adequacy of academic services listed under each of the null hypotheses. In reference to the variable type of financial support, null hypotheses 1 and 3 were rejected. Hence, there was a significant difference in the respondents' opinions among the groups surveyed under these null hypotheses. In the rejection of null hypothesis 1 the significant difference in the respondents' opinions among the groups was contributed by Group I (home government sponsored students) with a positive percentage variance in responses towards inadequacy of services provided by the college for improvement of proficiency in English. In the rejection of null hypothesis 3 the significant difference in the respondents' opinions among the groups was contributed by Group III (personal savings) with a positive percentage variance (+7) in responses towards adequacy in consideration, understanding and patience of instructors towards deficiencies in English.

Based on studies in sponsorship sources in relation to the satisfaction of academic needs of international students Hountra (1956), contended that sponsored international students had better academic performance than self-supporting students. This view was further supported by Pavri (1963) and Chongolee (1978). Contrary to the view,



Ohuche (1967), found no differences in academic performance between Nigerian students who had government scholarships and those who were self-supported.

In the present study null hypotheses 16 to 33 were tested to determine the adequacy of services in satisfying the personal needs of international students of New York City Technical College. It was observed that with reference to variable age, null hypothesis 29 was rejected. Thus, there was a significant difference in the respondents' opinions among the groups in the variable regarding the adequacies of personal counseling given by the college in health care. The significant difference in respondents' opinions was contributed by Group II (23-29 years), with a positive percentage variance (+8) in responses towards adequacy of services. The acceptance of all the remaining hypotheses in the variable reflected that there was no significant difference in the respondents' opinions of the adequacy of personal services listed under each of these null hypotheses.

For the variable sex, hypotheses 16, 18, 19, 20 and 26 were rejected. Hence, there was a significant difference in respondents' opinions between Group I (males) and Group II (females) pertaining to the areas surveyed under these hypotheses. In the rejection of null hypothesis 16, Group I (males) with positive percentage variance (+13) in responses towards inadequacy of services contributed to

the significant difference in respondents' opinions towards services provided in obtaining financial aid. In the rejection of null hypotheses 18, 19, 20 and 26 (Group I males) with positive percentage variances of (+7), (+8), (+15) and (+14) in responses towards adequacy of services contributed to the significant difference in respondents' opinions between the two groups regarding understanding policies and procedures of the college in reference to tuition fees, understanding policies and procedures regarding student activity fees, information provided in reference to tuition fees, understanding policies and procedures regarding student activity fees, information provided regarding cost of tuition and opportunities for cross-cultural activities in the form of seminars, clubs and workshops. The remaining null hypotheses in the variable were accepted thus, indicating that there was no significant difference in the respondents' opinions between the groups in the variable in reference to personal services tested in the null hypotheses.

For the variable time lived in United States, all null hypotheses were accepted. Thus there was no significant difference in the respondents' opinions between the groups in the variable in reference to the adequacy of personal services stated in the null hypotheses.

Null hypotheses 17, 21, 23, 24, 25 and 29 were rejected for the variable proficiency of reading in English.

In the rejection of null hypotheses 17 and 29 Group II (those with a good reading level in English) with positive percentage variances (+12) and (+10) in responses towards adequacy of services contributed to the significant difference in the respondents' opinions regarding assistance extended by the college in obtaining work permits for Summer and part-time jobs and for personal counseling given by the college regarding health care.

In the rejection of null hypotheses 21, 23 and 24 Group I (those with an excellent level of reading) with positive percentage variances (+9) and (+9) in responses towards inadequacy of services and (+7) towards adequacy of services respectively, contributed to the significant difference in respondents' opinions among the groups in the variables regarding the areas tested under the null hypotheses. The areas evaluated under null hypotheses 21, 23 and 24 were information provided by the college in reference to cost of personal expenses, information provided by the college regarding cost of health care and the availability of extracurricular activities at the college to learn culture and customs of United States. Group III (those with a fair level of reading in English) with a positive percentage variance (+2) in responses towards adequacy of services contributed to the rejection of null hypothesis 25 indicating a significant difference in the respondents' opinions among the groups in the variable with reference to

assistance provided by the college to encourage the introduction to and involvement in the community

For the variable proficiency in writing in English, null hypotheses 24, 26, 28 and 31 were rejected. Thus, there was a significant difference in respondents' opinions among the groups regarding the services surveyed under the null hypotheses. The rejection of null hypotheses 24 and 28 indicating a significant difference in the respondents' opinions among the groups was contributed by Group II (those with a good level of writing in English), Group II indicated positive percentage variances of (+10 and +4) in responses towards adequacy of services provided by the college in reference to the availability of extra curricular activities to learn culture and customs of United States and personal counseling on Immigration and Tax laws of United States. The rejection of null hypotheses 26 and 31 indicating a significant difference in the respondents' opinions among the groups was contributed by Group III (those with a fair level of writing in English) with positive percentage variances (+4) and (+8) in responses towards adequacy of services for opportunities for cross-cultural activities in the form of seminars, clubs and workshops and for personal counseling provided by the college with reference to child care. The remaining null hypotheses in the variable were accepted indicating no significant difference in opinions regarding services surveyed in the null hypotheses.

For the variable proficiency of speaking in English, null hypotheses 17, 19, 21, 22, 23, 25, 28 and 29 were rejected. The rejection of null hypotheses 17, 21, 22 and 25 indicating a significant difference in the respondents' opinions among the groups was contributed by Group I (those with excellent level of speaking in English) with positive percentage variances in responses of (+6), (+11) and (+4) respectively, towards inadequacy of services surveyed in the four hypotheses. The areas surveyed in these hypotheses were guidance and assistance extended by the college in obtaining work-permits for Summer and part-time jobs, in information provided by the college with regard to cost of housing and assistance provided by the college to encourage the introduction to and involvement of students in the community. The rejection of null hypotheses 19 and 23 indicating a significant difference in the respondents' opinions among groups was contributed by Group IV (those with a poor level of speaking in English) with positive percentage variances (+7) and (+8) in responses towards adequacy of services regarding policies and procedures with references to student activity fees and the information provided by the college regarding the cost of health care respectively. Group III (those with a fair level of speaking in English) with a positive percentage variance (+10) in responses towards adequacy of services and Group I (those with an excellent level of speaking in English) with a positive percentage

variance of (+10) in response towards inadequacy of services in personal counseling provided by the college in reference to Immigrations and Tax laws of United States contributed to the rejection of null hypothesis 28. In the rejection of null hypothesis 29 Group II (those with good level of speaking in English) contributed with a positive percentage variance in responses (+6) towards adequacy of services pertaining to personal counseling extended by the college regarding health care. The remaining null hypotheses in the variable were accepted. Hence, there was no significant difference in the respondents' opinions in the groups in the variable of the adequacy of personal services tested in the null hypotheses.

For the variable national origin, null hypotheses 17, 24 and 32 were rejected,. Hence, there was a significant difference in the respondents' opinions among the groups regarding personal services surveyed in these null hypotheses. In the rejection of the null hypotheses 17 and 24 Group IV (Oriental) with a positive percentage variance (+6) in response towards adequacy of services and a positive percentage variance (+10) in response towards inadequacy of services contributed to the significant difference in respondents' opinions pertaining to guidance and assistance extended by the college in obtaining work permits for Summer and part-time jobs and regarding the availability of extra curricular activities at college to learn culture

and customs of the United States respectively. Group II with a positive percentage variance of (+6) in responses towards adequacy of services contributed to the rejection of null hypothesis 32, indicating a significant difference in respondents opinions of the experience and knowledge of personal counselors at the college. In the analysis of migration assimilation and adjustment patterns of Puerto Rican students in New York City Glazer (1963) noted that family structure, housing, religion, social habits and relationships with other ethnic groups constituted the major problems of acculturation. In order to insure adequate cultural adjustment of international students, guidance services should be provided in the form of acculturation. Adjustment to new conditions is a continuous process in which such services must be provided since, for example many of the international students find that adapting personal habits to life and study in a different setting may cause considerable strain. Criteria of active adjustment of mastery of the environment, involving a choice of what a student adjust to, and a deliberate modification of environmental conditions are of paramount importance to insure acculturation. More investigations by Essier (1975) on social relations among male Nigerian students with black and white Americans in the United States indicated that a majority of these foreign students did not interact adequately with the white Americans, but interacted

more with black Americans. Mortimer and Byce-Laporte (1981) affirmed that race has become a very important factor in the social adjustment of international students.

For the variable native language, null hypotheses 21, 23, 24, 26, 29 and 31 were rejected. Therefore, there was a significant difference in the respondents' opinions among the groups in the variable in reference to the areas surveyed in these null hypotheses. In the rejection of null hypotheses 21 and 23, Group II with positive percentage variances (+8) and (+9) in responses towards adequacy of services contributed to the significant difference in the respondents' perceptions among the groups towards the information provided in reference to cost of personal expenses, and those provided regarding the cost of health care respectively.

In the rejection of null hypotheses 24, 26 and 29, Group IV with a positive percentage variance (+8) towards inadequacy of services respectively, contributed to the significant difference in respondents' opinions among the groups of the areas surveyed in these null hypotheses. The areas of services that were surveyed under these null hypotheses were availability of extracurricular activities at the college to learn culture and customs of the United States, opportunities for cross-cultural activities in the form of seminars, clubs and workshops and personal counseling extended by the college to international students



regarding health care. The remaining null hypotheses in the variable were accepted indicating that there was no significant difference in the respondents' opinions among the groups in the variable pertaining to the adequacies of services listed in these null hypotheses. In the rejection of null hypothesis 31 indicating a significant difference in the respondents' opinions among the groups was contributed by Group I with a positive percentage variance (+6) in responses towards inadequacy of services in reference to personal counseling provided by the college for child care.

In reference to the variable financial support null hypotheses 16, 17 and 19 were rejected. Hence there was a significant difference in the respondents' opinions among the groups in the variable regarding the services surveyed in the null hypotheses. In the rejection of null hypothesis 13, Group II with a positive percentage variance of (+3) in response towards inadequacy of services contributed to the significant difference in respondents' opinions of assistance provided by the college in obtaining financial aid. Group I with a positive percentage variance (+7) in responses towards inadequacy of services contributed to the rejection of null hypothesis 17 indicating a significant difference in the respondents' opinions among the groups in reference to obtaining work permits for Summer and part-time jobs. In the rejection of null hypothesis 19, Group III with a positive percentage variance (+9) towards adequacy of

services contributed to the significant difference in the respondents' opinions among the groups with reference to policies and procedures of the college regarding student activity fees.

In congruence with some of the findings of the present study, Pruitt (1977) found that sponsorship was related to social adjustment of international students in the United States and that government sponsored students have better adjustment. Hull (1978) found that self-supporting students were more like to interact with United States nationals and were more content with personal services provided by institutions of higher education.

### Conclusions

From the findings of the present study several conclusions could be made. In every category of adequacy of services to satisfy the academic needs of international students surveyed, student expectations were not reached even to minimal levels.

The problem with deficiencies in English may be more evident at NYCTC as most international students arrive from Far-Eastern and Middle Eastern countries. These students have a poor background in written and spoken English. This problem was highlighted by the recent action of the Iranian government to drop the requirement of a language proficiency examination for students wanting to pursue study abroad.

NYCTC requires all international students to qualify in the Test of English as a Foreign Language (TOEFL) prior to admission. In addition the college has a program in English as a Second Language (ESL) for international students. The findings of the present study indicated several shortcomings of this program. The number of sections offered per course in the program was also stated to be inadequate to accommodate the high enrollment rate sought by international students. Often these students are closed out of the ESL courses in the first semester and they have been forced to register for other courses that have no relevance to their major curriculum mainly to maintain a minimum course load. It could be concluded from the findings of the study that the ESL Program need to be regularly evaluated especially through processes of self-study. Further, it seemed evident that although a fair screening for proficiency in English is maintained by the college, the international students have serious problems at NYCTC, thus calling for further assistance in attaining the standards expected of them in an academic setting.

In the study the low rating scores attained for services in academic advisement at NYCTC had some justifications. At the college, advisors with special training to serve the needs of international students do not exist. The only form of academic advisement the international students obtain is through regular program planning by academic

advisors assigned to all students at the college. The absence of a Foreign Student Advisor has added further encumbrances for proper guidance and relevant academic advisement.

The low mean weighted score pertaining to instructional practices, format of examinations and grading could also perhaps be attributed to the educational backgrounds from which the international students arrive. Most International students enrolling at NYCTC come with a training under the British or the French systems. Often the more collegial atmosphere maintained in the classrooms at NYCTC may seem too informal and less structured to these students thus impeding the learning process. Western faculty-student relationships are based on expectations of mutual honesty and respect. Many international students arrive with a respect for authority far surpassing that of American peers.

In the evaluation process too the international students may have difficulties in adapting to frequent testing and quick thinking multiple choice and short answer examinations. Further, the deficiencies in the English language inevitably could be a factor attributable for not completing short answer examinations by international students within a specified time period.

In the areas of personal service, assistance to obtain financial aid and counseling on Immigration and Tax

laws attained minimal satisfactory levels of services in the present study. All other areas showed inadequacies at different levels below minimal. The finding that assistance to obtain financial aid attained minimal satisfactory levels in comparison to most other areas that attained unsatisfactory levels could be somewhat attributed to the efforts made by the college to provide work-study and part-time jobs available to international students. There is a recent trend to consciously assist international students by employing them as student aides and in the Learning Centers. In addition, the possibility exists that most international students especially the ones arriving from middle-eastern countries perhaps are fairly well funded by their own government or by the parents, that the financial burdens normally experienced by international students may not be faced by the group of international students surveyed in the study.

The attainment of minimal satisfactory levels in serving the international students to obtain financial aid, should not be interpreted as an amelioration of their financial burden. Due to constraints in federal aid all assistance to international students at NYCTC has been abolished. At NYCTC no financial waivers are granted to foreign students. The tuition fee assigned to non-resident students is double the fee paid by resident students. The financial burden of international students is further

accentuated due to the inavailability of residential facilities at New York City Technical College.

The second area that attained just above minimal satisfactory levels in serving the personal needs of international students in the study was counseling in Immigration and Tax laws of the United States. At present the college has assigned an advisor from the counseling department on a part-time basis to attend to Immigration matters of admitting students to the college. It could be concluded from the study that this assistance is somewhat effective.

As indicated by other research studies on international students, the foreign students at NYCTC are also faced with some common personal problems encountered by these students. The international students arriving at NYCTC are from cultures with close family ties and distinct patterns of etiquette, food habits and religious beliefs. The sudden exposure to a free and liberal culture, with emphasis for independence may be quite a trauma at first to adjust to for this sector of the student population.. Differences in friendship building, dating, etiquette or even aggressiveness may be confusing to foreign students. In addition, homesickness and the temperate climate may make adjustment more difficult.

The deficiencies in the adequacies of services, conditions and opportunities in satisfying the personal needs of international students at NYCTC may be greatly

attributed to the absence of a Foreign Student Advisor at the college. NYCTC takes pride in its Day Care Center sponsored by the Faculty Student Association. The cost of child care however is not quite affordable by international students with limited incomes. At present, although services are available through the Faculty Students Association utilizing student activity fees, these are geared towards the needs of non-international students. Although foreign students are mandated to pay the regular student activity fees, limited funds are allocated to service the needs of international students. The only finances allocated is a minimal funding for the International Students Club.

From the findings pertaining to responses of international students based on personal characteristics, some conclusions could be arrived at. The groups in the variable age, time lived in the United States and type of financial support pertaining to academic as well as personal services had the least rejection of null hypotheses. Since most null hypotheses in these three variables were accepted it could be concluded that there was no significant difference of the respondents' opinions between or among the groups in these variables regarding the adequacies of services to international students in most areas tested in the study.

In the area of academic services the highest rejection of null hypotheses was seen among the groups in

the variables sex, national origin and native language. Hence, there was a significant difference in the respondents' opinions among the groups in these variables regarding adequacies of academic services to international students. The significant difference in the respondents' opinions between the groups in the five rejected null hypotheses for the variable sex was contributed by Group I indicating adequacy of academic services. Five null hypotheses were rejected for the variable national origin pertaining to academic services indicating a significant difference in the respondents' opinions among the groups. Group IV (Oriental) indicating adequacy of services and Group II (Middle Eastern/Asian) indicating inadequacy of services contributed the significant difference in the respondents' opinions regarding the adequacy of services surveyed in the rejected null hypotheses.

Seven null hypotheses were rejected for the variable native language pertaining to academic services indicating a significant difference in the respondents' opinions among the groups in areas surveyed under these null hypotheses. Group II (Spanish/French) and Group V (Other) indicating adequacy of services and Group III (Hindi/Arabic) and Group IV (Chinese) indicating inadequacy of services contributed to the significant difference in the respondents' opinions among the groups in the areas surveyed under the rejected null hypotheses.



In reference to personal services the highest rejection of null hypotheses was seen in the variables proficiency of reading in English, proficiency of speaking in English and native language. For the variable proficiency of reading in English six null hypotheses were rejected indicating a significant difference in the respondents' opinions among the groups pertaining to the areas surveyed under the null hypotheses. Group II (those good in reading) indicating adequacy of services and Group I (those excellent in reading) indicating inadequacy of services in most of the rejected null hypotheses contributed to the significant difference in opinions. For the variable proficiency of speaking in English eight null hypotheses were rejected indicating a significant difference in the respondents' opinions among the groups in the variable in the areas surveyed in the rejected null hypotheses. Group IV (those with a poor level of speaking in English) mainly, indicating adequacy of services and Group I (those with an excellent level of speaking in English) mainly, indicating inadequacy of services contributed to the significant difference of opinions among the groups.

For the variable native language six null hypotheses were rejected indicating a significant difference in the respondents' opinions among the groups in the variable pertaining to areas surveyed. Group II (Spanish/French) and Group IV (Chinese) indicating adequacy of services and

Group IV (Chinese) indicating adequacy of services and Group IV (Chinese) indicating inadequacy of services in certain instances contributed to the significant difference in the respondents' opinions among the groups in the variable.

Recommendations for the Improvement of Practice,  
Including Strategies for Diffusion,  
Implementation and Improvement

The findings from the present study had some implications for the institution. The determination of the inadequacies of selected academic and personal services, conditions and opportunities at NYCTC was believed to create a greater sensitivity towards the needs of this sector of the student clientele. Consequently, this may lead to the establishment of a Foreign Student Advisors Office.

Satisfying the needs of international students in a more effective manner was envisioned as an avenue for increased enrollment of these students at the college. This undoubtedly is expected to increase the revenue to the institution in this epoch of financial constraints from other sources. A greater sensitivity towards the needs of international students was believed to involve more completely and meaningfully this group of students in the American culture. In return international students were expected to extend a cultural and academic enrichment to the college community of New York City Technical College. An

enlightening thought as a result of the present project was the consideration of internationalizing some of the programs at the college.

Development of a Plan for Achieving Desired Change  
in Serving the Needs of International Students  
at New York City Technical College

From the findings of the present study it was evident that services, conditions and opportunities in satisfying the academic needs and most of the personal needs of international students were not adequately met by NYCTC. In an effort to alleviate some of these inadequacies and to bring about a desired change in serving the needs of these students, the following plan was designed to be presented to the Vice-President of Student Affairs of the College.

It is imperative that any planning process at an institution requires a commitment of the administration, the faculty and the students. The plan proposed in achieving a desired change in serving the needs of international students at NYCTC will involve all three groups of the college population. The planning process will be a function of the Vice President of Students Affairs and will involve the appointment of the following committees:

1. A Steering Committee to oversee the functions of the planning process. The Steering Committee will be responsible for the appointment of the sub-committees involved in the planning process.

2. Sub-committee to review the missions and goals of the institution towards international education. The committee will comprise of three members (one administrator, one American faculty member and one international faculty member) to review the present missions and goals of the institution towards international education. The committee will prepare a specific mission statement towards international education to be included in the college catalog, within a period of three months.

3. Sub-Committee to review admission, recruitment, academic policies, and counseling regarding international students at the college.

A three member committee with representation from the Admissions Office, the Registrars Office and a faculty member will review the present policies regarding recruitment, admission, evaluation of credentials and counseling of international students. The committee will draw out a plan for the improvement of such services and submit a report to the Steering Committee in six months.

4. Sub-committee to investigate the feasibility of establishing a Foreign Student Office at NYCTC. An open hearing will be held in the college auditorium to discuss the feasibility of establishing a Foreign Student Office and staff

at the college. Subsequent to such a hearing a seven member team consisting of one administrator, two counselors (one American and one foreign), two faculty members (one American and one foreign), two faculty members (one American and one foreign) will be appointed to formulate a plan for the development of an International Student Advisors Office. The committee will be charged with the following.

- a. Investigate the administrative process in establishing a Foreign Student Advisors Office, by consulting the President, Provost and the Vice-President of Finance and Planning.
  - b. Specify the qualifications and hiring procedures of the Foreign Student Advisor and staff.
  - c. Specify the duties and responsibilities of the Foreign Student Advisor and staff.
5. Task force to investigate the procedures for improvement of the English as a Second Language Program and international education at NYCTC. A task force of six faculty members including two international faculty members, two American faculty members and two faculty members from the ESL Program will be responsible in planning for.

- a. Improvement of the ESL courses of the college and seek internal and external funding for such improvement.
- b. Propose a plan for internationalization of curricula at New York City Technical College of the City University of New York.

The task force will be requested to submit a report at the end of six months.

6. An advisory committee for international Affairs at New York City Technical College.

An advisory committee will be appointed by the President of the college that will consist of two faculty members (one American and one international) two students (one American and one international) and two members from the community will act as liaisons between the college and the community and will be responsible for organizing intercultural and social activities and for arranging families in the community to act as hosts to international students. The advisory committee will submit a full report of a proposal of the activities within a period of three months to the Steering committee for review and recommendations.

The reports of the Sub-committees will be examined by the Steering Committee and a final report will be

presented to the Vice-President of Student Affairs. After examination of the report the Vice-President of Student Affairs will submit it with further recommendations to the Provost and the President of the college for approval. Finally, the plan will be submitted to the Board of Trustees of the City University of New York for approval and implementation.

If the plan is approved and implemented, an evaluation of the activities of the plan is recommended after a period of two years. The evaluation of the plan will be a function of the Foreign Student Advisor. A self-study of all the activities pertaining to international student services at the college is proposed in the evaluation process. A consultant from the National Association of Foreign Student Affairs (NAFSA) will be invited on campus to examine the self-study report and make recommendations towards further improvement of services to international students at New York City Technical College.

Due to the anticipated time frame of approximately three years for implementation and evaluation of the plan, only the designing of the plan was accomplished in the present study.

### Recommendations

As a result of the findings in the study, the following recommendations were made to the administration of New York City Technical College.

1. The plan designed for achieving a desired change for improvement of services to international students be approved and implemented.
2. Reexamination of the admission policies with reference to proficiency in English of international students. A committee of ESL faculty be appointed to evaluate the students for proficiency in English. Based on the recommendations of the committee the students be channeled to the ESL Program, the Developmental English Program or be advised to join an institute for attaining proficiency in English, before pursuing an academic career.
3. More sections of the ESL courses be opened for international students and measures be taken to obtain additional funding for the ESL Program. Peer sessions to help in the English language be organized through tutorial labs throughout the academic sojourn of international students with also an opportunity for students to have a self-perceived evaluation of proficiency in English.
4. A greater sensitivity be extended on the part of the administration towards the international student clientele, by establishment of a Foreign Student Office with a full-time advisor and staff. Measures be taken to insure the coordination among the Foreign Student Advisor and the Admissions Officer and the ESL faculty.



5. An endeavor be made to tap the experience and expertise of international faculty of the institution in assisting the foreign students with academic and personal problems. Such assistance be considered as credit towards professional development of faculty.
6. To take advantage of the free consultation services of NAFSA by inviting a representative of the Association for advisement regarding the needs of international students at the college.
7. An orientation Program be organized for international students at the commencement of each year.
8. To encourage better involvement of international students with the community and pursue the involvement of the latter to act as hosts for the students.
9. Effort be made to involve the international students in the mainstream of the college by encouraging them to run for student offices and organizing cross-cultural workshops.
10. The college revise its curricula to include more programs with international dimensions by internationalizing some programs to maintain relevance of courses to academic needs of foreign students.

#### Diffusion and Implementation

Articles based upon the study will be submitted for consideration for publication in the Community College Research Quarterly, the Journal of College Student Personnel

and ERIC (Educational Resource Information Clearinghouse). This will permit wide dissemination of the findings and recommendations generated from the study. Functions of the different committees in the plan designed are expected to be completed in twelve to sixteen months. The final report from the Steering Committee will be presented to the Vice-President of Student Affairs who will present it with recommendations to the Provost and the President of the college. The final report will be submitted by the President of the college to the Board of Trustees of the City University of New York for consideration and implementation.

The findings of the present study will be presented to the Provost and the Vice-President of Student Affairs of the college, and an oral presentation of the study will be made through the auspices of the Professional Development Forum of New York City Technical College.

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**APPENDICES**

APPENDIX A  
THE TRANSMITTAL LETTER

Dept. of Biological Sciences  
Rm. P305  
New York City Technical College  
300, Jay St.  
Brooklyn, New York. 11201  
April 20, 1987.

Dear International Student:

I am conducting a study to determine the quality of services provided to international students at New York City Technical College. My special interest in the needs of international students is the result of personal experiences as a foreign student in the United States eighteen years ago, and continued interest in foreign student affairs at the college.

You have been selected to participate in this study and answer a questionnaire. Please take a few minutes to read carefully the questions and indicate your responses. Based on your responses and suggestions, recommendations will be made to the administration for improvement of services to international students.

If you have answered this questionnaire before, please do not respond. All responses will be held in strict confidence and the respondents will remain anonymous. Please return the completed questionnaire to your instructor.

Thanking you in advance for your assistance

Sincerely,

*R. Selvadurai*

Prof. Ranjani Selvadurai  
Biological Sciences

**APPENDIX B****QUESTIONNAIRE FOR INTERNATIONAL STUDENTS**

**To Determine the Adequacy of Selected Services  
Pertaining to Academic and Personal Needs of  
International Students at New York City  
Technical College**

**QUESTIONNAIRE:**

Please circle the appropriate choice for each item:

1. The assistance provided by New York City Technical College to international students to improve proficiency in English is:  
a. excellent b. good c. fair d. unsatisfactory
2. The services provided by the English as a Second Language (ESL) Program to international students at New York City Technical College are:  
a. excellent b. good c. fair d. unsatisfactory
3. The consideration, understanding and patience extended to international students towards deficiencies in the English language by instructors of the institution are:  
a. excellent b. good c. fair d. unsatisfactory
4. The cooperation extended by American students towards improvement of spoken English of international students at New York City Technical College is:  
a. excellent b. good c. fair d. unsatisfactory
5. The assistance to international students through academic counseling for curriculum programming at New York City Technical College is:  
a. excellent b. good c. fair d. unsatisfactory
6. The orientation to the academic setting provided by New York City Technical College to international students is:  
a. excellent b. good c. fair d. unsatisfactory
7. The availability and cooperation of academic advisors in meeting the needs of international students at New York City Technical College are:  
a. excellent b. good c. fair d. unsatisfactory
8. The academic advisement provided by New York City Technical College to international students with reference to transfer into four year programs is:  
a. excellent b. good c. fair d. unsatisfactory

9. The format of instruction and the classroom atmosphere at New York City Technical College to facilitate learning for students with a foreign background are:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
10. The type of examinations at New York City Technical College for students with a foreign educational background are:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
11. The grading practices at New York City Technical College for students with a foreign educational background are:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
12. The relevance of the curricula at New York City Technical College to future job needs in the home countries of international students is:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
13. The rapport between international students and faculty at New York City Technical College is:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
14. The extra assistance extended to international students through tutoring by instructors at New York City Technical College is:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
15. The opportunities for international students at New York City Technical College to discuss coursework with American students and peers are:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
16. The assistance provided by New York City Technical College in obtaining financial aid for international students is:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
17. The guidance and assistance extended to international students by New York City Technical College in obtaining work permits for Summer and part-time jobs are:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory

18. The policies and procedures at New York City Technical College with reference to tuition fees for international students are:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
19. The policies and procedures at New York City Technical College with reference to student activity fees for international students are:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
20. The information provided by New York City Technical College to international students regarding the cost of tuition is:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
21. The information provided by New York City Technical College to international students regarding the cost of personal expenses is:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
22. The information provided by New York City Technical College to international students regarding the cost of housing is:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
23. The information provided by New York City Technical College to international students regarding the cost of health care is:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
24. The extracurricular activities available at New York City Technical College for international students to learn the culture and customs of the United States are:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory
25. The assistance provided by New York City Technical College to encourage the introduction to and involvement of international students in the community is:
  - a. excellent
  - b. good
  - c. fair
  - d. unsatisfactory



26. The opportunities at New York City Technical College for cross-cultural activities in the form of seminars, clubs and workshops are:  
a. excellent b. good c. fair d. unsatisfactory
27. The respect for individual customs, culture and beliefs of international students by the college community of New York City Technical College is:  
a. excellent b. good c. fair d. unsatisfactory
28. Personal counseling provided by New York City Technical College to international students with reference to regulations of immigration and tax laws of the United States is:  
a. excellent b. good c. fair d. unsatisfactory
29. Personal counseling provide by New York City Technical College to international students with reference to health care is:  
a. excellent b. good c. fair d. unsatisfactory
30. Personal counseling provided by New York City Technical College to international students with reference to housing is:  
a. excellent b. good c. fair d. unsatisfactory
31. Personal counseling provided by New York City Technical College to international students with reference to child care is:  
a. excellent b. good c. fair d. unsatisfactory
32. The experience and knowledge of counselors pertaining to personal needs of international students at New York City Technical College are:  
a. excellent b. good c. fair d. unsatisfactory
33. Personal counseling provided by New York City Technical College to international students with reference to needs in adapting to living in New York City is:  
a. excellent b. good c. fair d. unsatisfactory

Please use the space below to make any comments or suggestions that would help New York City Technical College better serve the needs of its international students:

## PERSONAL CHARACTERISTICS

Please respond to the following items concerning your personal characteristics:

1. AGE: (Please check box):

17 to 22 years  23 to 29 years  30 years or over

2. SEX: (Please check box):

Male  Female

3. TIME LIVED IN THE UNITED STATES: (Please check box):

1 to 2 years  3 years or over

4. LEVEL OF PROFICIENCY IN ENGLISH: (Please circle appropriate letter):

Reading:

a. Excellent  
b. Good  
c. Fair  
d. Poor

Writing:

a. Excellent  
b. Good  
c. Fair  
d. Poor

Speaking

a. Excellent  
b. Good  
c. Fair  
d. Poor

5. NATIONAL ORIGIN: (Please check box):

European:  Latin American or Caribbean

Asian or Middle Eastern  Oriental

Other  (Specify -----)

6. NATIVE LANGUAGE: (Please check box):

English used as the official language

Spanish or French

Arabic or Hindi

Chinese

Other  (Specify -----)

## PERSONAL CHARACTERISTICS (contd.)

7. TYPE OF FINANCIAL SUPPORT: (Please check box):

Home government sponsored

Sponsored by parents

From personal savings

Thank you for completing this questionnaire.

## VITA

Ranjani H. Selvadurai a native of Sri Lanka (Ceylon) received her B.S (Honors) degree from the University of Ceylon and her M.S. degree (Physiology) on a Fellowship awarded by Long Island University Brooklyn, New York. She is the recipient of the Phi Sigma Award for the outstanding graduate student of the year, 1971.

After completing the M.S. she joined Mount Sinai Medical Center in New York as a Research Specialist in the Department of Circulatory Physiology. She is the co-author of the article:

Krakoff, L.R., Selvadurai, R., Sutter, E. "Effect of Methylprednisolone Upon Arterial Pressure and the Renin-Angiotensin System in the Rat." American Journal of Physiology, 228:613-617. February, 1974.

In 1974 she joined the Biological Sciences Department of New York City Technical College of the City University of New York and currently is an Assistant Professor in the department.

I certify that I have read and am willing to sponsor this Major Applied Research Project submitted by Ranjani H. Selvadurai. In my opinion it conforms to acceptable standards and is fully adequate in scope and quality as a Major Applied Research Project for the degree of Doctor of Education at Nova University.

October 21, 1987  
(date)

John Losak  
John Losak Ph.D.  
MARP Advisor

I certify that I have read this Major Applied Research Project and in my opinion it conforms to acceptable standards for a Major Applied Research Project for the degree of Doctor of Education at Nova University.

October 21, 1987  
(date)

Phyllis S. Cooper  
Phyllis S. Cooper Ed.D.  
Local Committee Member

This Major Applied Research Project was submitted to the Central Staff of the Center for Higher Education of Nova University and is acceptable as partial fulfillment of the requirements for the degree of Doctor of Education.

October 19, 1987  
(date)

Ross M. Moreton  
Ross M. Moreton Ed.D.  
Central Staff Committee Member