The Educational Sojourn Of The Returned Iranian Alumni From University Of California, 1963-64--1973-74

Hutan Yassai Ardakani

University of the Pacific

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THE EDUCATIONAL SOJOURN OF THE RETURNED IRANIAN ALUMNI FROM UNIVERSITY OF CALIFORNIA, 1963-64 - 1973-74

A Dissertation
Presented to
the Faculty of the School of Education
University of the Pacific

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
Hutan Yassai Ardakani
May 1976

Abstract of Dissertation

PROBLEM: The flow of returning Iranian graduates from American educational institutions has focused attention upon the educational experiences of the graduates and the extent to which they are able to utilize their training for employment in Iran.

PURPOSE: The major purposes of this study were to analyze (1) the degree of satisfaction of the sojourn period in terms of the academic, economic, and social experiences of a group of Iranian alumni who have returned to Iran, and (2) the relevancy and applicability of their American education.

METHODOLOGY: The sample for this study was a group of Iranian graduates from the University of California system who returned to Iran. A list of 103 alumni was prepared under the auspices of the Ministry of Science and Higher Education in Iran. The alumni were contacted on the phone by the researcher in Iran and 76 confirmations for the interviews were arranged. During the course of interviewing, a structured questionnaire was administered and items therein were discussed at length. The questionnaire contained 28 reaction items pertaining to the institutional information and 20 general items designed to elicit descriptive data. Open-ended questions were also included.

Selected computer programs for the statistical package for the Social Science (SPSS) provided the following analyses: (1) frequency distributions, (2) contingency tables for the categorical data, and (3) means, standard deviations, and Pearson Product Correlation Coefficients for the items related to the degree of satisfaction.

FINDINGS AND CONCLUSIONS: The findings of this study indicated that 10 to 45 percent of the respondents encountered difficulties in 11 specific areas of academic, economic, and social aspects of their sojourn experiences. The major difficulties were: finding suitable housing, using the English language effectively, and receiving help from the student advisors.

The respondents indicated their satisfaction with the academic, economic, and social aspects of the University of California experiences. Male graduates with doctoral degrees were the most satisfied group of the graduates with their academic aspects of their experience. Females expressed a higher degree of satisfaction with the social and physical aspects of their sojourn experience than did the males.

The males and singles who graduated with a doctoral degree were highly satisfied with the relevancy and applicability of their training to the needs of Iran. Ninety-five percent of the respondents reported using their training to either some or high degree in their employment. The graduates in environmental design indicated that they were highly satisfied with the opportunities they had for using their university training in Iran, while the graduates in chemistry were the least satisfied in this respect.

Upon returning to Iran, 87 percent of the graduates held positions in 3 occupational categories: professorships, 41 percent; administrative positions, 33 percent; and engineering, 13 percent. The remaining 13 percent of the graduates held positions in 7 different disciplines.

RECOMMENDATIONS: 1) Adequate information should be provided for the student who wishes to study in the United States. The prospective university should supply the student with accurate information related to the academic, economic, physical, and social aspects of the institutions.

2) Sufficient knowledge of English language should be required of students prior to admittance into universities.

3) The government of Iran should direct and encourage Iranian students who wish to study abroad into fields of study which are in demand and are easily applicable in Iran.

4) This study should be replicated in an effort to substantiate the findings and to generalize them into wider populations.
This study is dedicated to my beloved parents Major General and Mrs. Mahmoud Yassai Ardakani
ACKNOWLEDGMENTS

The writer wishes to express his gratitude to a number of people for their assistance during the period of the research for this study.

With deep respect, he acknowledges his indebtedness to Professor T. C. Coleman, Chairman of the Dissertation Committee, for his invaluable assistance in reading and criticizing the manuscript throughout the course of the research study.

Grateful appreciation is extended to Professor Margaret L. Cormack and Provost Otis H. Shao for their critical reading, guidance, and insight.

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The writer wishes to express his indebtedness to Dr. Rahmat Haqdan, Deputy Minister of Science and Higher Education of Iran, for his assistance in facilitating the researcher's preliminary works in Iran. Special appreciation also goes to Dr. Haqdan and Dr. F. Akbari and all of the other Deputies
of the Ministry of Science and Higher Education, who were instrumental in arranging the scholarship funds which helped to make this research possible.

A final note of thanks is extended to all the members in the sample who consented to be interviewed and thus make it possible for the researcher to obtain the data for the study.
# TABLE OF CONTENTS

| LIST OF TABLES                        | ix  |
| LIST OF FIGURES                      | xii |

## Chapter

1. **INTRODUCTION**
   - THE PROBLEM:                      1
     - Statement of the Problem:       6
     - Objectives of the Study:        7
   - RATIONALE:                       8
     - Importance of the Study:        8
     - Purpose of the Study:           13
   - THEORETICAL FRAMEWORK:           13
     - Assumptions:                   13
     - Limitations:                   14
     - Definitions of Terms:          14
   - DESIGN AND PROCEDURE:            15
     - Selection of the Sample:       15
     - Instrument Development:        16
     - Organization of the Study:     16
   - SUMMARY:                         17

2. **REVIEW OF THE RELATED LITERATURE**: 18
   - INTERNATIONAL EDUCATION AND EXCHANGE: 18
     - The Purposes of International Education and Exchange: 20
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Relevancy and Applicability of American Education.</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>PROBLEMS OF INTERNATIONAL STUDENTS</td>
<td>33</td>
</tr>
<tr>
<td></td>
<td>Pre-Sojourn Experiences of International Students</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Academic Problems of International Students</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Non-Academic Difficulties of International Students</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>IRANIAN STUDENTS</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Historical Background</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>The Beginning of Study Abroad</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Mass Exodus of Students Abroad</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>The Iranian Student in the United States: A Profile</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>IMPACT OF THE BRAIN DRAIN</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Factors Causing Non-Return</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>The Brain Drain and the Subsequent Financial Loss</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>Non-Returning Iranian Graduates</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>Brain Gain Efforts</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>RETURNED IRANIAN GRADUATES</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td>Factors Influencing the Student's Decision to Return</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>Educational Characteristics of Returned Iranian Graduates</td>
<td>89</td>
</tr>
<tr>
<td></td>
<td>Some Personal Characteristics of Returned Graduates</td>
<td>94</td>
</tr>
<tr>
<td></td>
<td>SUMMARY</td>
<td>96</td>
</tr>
<tr>
<td>Chapter</td>
<td>THE DESIGN AND PROCEDURES OF THE STUDY</td>
<td>99</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------</td>
<td>----</td>
</tr>
<tr>
<td>3.</td>
<td>IDENTIFICATION OF THE POPULATION</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>Selection of the Sample</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>DEVELOPMENT OF THE SURVEY INSTRUMENT</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Field Testing</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>Validity</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>Administration of the Instrument</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>RESEARCH PROCEDURES</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>TABULATION AND THE TREATMENT OF DATA</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td>SUMMARY</td>
<td>107</td>
</tr>
<tr>
<td>4.</td>
<td>ANALYSES OF DATA</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td>BACKGROUND INFORMATION OF THE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RESPONDENTS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Personal Data</td>
<td>110</td>
</tr>
<tr>
<td></td>
<td>Training Prior to Admission into the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>University of California</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reasons for choosing the United States</td>
<td></td>
</tr>
<tr>
<td></td>
<td>for Study</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EDUCATIONAL CHARACTERISTICS OF THE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RETURNED GRADUATES</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fields of Study</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Degree Attainment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SATISFACTION WITH THE UNIVERSITY OF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CALIFORNIA EXPERIENCE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physical and Social Aspects of the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sojourn Experience</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Living facilities</td>
<td>129</td>
</tr>
<tr>
<td></td>
<td>Services provided by the University</td>
<td>131</td>
</tr>
<tr>
<td></td>
<td>Social and recreational activities</td>
<td>134</td>
</tr>
<tr>
<td>Chapter</td>
<td>Academic Aspects of the University of California Experience</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>4.</td>
<td>Academic programs and standards</td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>Faculty advisory system</td>
<td>139</td>
</tr>
<tr>
<td></td>
<td>Classroom instruction</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>General Satisfaction</td>
<td>147</td>
</tr>
<tr>
<td></td>
<td>Correlation of the Satisfaction Items</td>
<td>153</td>
</tr>
<tr>
<td></td>
<td>NATURE OF EMPLOYMENT AND JOB SATISFACTION UPON RETURNING</td>
<td>156</td>
</tr>
<tr>
<td></td>
<td>TO IRAN</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>Nature of Employment</td>
<td>161</td>
</tr>
<tr>
<td></td>
<td>Job Satisfaction</td>
<td>165</td>
</tr>
<tr>
<td></td>
<td>APPLICABILITY OF UNIVERSITY OF CALIFORNIA TRAINING</td>
<td>166</td>
</tr>
<tr>
<td></td>
<td>PROBLEMS FACED BY IRANIAN STUDENTS</td>
<td>172</td>
</tr>
<tr>
<td></td>
<td>While Attending the University of California</td>
<td>173</td>
</tr>
<tr>
<td></td>
<td>Upon Returning to Iran</td>
<td>176</td>
</tr>
<tr>
<td></td>
<td>SUMMARY</td>
<td>178</td>
</tr>
<tr>
<td>5.</td>
<td>SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>SUMMARY OF THE STUDY</td>
<td>183</td>
</tr>
<tr>
<td></td>
<td>CONCLUSIONS AND IMPLICATIONS</td>
<td>184</td>
</tr>
<tr>
<td></td>
<td>RECOMMENDATIONS</td>
<td>191</td>
</tr>
<tr>
<td></td>
<td>SUMMARY</td>
<td>192</td>
</tr>
<tr>
<td></td>
<td>BIBLIOGRAPHY</td>
<td>194</td>
</tr>
<tr>
<td></td>
<td>APPENDIX A. THE LAW PROVIDING FOR FOREIGN STUDY</td>
<td>202</td>
</tr>
<tr>
<td></td>
<td>APPENDIX B. THE SURVEY INSTRUMENT</td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>APPENDIX C. DATA RELATED TO THE REACTION ITEMS</td>
<td>211</td>
</tr>
</tbody>
</table>
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Foreign Countries with More Than 1,000 Students in the U.S. from 1963-64 to 1973-74 -- Top Ten Countries Only.</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>The Fields of Specialization Pursued by Iranian Student Abroad, 1928-1934 in Preparation for University Position in Iran.</td>
<td>52</td>
</tr>
<tr>
<td>3.</td>
<td>The Growth of Elementary and Secondary Education in Iran.</td>
<td>55</td>
</tr>
<tr>
<td>4.</td>
<td>Students Abroad by Countries of Origin, Around 1968 (15 countries only)</td>
<td>58</td>
</tr>
<tr>
<td>5.</td>
<td>Students from Near and Middle Eastern Countries in the U.S. in the Academic Year of 1973-74.</td>
<td>59</td>
</tr>
<tr>
<td>6.</td>
<td>Number of Iranian Students in the United States 1963-64 to 1973-74.</td>
<td>62</td>
</tr>
<tr>
<td>7.</td>
<td>High-Level Emigration to the United States From the Middle East in Relation to Population Size 1962-1966.</td>
<td>75</td>
</tr>
<tr>
<td>8.</td>
<td>Number of Returned Iranian Graduates from Five Foreign Countries in a Three Year Period.</td>
<td>91</td>
</tr>
<tr>
<td>9.</td>
<td>Age Distribution of the Alumni at the Time of Entrance to and Graduation from the University of California.</td>
<td>111</td>
</tr>
<tr>
<td>10.</td>
<td>Number of Respondents by Sex and Marital Status.</td>
<td>111</td>
</tr>
<tr>
<td>11.</td>
<td>Primary and Secondary Sources of Financial Support Reported by the Alumni.</td>
<td>113</td>
</tr>
<tr>
<td>12.</td>
<td>Adequacy of Financial Support Reported by the Graduates.</td>
<td>115</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>------</td>
</tr>
<tr>
<td>13.</td>
<td>The Adequacy of the Four Most Frequently Reported Primary Sources of Support (in Percent).</td>
<td>116</td>
</tr>
<tr>
<td>14.</td>
<td>Adequacy of Financial Support by Sex and Marital Status.</td>
<td>117</td>
</tr>
<tr>
<td>15.</td>
<td>Countries in which the Respondents Obtained Degrees Prior to Entering the University of California</td>
<td>119</td>
</tr>
<tr>
<td>16.</td>
<td>Length of Enrollment at the University of California.</td>
<td>122</td>
</tr>
<tr>
<td>17.</td>
<td>Fields of Study Reported by the Student Sample.</td>
<td>123</td>
</tr>
<tr>
<td>18.</td>
<td>Degrees Attained and Fields of Study.</td>
<td>125</td>
</tr>
<tr>
<td>19.</td>
<td>Males and Females and the Level of Degrees Attained.</td>
<td>126</td>
</tr>
<tr>
<td>20.</td>
<td>Computed Satisfaction Means Related to Living Facilities at the University of California.</td>
<td>130</td>
</tr>
<tr>
<td>21.</td>
<td>Computed Satisfaction Means Related to Services Provided by the University of California</td>
<td>133</td>
</tr>
<tr>
<td>22.</td>
<td>Computed Satisfaction Means Related to Social and Recreational Activities at the University of California</td>
<td>135</td>
</tr>
<tr>
<td>23.</td>
<td>Computed Satisfaction Means Related to Academic Programs and Standards at the University of California</td>
<td>140</td>
</tr>
<tr>
<td>24.</td>
<td>Computed Satisfaction Means Related to Faculty Advisory System at the University of California</td>
<td>146</td>
</tr>
<tr>
<td>25.</td>
<td>Computed Satisfaction Means Related to Classroom Instruction at the University of California</td>
<td>148</td>
</tr>
<tr>
<td>26.</td>
<td>Mean Satisfaction of Items Related to Academic Aspects According to Level of Degree Received</td>
<td>150</td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>27</td>
<td>Rank Order of Satisfaction Items Related to the Physical, Social, and Academic, Aspects of the Student Experience</td>
<td>154</td>
</tr>
<tr>
<td>28</td>
<td>The Initial and Final Positions Held by the Respondents in the Three Largest Occupational Groups</td>
<td>164</td>
</tr>
<tr>
<td>29</td>
<td>Mean Satisfaction of Applicability of University of California Training and Present Job According to Major Field of Study</td>
<td>169</td>
</tr>
<tr>
<td>30</td>
<td>Mean Satisfaction of Applicability of University of California Training and Present Job According to Sex and Marital Status</td>
<td>170</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Migration of High-Level Manpower to the United Kingdom 1967</td>
<td>71</td>
</tr>
<tr>
<td>2.</td>
<td>Migration of High-Level Manpower to the United States and Canada 1967</td>
<td>72</td>
</tr>
<tr>
<td>3.</td>
<td>Breakdown of the Number of Iranian Returnees Educated in Foreign Lands</td>
<td>93</td>
</tr>
</tbody>
</table>
Chapter 1

INTRODUCTION

Today we have far to go to catch up, and it is not enough merely to "catch up". Conditions in my country differ considerably from those in the west, and we need also to adapt. We are both adjusting the technology to our culture and our culture to the technology. And here lies a clue to a new kind of pioneering. With our great scholarly tradition and our thousands of university-trained young men and women, I foresee that my country may help provide leadership in the world-wide quest for a fresh synthesis of East and West, old and new.¹

--Shah

The number of Iranian students enrolled in United States educational institutions is increasing rapidly. In 1963 there were 2,829 Iranian students enrolled in United States colleges and universities.² The Iran Ministry of Science and Higher Education in 1971 indicated that 7,889 Iranians were attending educational institutions in the United States.³ This figure rose to 9,623 students in the 1973-74


³Statistical Figures on Iranian Students Abroad and Students Sent Abroad by the Department of Student Affairs, (Tehran: Ministry of Science and Higher Education, 1972), p. 92.
academic year, making the Iranian student population the third largest nationality group of foreign students in the United States. (See Table 1, on the following page, for comparison.)

The flow of international students to the United States is not limited solely to Iranians. The numbers of students from other countries in Asia, Africa, and Latin America also demonstrate considerable increases. Writing in 1963, Wilson stated that the "U.S., at present, has in its native student body about a third of all the college and the university students in the world. And about a fourth of all students studying outside their own country are studying in the U.S." With a total of 151,066, the international student population in United States colleges and universities has nearly tripled since 1963.

The upward trend in the admissions and training of international students by American educational institutions indicates an active interest and a course of events in international affairs promoted by educational policy planners and administrators. Since the end of World War II, American

---


6 Open Doors, 1975, loc. cit.
Table 1

Foreign Countries with More Than 1,000 Students in the U.S. from 1963-64 to 1973-74 -- Top Ten Countries Only.
(A Comparison of the Number of Iranian Students in the U.S. with the Number of Students from Other Countries.)

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Number of Students</th>
<th>Rank of Country</th>
<th>Country of Origin</th>
<th>Number of Students</th>
<th>Rank of Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>8,458</td>
<td>1</td>
<td>Hong Kong</td>
<td>10,764</td>
<td>1</td>
</tr>
<tr>
<td>India</td>
<td>6,387</td>
<td>2</td>
<td>India</td>
<td>10,168</td>
<td>2</td>
</tr>
<tr>
<td>Japan</td>
<td>3,220</td>
<td>3</td>
<td>Iran</td>
<td>9,623</td>
<td>3</td>
</tr>
<tr>
<td>Iran</td>
<td>3,162</td>
<td>4</td>
<td>Canada</td>
<td>8,748</td>
<td>4</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>3,143</td>
<td>5</td>
<td>China, Republic of</td>
<td>8,416</td>
<td>5</td>
</tr>
<tr>
<td>China, Republic of</td>
<td>3,057</td>
<td>6</td>
<td>Cuba</td>
<td>7,932</td>
<td>6</td>
</tr>
<tr>
<td>Korea</td>
<td>2,411</td>
<td>7</td>
<td>Thailand</td>
<td>5,786</td>
<td>7</td>
</tr>
<tr>
<td>China, Unspecified</td>
<td>2,335</td>
<td>8</td>
<td>Nigeria</td>
<td>4,816</td>
<td>8</td>
</tr>
<tr>
<td>Philippines</td>
<td>2,277</td>
<td>9</td>
<td>Japan</td>
<td>4,745</td>
<td>9</td>
</tr>
<tr>
<td>Cuba</td>
<td>2,179</td>
<td>10</td>
<td>Korea, Republic of</td>
<td>3,612</td>
<td>10</td>
</tr>
</tbody>
</table>

Sources:

institutions of higher education have become focal centers in the interchange of persons across national boundary lines. The ever-increasing numbers of international students on American campuses as observed by the researcher is an indication of the extent of the involvement and the resulting influence of the United States in contemporary world affairs. In recent years educational exchange has become a significant element in international relations.\textsuperscript{7}

The growth of international student populations in American institutions is an indication of the world-wide emphasis on educational training and its importance in national development. Scholarship opportunities for study in the United States offered by governments abroad or by various institutions or organizations for their own nationals, are numerous. A report published by the National Association for Foreign Student Affairs reflects this important purpose of international education:

The imperious needs—and demands—of newly independent countries, as well as of the older but less privileged nations of the world, pose a unique challenge to American education. Many leaders of these nations correctly identify education as the means by which their peoples can exorcise the colonial past and gain access to the political, social, and economic advantages to which they aspire.\textsuperscript{8}


\textsuperscript{8}The College, the University, and the Foreign Student (Washington, D. C.: National Association for Foreign Student Affairs, 1974), pp. 3-4.
Although national development is furthered by education abroad, it is not the prime motivating factor for the student. The individual who journeys to another country in search of an education is primarily concerned with his own personal growth, not with politics. The period following World War II has been characterized by an "explosion of awareness," in which young people have come to demand more control over their destinies. Many students set certain professional goals for themselves, and envision international experience as being a part of their professional experience.\(^9\)

Those who have been active on the international student scene during the past two decades have become thoroughly aware of the fact that many of these students have problems.\(^10\) Some of these problems have materialized because the situation of the international student on American campuses has been left to chance.\(^11\) When an institution accepts a student it has the basic responsibility of providing educational experiences which will satisfy the specific objectives of that individual. The international student brings with him his


entire sociocultural background, his educational and working experiences, his sociopolitical concepts, and his objectives for educational training.12

The presence of international students on American campuses has raised significant questions, criticisms, and suggestions concerning their education and its related after effects.13 Particular concern has been voiced about the growing number of international students who remain permanently in the United States after completion of their degree requirements. Every year a considerable number of foreign students are being lost to their host countries. This loss of educated manpower has created the problem of the brain drain in many countries of the world. Only recently have social scientists turned their attention to these important questions.

THE PROBLEM

A flourishing economy boosted by additional oil revenues plus the increasing demand for trained professionals have beckoned Iranians home.14 As a result, Ramazani remarks


that the return of an increasing number of foreign university graduates to Iran has combined with other factors "to endow Iran with a growing body of planners." The flow of returning Iranian graduates from foreign educational institutions has focused attention upon the educational experiences of this group and the applicability of education abroad.

Statement of the Problem

Little empirical data exist on the extent to which a returning American-educated Iranian is able to utilize his training. A carefully designed investigation is needed to examine: (1) the problems faced by Iranian students while attending American universities, and (2) the relevancy and applicability of the academic training received by Iranian students in American universities.

Objectives of the Study

This study was primarily designed to:

1. Identify the problems faced by Iranian students in terms of academic, economic, and social experiences encountered while attending American universities.

2. Identify the degree of satisfaction of Iranian alumni in terms of their personal assessment of the academic and social aspects of their American university experience.

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3. Determine the relevancy and applicability of American education for Iranian alumni upon their return to employment in Iran.

4. Determine the nature of Iranian alumni's employment and the degree to which American education has enhanced their employment opportunities.

RATIONALE

Importance of the Study

Margaret Cormack indicates that there exists an abundance of research material concerned with international education. Most available research has been primarily program-oriented as opposed to being student-oriented. She recommends that new research studies are necessary in order to determine the long-range results in international terms as well as academic goals. Another report prepared for the United States Bureau of Educational and Cultural Affairs notes:

That the leaders of government, industry, technology, education, and science will be drawn from the ranks of these international students can hardly be doubted. . . . That among them are individuals whose feelings and opinions about the United States may some day affect this nation's destiny is easily possible. The Congress has formally recognized that the national interest is affected by what happens to these thousands of foreign students.

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The report also stresses that the existing problems must be examined and that educators should strive to eliminate as much as possible any causes of dissatisfaction among international students. Shao remarks that American educational institutions, by accepting international students, share in the responsibility of training native leaders. These nationals will have acquired the necessary training to aid in raising the levels of their national and social developments. Consequently, those nations may become partners with the more developed countries.

Through the acquisition of information about the major causes of dissatisfaction among international students, a better understanding of their problems may be reached. Many of these students have failed in their academic work simply because they have encountered personal and social difficulties too great to overcome. With a broader understanding and deeper insight regarding these problems, American universities would be better equipped to provide worthwhile experiences for this ever-increasing body of students. A participant at the Colloquium on the Foreign Graduate

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18 Ibid., p. ii.
19 Otis H. Shao, loc. cit.
20 Ibid., p. 32.
Student speculated that, "Social experiences may be remembered long after classwork is forgotten."21

Regarding cross-cultural education, Metraux has written:

The institution of higher learning remains the focus of specific experience in cross-cultural education and the responsibility for successfully reaching the immediate and long-range goals of exchange programs rests primarily with the universities and colleges . . . The basic assumption in all exchanges of students is that . . . their objectives will be served by an academic experience.22

Along with Metraux, other experts in the field of international education concur that it is the duty of educational institutions to provide sound academic and personal experiences for their foreign students.23

The academic programs of American educational institutions have often come under scrutiny in regard to the relevancy of training received by international students. A Committee on Educational Interchange Policy posed the following questions: "Are the concepts taught applicable primarily to the U. S., or do they have wider applicability?


23 The College, the University, and the Foreign Student, op. cit., p. 19.
Is the program influenced too heavily by U. S. professional requirements and not enough for home country needs? Does the program prepare the student both for his first assignment and for greater responsibility later?"24

In remarks delivered at a colloquium on foreign graduate students, Ivan Putman noted:

American education is American education—parochial in many ways—designed for American students who will work in an American setting. Americans have assumed that our educational system is universal, a cultural constant. It is so much a part of our lives that it has never occurred to us that it may not be applicable abroad. But there are problems in exporting it.25

The applicability of the training received by an international student should be a component of his total American educational experience. The National Association for Foreign Student Affairs has declared that educational administrators and policy planners should assess what their institutions are able to offer the international student in terms of his own and his country's needs.26

In reviewing various studies, Walton relates that research has shown that there is considerable variation in the reported usefulness of foreign training in developing

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25 The National Liaison Committee on Foreign Student Admissions, op. cit., p. 13.

26 The College, the University, and the Foreign Student, op. cit., p. 12.
nations. On the basis of previous studies, Walton has drawn some generalizations about the use of training in developing countries. They are as follows:

1. An expanding economy favors the prompt use of training.

2. Those with a foreign education use their training eventually, but some have a long wait.

3. In a tight employment situation the foreign educated often have a better chance of employment than those without foreign experience.

4. Jobs held by returned students are not always in the specific field for which the students were trained.

5. The social contacts and family position of returned students are important factors in determining when and how he will use his training.

6. The reputation of American education abroad has some influence on whether training is immediately useful.

7. Those who study abroad at the graduate level have a better chance of putting their training to immediate use than those who study at the under-graduate level.

8. The skills of the generalist are more useful in the long run than narrowly specialized skills.27

With the growing body of international students coming to the United States, and the diversity of the programs offered by educational institutions, new figures are

necessary to determine the present status of these many foreign graduates. After graduation, contact between the institution and the alumnus is often lost. Poor communication between the educational institution and its alumnus is particularly common in the case of the foreign student.

Purpose of the Study

The general purpose of the present study is primarily two fold: (1) to analyze the sojourn period in terms of the academic and social experiences of a selected group of Iranian alumni who have returned to Iran, and (2) the relevancy and applicability, as perceived by the graduates, of their American education.

THEORETICAL FRAMEWORK

The present investigation was based upon several assumptions and limitations. Included are the assumptions, limitations, and definitions of terms applicable to this study:

Assumptions

The underlying assumptions upon which the merit of the findings rest are:

1. This study will provide understanding and insights into the nature of the sojourn experiences of a group of Iranian alumni by examining the academic phase of their American education.
2. By examining the more serious areas of difficulties, that is, social and economic, this study may aid in the formulation of possible solutions to these problems.

3. In focusing attention on the relevancy of American education as viewed by the subjects, this study may encourage the re-examination of the objectives of education abroad by both the sponsoring agencies and the prospective international student.

Limitations

This study was limited to the following:

1. A group of selected Iranian students who have returned to Iran after receiving degrees.

2. Iranian students who graduated from any one of the nine campuses of the University of California: Berkeley, Davis, Irvine, Los Angeles, Riverside, San Diego, San Francisco, Santa Barbara, and Santa Cruz.

3. Iranian students who graduated from the University of California campuses during the ten-year period starting with the academic year of 1963-64 and ending with the academic year of 1972-73.

Definitions of Terms

Terms applicable to this study were defined as follows:

1. Cross-cultural education -- defined as the social process of acquiring knowledge of an intellectual or technical nature, usually under institutionalized conditions, outside one's own social and cultural
environment. Synonymous terms are international education, study abroad, foreign study, and educational exchange-of-persons.

2. **International student** -- a term used to refer to a person(s) from outside the continental United States who comes to this country for educational purposes. Synonymous terms are students from abroad, students from other lands, foreign students, visiting scholars and exchange students.

3. **Experience** -- knowledge, skills, or practice derived from direct observation of or participation in events; something personally encountered, undergone, or lived through.

4. **Satisfaction** -- defined as fulfillment of a need or want.

**DESIGN AND PROCEDURE**

**Selection of the Sample**

The subjects of this study were Iranian alumni from the nine campuses of the University of California who have returned to Iran. The names and addresses of the subjects were secured from the publications prepared by the Ministry of Science and Higher Education of Iran. Seventy-six alumni were interviewed.

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29 Ibid.


31 Ibid., p. 765.
Instrument Development

A questionnaire was designed to accumulate data relevant to the objectives of this study. The questionnaire was divided into two areas: (1) general information, and (2) institutional information. The items contained therein were carefully selected through a survey of the related literature, review of the assorted questionnaires utilized in similar studies, and from the personal experiences of the researcher. Upon approval of the questionnaire items by the chairperson of the dissertation committee, a pilot study was conducted. The subjects of the pilot study comprised a group of twenty international students at the University of the Pacific. After examination of the data obtained from the pilot study, several items were eliminated from the questionnaire.

Organization of the Study

In the present chapter, the state of the problem and the objectives of this investigation were introduced. A brief background of the importance of the study was presented. This investigation will be continued in the four remaining chapters as follows:

1. Chapter 2 will contain a review of the related literature; the goals of educational exchange, the impact of the brain-drain, and the problems faced by international students will be discussed.

2. Chapter 3 will include the design and procedure of the study. Selection of the sample and the arrangements made for securing the interviews will be reported.
3. Chapter 4 will consist of an analysis of the obtained data. The seventy-six alumni will be classified according to age upon graduation, sex, fields of study, length of stay in the United States, degrees received, and campuses attended.

4. Chapter 5 will present a summary of the findings based upon an analysis of the structured interviews. This investigation will be concluded with recommendations for further studies.

SUMMARY

This chapter has outlined the concern of educational policy planners and administrators over the growing body of international students in United States educational institutions. The emphasis placed on the educational aspect as the prime objective of international exchange programs brings us to the question of the applicability and relevancy of American education in foreign lands. Institutions of higher learning must provide programs to the international student which meet two types of needs: the immediate and practical, and the long range. "Foreign student programs... in this country should be viewed as part of the total international commitment."\(^{32}\)

\(^{32}\)The College, the University, and the Foreign Student, op. cit., p. 25.
Chapter 2

REVIEW OF THE RELATED LITERATURE

This chapter will be devoted to a review of the literature applicable to this study. Attention will be focused upon the following major areas of interest: (1) international education and exchange; (2) problems of international students; (3) Iranian students; (4) impact of the brain drain; (5) returned Iranian graduates.

INTERNATIONAL EDUCATION AND EXCHANGE

The history of educational exchange is as old as man's quest for knowledge. The earliest records of cultural interchange date back to pre-Biblical times. There exists considerable evidence of the occurrence of educational sojourns across cultural and national boundary lines during the early Christian era.\(^1\) An historical analysis of international education and cross-cultural exchange throughout

the centuries reveals that such activities have followed the
increase in world population.²

There was a long and slow increase in the exchange
of persons across cultural boundaries until the eighteenth
century. Upon the advent of the Industrial Revolution,
there was a tremendous increase in educational borrowing
among the world’s scholars.³ The major thrust of this
phenomenon came in the twentieth century and after World
War II. The rapid development of international education
in recent years can be attributed to more efficient modes
of transportation and communication. Consequently, the
shrinking distances between nations have resulted in a grow­
ing awareness and concern among individuals of all cultures
for each other.

On the significance of international education, it
has been noted that:

The accelerated pace of man’s quest for know­
ledge in the twentieth century has been accom­
panied by an effort to bring the benefits of new
knowledge to all men. This revolution has touched
every continent and has left few institutions un­
changed. By any measure, the impact of education
has been significant, and there are many who pre­
dict that the ultimate consequences will reshape
the world.⁴

² Steven E. Deutsch, International Education and
Exchange: A Sociological Analysis (Cleveland: The Press
of Case Western Reserve University, 1970), p. 4.

³ William W. Brickman, "Historical Framework of
International Student Inter-change," Exchange, Winter
1968, pp. 27-35.

⁴ David G. Scanlon and James J. Shields, Jr., eds.,
Problems and Prospects in International Education, (New York:
The impact of international education has far-reaching implications in today's world. The benefits of exchange are not limited solely to the travelling scholar. Both the host country and their native homeland of the student share an interest in the educational and cultural experiences gained from study abroad. Accordingly, there are three main groups which participate in the process of international education: the host nation; the student; and his country of origin. Regarding the goals of international education, each group expresses various objectives and expectations, some of which are unique to a particular group, while others are commonly shared.

The Purposes of International Education and Exchange

Personal and professional advancement of the individual has always been the major motivation for study abroad. On this account Metraux remarks:

By the end of the eighteenth century, there had developed in Western Society two principal motivations for study abroad: it was a way of acquiring knowledge when centers of learning were few, and a means of completing the educational process by contacts with other peoples and other mores. As a social phenomenon, cross-cultural education was almost entirely subject to individual initiative often motivated merely by a well-established tradition.5

In the field of foreign study, the primary area of emphasis is concerned with the participating student. The

5Guy S. Metraux, op. cit., p. 6.
invaluable experiences obtained through studying in foreign cultures can hardly be denied. Study abroad presents a unique aspect of education that enables the student to gain understanding and respect for the existing differences among the peoples of the world. Abrams relates the benefits to be obtained from this type of educational experience as being: (1) a knowledge and understanding of his host culture and the world in general; (2) a more objective understanding of his own culture; and (3) a more objective understanding of himself and his values, and an advance in maturity and in independence. 6

After reviewing several hundred random applications submitted by prospective students to the Institute of International Education, the Committee on Educational Interchange Policy found that the following goals were given by students in decreasing order of frequency:

1. To advance the candidate's personal and professional development.

2. To prepare the candidate for service to his home country through the acquisition of additional knowledge and skills.

3. To promote international understanding.

4. To contribute to the advancement of knowledge through cooperative study and research with professional colleagues in the United States.7


In addition to the above formally stated objectives for international study, students also hold private reasons for their desire to study abroad. Many subjects questioned replied that curiosity and a desire to travel had motivated them to apply to American institutions. Some expressed a desire to acquire new skills, with many voicing the hope that a foreign education would increase their opportunities for professional advancement. The privately held objectives of students do not necessarily coincide with the intentions of the various private and government sponsors of international students.

The trends of the twentieth century in international education has turned its focus upon other objectives beside the basic individual motivation and personal initiatives. International education and exchange of today is concerned with not only the students and scholars, but many other people and institutions. The financing of study abroad through the sponsorship by various organizations has resulted in what has been termed "directed educational exchange." If the wandering scholars of other ages traveled on their own resources, many of today's students travel on other people's money.

The international students of today are sponsored


9Irwin Abrams and David E. Arnold, loc. cit.
by a variety of organizations and institutions. Both the United States government, and the governments of the students, international organizations, private foundations, voluntary agencies, and corporations are contributors to the education of these students. 10

The "typical" foreign student -- "the cultivated youth from a wealthy Western European family who comes on his own financial resources for his own special purposes", is the exception, rather than the rule, on the present international educational scene. 11 Education has come to be viewed by the governments of the world as the means to which economic development and success may be achieved. The "new typical foreign student" hails from the emerging and developing countries of the world. A survey conducted in the United States found that the areas of Asia, Africa, and the Middle East were the chief contributors of international students. 12

The numbers of sponsoring agencies and governments which financially aid the foreign education of their nationals are so great, that there exists no list of formal objectives

11 Ibid., p. 5.
regarding the purposes underlying the support of study abroad. Perhaps, the views held by those governments and organizations which aid international students would most closely approximate those offered by Cajoleas:

1. The exchange of ideas in all fields of study.
2. The contributions of experts to the development of less technologically advanced countries.
3. The realization of world peace through international cooperation and understanding.

The world-wide emphasis on educational training and its importance in national development has received particular attention in the developing countries. In an all-out effort to strengthen their educational facilities, most developing countries are sending large numbers of their nationals abroad every year. The immediate demand for trained personnel in these countries is so great that they must import foreign researchers.  

In an annual report, the Institute of International Education indicated that the 3 percent increase of the international student population in the United States during


14 Committee on Educational Interchange Policy, op. cit., p. 3.
the academic year of 1973-74 was the result of an increased number of students from the developing countries. The number of students from Latin America, Africa, and in particular, the Near and Middle East rose significantly. In the same period, the number of Iranian students indicates a growth of 22 percent from the previous year.\textsuperscript{15}

The increasing number of international students seeking admission into American educational institutions indicate a world-wide outreach for the educational opportunities available in the United States. Approximately one-third of the students who leave their homelands for study abroad journey to the United States.\textsuperscript{16} As a result of the increasing international student populations, American educational institutions are being faced with a unique challenge -- "the furthering of the economic, political, and social development of many countries through the education of great numbers of their nationals who are expected to fill positions of leadership.\textsuperscript{17}

A report of the Board of Foreign Scholarships, Department of State indicated that educational exchange:

\begin{itemize}
  \item \textsuperscript{16}Hugh M. Jenkins, NAFSA and the Student Abroad, (Washington, D. C.: National Association for Foreign Student Affairs, 1973), p. 2.
  \item \textsuperscript{17}The College, the University, and the Foreign Student, loc. cit.
\end{itemize}
1. Is now established as an important and continuing aspect of America's relations with other countries.

2. Has become a recognized and proven means of increasing understanding between nations and peoples.

3. Has become a reciprocal benefit extended by the government of the United States and the governments of nearly all countries in the world, to one another.

4. Is now accepted and established as a valuable means of assisting the newly independent countries in their educational development.

5. Is today nationally recognized -- and supported -- as an essential means of strengthening the competence of the United States and its citizens to meet their responsibilities in other parts of the world.\(^{18}\)

The Institute of International Education, in reference to the goals of exchange of the major organizations or institutions sponsoring visiting scholars, notes that the promotion of international understanding and world peace rank first in importance. The development of friends and supporters of the United States took the second priority. The United States contribution to the economic, social, or political development of other countries was listed as the third important purpose. The advancement of the individual's educational or professional development, voiced by students as

being the most important, preceded the advancement of knowledge for the general welfare of mankind. 19

Although the purposes of international education expressed by the three participating groups -- the student, his homeland, and the host country -- are commonly shared, it is noteworthy that different priorities are given to each objective. While the goals of the student have been formulated in terms of personal advancement, the aims of the governments, institutions, and agencies which support him have been based upon a concern for national interest and international understanding. 20

Regardless of the stated objectives of sponsoring agencies or governments, the cross-cultural education of international students is fundamentally concerned with education. 21 After examining the numerous goals and motivations in the international education field, Du Bois suggests that the one safe generalization is that "the goals and the motives of foreign study must be educational." 22

19 Committee on Educational Interchange Policy, loc. cit.

20 Irwin Abrams and David B. Arnold, loc. cit.


22 Cora Du Bois, op. cit., p. 16.
Relevancy and Applicability of American Education

The emphasis placed upon the educational aspect of study abroad poses a unique question -- Can American education be universally applied? A great deal of research studies conducted on international exchange was focused upon "favorable" attitudes of foreign students toward the United States, and the "adjustment" of these students. 23 Relatively few studies have examined the relevancy of the education received by these students to the needs of their homelands.

The Committee on Educational Interchange Policy stated that students from developing countries believe that the American approach to education is practical, and that this factor is one reason for their selection of the United States. The Committee noted, however, that many graduates returning to their home lands find no practical relevance between their training and their career development in their own countries. 24

In a study conducted by Green on 1110 international alumni of Cornell University, only three percent of the respondents reported that their university experience was


of little or no use. A few attributed this to the fact that the jobs available to them or the careers in which they found themselves were not related to the training they had received. Approximately one-fourth of the group indicated that their training was in one way or another "not compatible with the situation to which they returned," that is, social attitudes against any sort of change, resentment for "American" ideas, the "chaotic state of departmental organization," or that the training received was premature for the country.  

Despite these problems encountered, two-thirds of the alumni rated their American education as being highly useful. Individuals who had been admitted with graduate status more frequently reported that their training received was highly useful, as compared with those admitted with undergraduate status.  

In a study on returned Indian students, it was found that students who were well trained in methodology and principles were better prepared for employment in their own country. The reasons cited were that these students were more "able to strip away the cultural patterns surrounding their acquired skills and to apply them to Indian


26 Ibid.
This group of students, however, represented only the small portion of students studied. Out of 110 students educated in England or the United States, few with advanced degrees were able to utilize the knowledge they had gained.

The Useem's study recommended that learning skills in developing and improvising to meet practical needs was more valuable than learning the exact ways in which they were applied to local conditions. Practical field work and actual experience were stressed as being a useful means of increasing the student's self-confidence. This sort of training was rated highly valuable by both the returnee, and Indians who were in positions to employ the foreign-trained.

The importance of providing the foreign student with the training and information he needs, and will be able to apply successfully on his return, was stressed by Beals and Humphrey in their study on returned Mexican students. Another study on returned Swedish students

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28 Ibid., pp. 204-219.

reflects on the favorable, "efficient or fruitful" aspects of American education by stating that the students "find much of this adaptable material in the United States, and are using it vigorously and effectively in their home country."\(^{30}\)

Returned international alumni of Columbia University were asked to give recommendations for the improvement of the Teachers College program for foreign students. The most commonly stated suggestion from the eighty-one respondents was: "Help students relate educational principles to problems in their home countries".\(^{31}\) One solution to aid in this was that American professors should provide special assignments to international students which would enable them to "discover universal principles by stripping away the cultural baggage and then to apply these principles to situations in their respective cultures".\(^{32}\)

Americans have assumed that their educational system is universal, but there are problems in exporting it. The applicability of United States training to other cultures


\(^{32}\)Ibid., p. 128.
should be a component of the total American educational experience. 33 Some students feel, however, that the theoretical knowledge presented in universities and colleges is inapplicable to the practical problems they will encounter upon their return. 34

That international students have reported some difficulties in applying American education to their own cultures, does not necessarily mean that United States educators must change the curriculum for the purposes of catering to the foreign student element. Perhaps a more thoughtful and conscientious selection of the courses offered in universities would contribute to a more sound education for the international student. An analysis of the comments made by alumni in Cajoleas' study revealed that at least one out of every five students would have benefited from the study of the processes and the methods of social change. 35 It can be concluded that the ability to "adapt" facts, theories, and methods to any situation is equally as important as the knowledge itself.

34 Steven E. Deutsch, op. cit., p. 179.
35 Louis Cajoleas, op. cit., p. 239.
PROBLEMS OF INTERNATIONAL STUDENTS

Foreign students share certain similarities which set them apart from those who study in their own country. These students experience adjustment difficulties while they are in a different national setting and culture. In many cases the difficulties are seriously intensified when the students must use a second language to overcome their problem. 36

In a report prepared for the National Association for Foreign Student Affairs, the committee remarked that:

Foreign students do have problems and concerns that are different -- some in kind, some merely in degree -- from those of American students . . . yet, many institutions do not assume even as much responsibility toward foreign students as they do toward American students in terms of providing them with adequate information, admitting them with due regard for their needs and looking after them once they are here. 37

The areas in which international students often experience difficulties are numerous. Researchers concerned with the situation of these students have primarily dealt with the adjustment aspects. Storm presents a list of potential problems which may face the foreign student:


37 The College, the University and the Foreign Student, loc. cit., p. 9.
1. The language barrier may prevent him from doing first-quality work at an advanced level.

2. The cultural adjustment may be too great so that he remains a miserable outsider during his entire stay in the country.

3. The backwardness of his country may cause him to feel insecure and inadequate.

4. He may become pessimistic about his ability to make a useful transfer of his learning.38

A definite line can not be drawn between each area of potential problems, for the situation of foreign students in a different culture is complex. Many of these problems are interwoven. For the purpose of simplicity the investigator has categorized the problems of foreign students into the pre-sojourn experiences, academic problems, and non-academic problems.

Pre-sojourn Experiences of International Students

The amount of accurate information the international student has about the situation which he is about to enter plays a significant role in his ultimate success. The more information he has about the new culture, the greater will be his ability to adapt. The analysis of a survey on foreign students in the United States revealed that more than one-half of the students had left their countries with

insufficient knowledge about the United States. Between one-half and two-thirds of these students lacked the preparation necessary to participate satisfactorily in their new culture. 39

Fifty-four percent of the students in another study indicated that they received either very little or no information about the United States prior to their departure. 40 The students who indicated that they had information about the United States, has learned this knowledge through various sources. The most frequent source of information mentioned were (1) friends and relatives, and (2) books and magazines. 41

In a study of Indian students a great majority of the respondents indicated that their contact with western culture had been through cinemas, books, magazines, and radio. Only a few stated that their knowledge about the West was through actual contact with Westerners. 42 All of those studied in a sample of Iranian students were reported to be influenced by the Hollywood pictures, which often do


41 Ibid.

not accurately portray American life. The students who had personal contacts with Americans held the most realistic perceptions of the United States. 43

Academic Problems of International Students

In 1965 a national survey was conducted on 1,500 foreign students enrolled in United States educational institutions of higher learning. Findings of this study revealed that approximately one-half of the respondents indicated that their English language ability was inadequate in coping with their studies. Almost 20 percent of the students rated their writing skills as poor, nearly 35 percent rated their oral skills as poor, and 14 percent rated their reading ability as poor. 44 Findings in another study also indicated that a high proportion of foreign students in the United States were poorly prepared in the usage of the English language. 45

Researchers believe that English language ability is a determining factor in the student's academic performance. An early study of the academic performance of foreign students at the University of Michigan indicated that 44


45 Steven E. Deutsch, op. cit., p. 71.
percent of the students were not performing satisfactorily. At the graduate level one out of every two students admitted with bachelor's degrees incurred probation at some point, compared with one out of five of those with master's, and one out of three of those holding doctorate degrees. An analysis of a comparative study involving American and foreign students indicated that foreigners were less successful than their American counterparts.

When the grade-point averages of a sample of 156 foreign students were compared with a control group of American students, the foreign students ranked below. No relationship was found between sex, age, type of degree, or previous educational experience, and the grade-point averages. Marital status and the students' proficiency in the English language were found to have a positive relationship with the grade-point averages. The low performance of foreign students in American educational institutions was also reported in a study at the University of Albany. Findings of this


study revealed that foreign students tend to score lower than American students at the same institution. 49

The academic pressures in American institutions have also created problems for international students. Many of the academic problems of foreign students are not generated by their alien cultures. The competitive nature of American educational institutions and the consequent high pressure placed upon individual students have contributed to the creation of their academic problems. 50

Other problems of an academic nature reported by foreign students are: (1) the adjustment to new methods of instruction; (2) securing data for and writing research papers; and (3) meeting the requirements for the degree. 51 Similar problems were reported by a group of returned Indian alumni from United States educational institutions. Regular weekly class assignments, participation in classroom discussions, the system of quizzes and timed tests, and the use of laboratory equipment were mentioned by the students when asked about their academic problems. 52


51 Louis P. Cajoleas, op. cit., p. 173.

52 John Useem and Ruth Hill Useem, loc. cit., p. 208.
Regardless of their low academic performance and difficulties with the English language, foreign students generally tend to be satisfied with their American education. In a study dealing with the problems faced by African students, the majority of the one thousand respondents were reportedly satisfied with their American educational experiences. Findings in another study revealed that foreign students were generally satisfied with their educational experiences. Twenty-nine percent of the 286 respondents indicated that they were completely satisfied with their American education, while 53 percent were mostly satisfied.

Non-Academic Difficulties of International Students

Not all of the problems of an international student are academic in nature. A foreign student is also a participating member of the community in which he lives, and a consumer of its many goods and services. Regardless of his academic performance, the foreign student must make an adjustment to his new environment. The adjustment phase represents the social-psychological aspect of the cross-cultural experience of the foreign student.

From the time of his arrival through his study, the international student passes through several phases of social

54 Steven E. Deutsch, op. cit., pp. 78-81.
55 Ibid., pp. 80-81.
and behavioral adjustments. These adjustment phases are presented below:

1. Spectator Phase. The student's experience tends to be limited to kaleidoscope impressions, without serious confrontations or difficulties or personal commitment to work toward their solution.

2. Involvement or Adaptive Phase. The student begins to involve himself actively in the host culture and to become emotionally engaged.

3. Coming to Terms Phase. Providing the sojourn is long enough, the student arrives at "modus vivendi," or the coming to terms phase. In this stage the student establishes satisfying personal relationships and arrives at a partial or total resolution of his personal and emotional problems.56

The most significant research theories on the behavioral adjustments of foreign students are the U-Curve and the W-Curve Theories. Researchers have found that the various adjustment phases through which the student must pass can be illustrated as a U-shaped Curve. In a study of 200 Norwegian students, it was found that those who had made satisfactory adjustments were the students who had lived in the United States less than 6 months and more than 18 months. In contrast the students who stayed in America from 6 to 18 months were less adjusted.57


duration of each phase was found to be dependent on the total length of stay.  

Other significant findings were the applicability of the U-shaped relationships between the duration of the sojourn and the adjustment of student upon his return to his homeland. The adjustment cycle with its ups and downs not only occurs when an individual adjusts to an alien social system, but also is repeated when the sojourner returns to his home environment. The nature of the behavioral adjustment and readjustment of the sojourner to his alien and native cultures leads to the extended U-Curve Theory which has been termed the W-shaped curve. The behavioral pattern of adjustments represented by both the U-curve and W-curve are not solely limited to students in a foreign culture. These theories are also applicable to individuals who change their geographical location within a country.

Observing the behavioral adjustments of a group of Iranian students, one investigator found that the newly arrived student observed life around himself with emotional detachment. After a year of being in the new culture, the student becomes more critical of his experiences. He will retreat more fully into the sub-culture of Iranian students.

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After the student has spent several years in the United States, he arrives at the phase of "modus vivendi," where he is more likely to see and accept people the way they are without making generalizations.60

The social experience of international students in the United States and their adjustments to the new environment have been the main theme of numerous research studies. One study revealed that a correlation existed between the nationality of the students and their reported problems. The study concluded that students from China and Turkey encountered more problems than the students coming from Norway or Canada. The researcher concluded that the cultural differences were an important element in adjustment.61

Similar findings were reported in another study on the social adjustments of international students. This investigation revealed that the students from underdeveloped nations were less integrated into their host culture than the students from the developed countries.62

In a study of 1,110 returned foreign alumni of Cornell University, it was found that 85 percent of the

60 Ruth C. Busch, op. cit., pp. 49-51.
62 Steven E. Deutsch, op. cit., pp. 76-77.
respondents were satisfied with their social experiences while at Cornell. Findings in another study revealed that 50 percent of the returned foreign alumni had experienced some difficulties in adjusting to American social customs. Sixty percent of the same sample reported that they had faced various personal problems. Financial difficulties accounted for one-third of the personal problems reported.

A study of foreign students in the New York City area found that 60 percent of the sample did not have enough money to get along with ease. Severe financial difficulties were reported by one-fifth of the entire foreign student population. Seventy-three percent of a sample of international students in another study reported that they experienced financial problems while in the United States. The students coming from underdeveloped countries encountered money problems more frequently than those from developed countries.

International students, particularly those from the

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63 Donald G. Green, loc. cit., p. 149.
64 Louis P. Cajoleas, op. cit., p. 173.
66 Steven E. Deutsch, op. cit., p. 81.
underdeveloped countries, experience many difficulties during their sojourn in the United States. The academic, social, and financial problems of these many students are compounded by the fact that they must communicate in a language which is foreign to them. Despite the numerous obstacles which confront the foreign student in an unfamiliar cultural setting, an increasing number of students leave their homelands every year to journey to the United States in search of an education.

**IRANIAN STUDENTS**

**Historical Background**

Oh, Ahuramazda, endow me with an educated child; a child who will participate within his community; a child who will strive for the happiness of his family, his city, and his country; an honorable child who may contribute to other's needs.  

This ancient Zoroastrian prayer of a parent for his child illustrates the great importance placed on education in Iranian society. This high esteem for education has been a continual theme in Iranian culture from the Achaemenid times. Education was regarded as an "intrinsic good worthy of honor and prestige and as an important instrument of self-protection, self-gain, and social mobility."  


Education, which was closely associated with the process of socialization and personality development, flourished in ancient and medieval Iran. Patriotism, the development of good moral character, physical fitness, and excellence in the various vocations were all sought in making a great nation. The ancient Iranian culture was well integrated, and education was a prime concern of the state. 69

The governmental influence on education was clearly illustrated during the reign of King Noshirwan the Just 531-579. As a result of his inspiration the University of Jundishapur became the greatest intellectual center of the time. There Greek, Jewish, Christian, Hindu, and Persian ideas were compared and exchanged. 70

In contrast to the type of leadership provided by King Noshirwan the Just, Emperor Justinian ruled neighboring Byzantium with a repressive government. During the anti-pagan campaign of Emperor Justinian many Byzantine scientists, philosophers, and craftsmen were expelled from Constantinople. The neighboring Persian Empire warmly welcomed this group of refugees at Jundishapur University. 71

Under the influence of King Noshirwan the thinkers of the time were able to continue their educational and cultural work and contribute to the greatness of the Persian Empire. At that time Persia was "the central mart for the exchange of ideas between the East and the West."

Persia, however, did not remain as a great center of learning. In 650 A.D., as a result of long-term fightings on her eastern, northern, and western frontiers, the weakened Persian Empire fell into the hands of Moslem Arabs. The invading Arabs attempted to stifle the Persian Zoroastrian culture in order to impose their own upon the people.

Persia remained under Arab rule for two centuries. As a result of rebellion against Arab political domination, regional kingdoms emerged in different areas of Persia by the middle of the ninth century. During the next four centuries Persia regained her old strength and glory once again, and became a focal center for cultural advancements and achievements. Many scientists and literary figures of that time made remarkable contributions to the furthering of knowledge and technology. Rhazes, the eminent physician; Khayyam, the exalted poet, philosopher, and mathematician; Ferdowsi, the outstanding epic poet; Avicenna, the prominent philosopher

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and physician; mighty writers and educators like Ghazzali, Nasir-al Din Tusi, Rumi, Sa'di, and many others attest to the greatness of the Persian culture during this period. 74

In the middle of the thirteenth century, Persia was once again invaded. This time Mongol troops destroyed the land. In many parts of the country the centers of learning were burned and the scholars were murdered. The Mongol invasion marked the beginning of a period of decline and cultural stagnation. Persia remained under Mongol domination for more than two centuries. The country was eventually reunified by the emergence of the Persian Safavid Dynasty in the sixteenth century. This period was characterized by advancements made in the fine arts and architectural designs. Heavy emphasis was placed on religious training, to the detriment of the sciences. 75

In contrast, the western cultures of the world were on the verge of progress, particularly in the application of the sciences. The Renaissance which took place in the West never occurred in the East, although it was brought on by the increased contacts with the East and accelerated by the Crusades. The Western world discovered the classics of the past in the Moslem lands, carried them back to Europe.


75 Mohamad Borhanmanesh, op. cit., p. 29.
This literature became the "source of a renaissance of the Human spirit in the fifteenth century." 76

In the early 1800's Persia became the center of a rivalry of interests between the British and Russians. In 1813, at the conclusion of the ten-year war with Russia, the Persian government signed a peace treaty in which the government of Persia submitted to the victory of Russian troops on her northern frontier. In 1828, after two years of fighting with Russia, the Persian government signed another peace treaty in which she relinquished additional territory to Russia. During the same period in 1838, Persia faced another defeat on her eastern frontier. When the government attempted to suppress a rebellion by the governor of the Persian province of Afghanistan, Great Britain interfered by declaring Afghanistan to be her protectorate, and waged war against Persia. The province of Afghanistan was subsequently lost. 77

These constant defeats resulted in the loss of Iran's traditional status among the neighboring nations, and forced her leaders to recognize the superiority of the West, particularly in the technological fields and administrative


disciplines. Borhanmanesh in this regard states:

To learn from Westerners, two major alternatives were available: (1) to invite Westerners to come to Iran and teach young Iranians; or (2) to send young Iranians abroad to learn from Westerners. The Iranian government decided to use both alternatives.\(^{78}\)

The Beginning of Study Abroad

He who is wise is powerful;
An old man's heart becomes young through knowledge.

--Ferdowsi

In the early nineteenth century the government of Iran began sending students to Europe in an effort to hasten westernization. The first government-sponsored student journeyed to England in 1810 for medical studies. England received five more students from Iran eight years later. This group studied the modern sciences. In 1848 another group of five students went to France for their studies.\(^{79}\)

Shah Nasir-un-Din in 1858 authorized the educational sojourn of 42 government-sponsored students to European educational institutions. This group of 42 students studied medicine, engineering, and political science. Each of these students received high government appointments upon his return. One of these students was selected to be the Minister

\(^{78}\) Mohamad Borhanmanesh, op. cit., p. 32.

\(^{79}\) A. Reza Arasteh, op. cit., p. 39.
of Public Instruction. The indispensible value received by the returned students was not disputed so the Iranian government continued to send more students to Europe for further study. Along with the Ministry of Public Instruction, other government agencies started to finance study abroad programs. In 1911 another group of 30 students was financed by various government agencies to study military sciences, social sciences, and agriculture in Europe. The number of Iranians in European education institutions in 1918 totalled 500 students. The break-down of students in the various European countries was reported as follows: France with 200 students; England with 34; and Germany with 9 students. The remaining Iranian students were scattered in Switzerland, Belgium, and other countries in Europe.

Although there was a growing need for modern education and trained personnel prior to the rise of Reza Shah in 1925, there existed little interest and concern for education. This period was characterized by an unstable government, particularly during the transitional period of 1914 to 1925. Shah Mohammed Reza in writings notes that:

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81 A. Reza Arasteh, op. cit., p. 40.
in those days education in Persia was the monopoly of the leisured classes and of the clergy, who kept this privilege to themselves, preventing it from spreading among the common people. They intended the public to remain in ignorance, so that they themselves might do whatever they wished.82

With the rise of Reza Shah to power in 1925, education became state-directed. In 1928 Parliament passed a bill concerning a foreign study program which was signed by Reza Shah. The first article of this bill authorized the government to send 100 students abroad every year for a five-year period of study.83 In accordance with the 1928 law, the Higher Council of Education decreed that the acute need for university teachers made it imperative that 35 percent of the one hundred students prepare themselves to become teachers in higher educational institutions. The Council ordered that the remaining 65 percent should enter the following professions: engineering, 25 percent; medicine and dentistry, 19 percent; agriculture, forestry and veterinary medicine, 12 percent; law and finance, 6 percent; and chemistry, 3 percent.84

In 1935 the total number of Iranians studying in European educational institutions rose to 1,170 students, four hundred of whom were sponsored solely by their families.

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83 See Appendix A.

84 Issa Sadiq, op. cit., p. 78.
At that time France was reported to be the most frequently chosen country. Other countries receiving high numbers of Iranian students were England, Germany, and Belgium.85 Table 2 presents a breakdown of the fields of study pursued by the Iranian students abroad at that time.

Table 2

The Fields of Specialization Pursued by Iranian Student Abroad, 1928-1934 in Preparation for University Position in Iran

<table>
<thead>
<tr>
<th>Fields of Specialization</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sciences</td>
<td>51</td>
</tr>
<tr>
<td>Mathematics</td>
<td>34</td>
</tr>
<tr>
<td>Language, literature, and philosophy</td>
<td>10</td>
</tr>
<tr>
<td>Education</td>
<td>7</td>
</tr>
<tr>
<td>History and geography</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>108</strong></td>
</tr>
</tbody>
</table>

Source:

*Education and Social Awakening in Iran*, p. 118.

Mass Exodus of Students Abroad

Politically, economically, and socially we have in recent years been advancing so fast that I am plagued by few of my old anxieties. But I still face plenty of frustration. I suppose what irritates me

most is inefficiency and slothfullness
and the lack of enough trained and high-
principled personnel. That is our only
serious problem today, for as that bottle-
neck is broken everything else is solved.\footnote{86}

The rapid flow of Iranian students, particularly to
the United States, became evident after World War II. One
of the characteristics of that period in Iran was rapid ur-
banization and industrialization, with a consequent demand
for educated manpower. The major contributing factor to
technological advancement was a series of long range Develop-
ment Plans initiated by the government in the late 1940's.
Coupled with these Development Plans was the Twelve-Point-
Reform Program of the White Revolution. Launched by the
Shah in 1962, the White Revolution was aimed at an equaliza-
tion of the distribution of wealth and the extension of social
justice for all.\footnote{87} The White Revolution redirected the
Iranian society toward economic prosperity and social awaking.

The economic development and social change were at-
tainable only through the education of the public. Educa-
tion was regarded as being the key to modernization.\footnote{88} A
survey conducted with a sample of four hundred Iranian literates

\footnotetext{86}{H. I. M. Mohammed Reza Pahlavi, op. cit., p. 320.}

\footnotetext{87}{Shahpour Rassekh, "Planning for Social Change,"
Iran Faces the Seventies, ed. Ehsan Yar-Shater (New York:

\footnotetext{88}{Joseph S. Szyliowicz, Education and Modernization
in the Middle East (Ithaca: Cornell University Press, 1973),
p. 2.}
residing in Tehran asked the question, "Which one particular field of development is of greatest importance to Iran?" Education was the most frequently cited field by the respondents.\textsuperscript{89}

The increased numbers of Iranian youths enrolled in educational institutions is a strong indication of the public regard for the importance of education. During the last two decades the enrollment figures of elementary and secondary schools increased from 316,905 in 1945\textsuperscript{90} to almost 2,500,000 students in 1965.\textsuperscript{91} Table 3 presents the growth of elementary and secondary education in Iran.

With the increased number of secondary school graduates, Iranian higher educational institutions found they could not absorb more than 10 percent of these students.\textsuperscript{92} In the school year of 1968-69, under the vastly expanded system of university admissions, some 17,000 out of 45,000 applicants received acceptance into higher educational institutions in Iran.\textsuperscript{93}

\textsuperscript{89} Marvin Zonis, \textit{The Political Elite of Iran}, op. cit., p. 32.


\textsuperscript{91} Shapour Rassekh, \textit{Iran Faces the Seventies}, op. cit., p. 151.


\textsuperscript{93} Marvin Zonis, "Higher Education and Social Change: Problems and Prospect," op. cit., p. 236.
In the minds of many young Iranians education is the necessary tool for the achievement of personal and social goals. Many of these students motivated by their high aspirations choose foreign countries for a continuation of their studies. For some of these students, the only alternative to their inability to gain entrance to universities within Iran, is study abroad. The attractiveness of study abroad was so great that at one time, there were more Iranians studying outside their country than were enrolled.

Table 3

The Growth of Elementary and Secondary Education in Iran

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Number of Students Enrolled at Elementary Schools</th>
<th>Students Enrolled at Secondary Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1945-46</td>
<td>287,905</td>
<td>29,000</td>
</tr>
<tr>
<td>1953-54</td>
<td>736,473</td>
<td>121,772</td>
</tr>
<tr>
<td>1959-60</td>
<td>1,327,376</td>
<td>253,000</td>
</tr>
<tr>
<td>1965-66</td>
<td>2,031,000</td>
<td>426,000</td>
</tr>
<tr>
<td>1972-73</td>
<td>3,738,000</td>
<td>1,328,000</td>
</tr>
</tbody>
</table>

Sources:

Iran Faces the Seventies, p. 151; and "A Comparison of Returning and Non-Returning Iranian Students in the United States," p. 5.

94 Marvin Zonis, The Political Elite of Iran, op. cit., p. 37.
at the universities of Tehran, Tabriz, Meshed, Ahwaz, the National Teachers' College, and the National University. 95

In addition to the promise of acquiring an education, another factor contributing to the flow of Iranian students abroad is the increased contact of Iran with the outside world. As a result of the impact of the mass media, never before have the people in Iranian society been so exposed to the western cultures. Radio, television, newspapers, and popular foreign movies have introduced the western way of life, as opposed to the traditional eastern "fatalistic outlook which justified human misery and backwardness as the will of the Almighty." 96 Many students, in hopeful anticipation of foreign travel, a better life and education, pack up and leave at the first opportunity.

The flow of Iranians abroad has been encouraged by the governmental policies enacted since World War II. In the early 1950's the Iranian government provided its students abroad with exchange money at approximately half the market price. In addition to the numerous full scholarships awarded to students, the government has also subsidized one hundred dollars a month to many of the students enrolled in full-time programs overseas. 97 In 1960 the Iranian government

96 Iraj Valipour, op. cit., p. 5.
97 M. Borhanmanesh, op. cit., pp. 36-37.
subsidized a total of $3.5 million in one year for foreign study. 98

The number of Iranian students outside Iran has grown so rapidly that the reported figures have varied widely. According to a UNESCO publication there were 7,610 Iranian students abroad in 1961. 99 In 1968 UNESCO reported that students from Iran studying abroad totalled 11,681. 100 These figures are presented in Table 4. The Iran Ministry of Science and Higher Education reported in 1971 that there were 18,035 students outside the country. This report included only those students possessing student passports, and did not include those holding regular passports. 101

In 1971 the Ministry of Science and Higher Education of Iran reported that in a random sampling of 398 returned students, 46 percent had been on student passports, while the remaining 54 percent had possessed regular passports. 102 The random sampling of 1,421 returned students in 1973 revealed that 44 percent held student passports. 103

101 Statistical Figures on Iranian Students Abroad and Students Sent Abroad by the Department of Student Affairs (Tehran: Ministry of Science and Higher Education, 1972), p. 2.
102 Ibid., 1971, p. 18.
103 Ibid., 1973, p. 36.
With these figures in mind, one can estimate that there are more than 30,000 Iranian students currently studying in educational institutions outside Iran.

Table 4
Students Abroad by Countries of Origin, Around 1968 (15 countries only)

<table>
<thead>
<tr>
<th>Country</th>
<th>Total</th>
<th>Rank of Country</th>
<th>As Percentage of Population Aged 20-24</th>
<th>Rank of Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taiwan</td>
<td>21,733</td>
<td>1</td>
<td>2.10</td>
<td>4</td>
</tr>
<tr>
<td>Jordan</td>
<td>21,205</td>
<td>2</td>
<td>10.86</td>
<td>1</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>20,178</td>
<td>3</td>
<td>0.13</td>
<td>14</td>
</tr>
<tr>
<td>Canada</td>
<td>15,094</td>
<td>4</td>
<td>0.93</td>
<td>6</td>
</tr>
<tr>
<td>India</td>
<td>14,025</td>
<td>5</td>
<td>0.03</td>
<td>15</td>
</tr>
<tr>
<td>Syria</td>
<td>12,584</td>
<td>6</td>
<td>2.65</td>
<td>3</td>
</tr>
<tr>
<td>Iran</td>
<td>11,681</td>
<td>7</td>
<td>0.53</td>
<td>8</td>
</tr>
<tr>
<td>U.K.</td>
<td>10,142</td>
<td>8</td>
<td>0.25</td>
<td>11</td>
</tr>
<tr>
<td>W. Germany</td>
<td>9,872</td>
<td>9</td>
<td>0.26</td>
<td>10</td>
</tr>
<tr>
<td>Greece</td>
<td>9,812</td>
<td>10</td>
<td>1.47</td>
<td>5</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>9,575</td>
<td>11</td>
<td>3.24</td>
<td>2</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>9,298</td>
<td>12</td>
<td>0.37</td>
<td>9</td>
</tr>
<tr>
<td>France</td>
<td>8,813</td>
<td>13</td>
<td>0.24</td>
<td>12</td>
</tr>
<tr>
<td>Malaysia</td>
<td>7,9494</td>
<td>14</td>
<td>0.89</td>
<td>7</td>
</tr>
<tr>
<td>Italy</td>
<td>7,528</td>
<td>15</td>
<td>0.20</td>
<td>13</td>
</tr>
</tbody>
</table>

Source:
The precise number of Iranian students in the United States is equally difficult to determine. The Iran Ministry of Science and Higher Education has reported that 7,889 of the 18,035 Iranians studying abroad in 1971 were pursuing their studies in United States educational institutions.\textsuperscript{104} The Institute of International Education has reported that there were 9,623 Iranian students engaged in studies in the United States in the academic year 1973-74.\textsuperscript{105} Another report prepared for the U. S. Department of State estimated that the number of Iranian students in the United States was much higher than had previously been reported. This report indicated that there were 25,567 students from the Middle East studying in the United States. Iran, with a total of 13,506 students was leading the way.\textsuperscript{106} The following table presents the number of students from the Middle East studying in the United States.

\begin{table}
\centering
\caption{Students from Near and Middle Eastern Countries in the U. S. in the Academic Year of 1973-74}
\begin{tabular}{lccc}
\hline
Home Country & Male* & Female* & Total \\
\hline
Afghanistan & 231 & 23 & 264 \\
Bahrain & 9 & 2 & 11 \\
\hline
\end{tabular}
\end{table}

\textsuperscript{104}Statistical Figures, op. cit., p. 29
\textsuperscript{105}Open Doors, 1975, op. cit., p. 2.
Table 5 (continued)

<table>
<thead>
<tr>
<th>Home Country</th>
<th>Male*</th>
<th>Female*</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyprus</td>
<td>153</td>
<td>47</td>
<td>200</td>
</tr>
<tr>
<td>Iran</td>
<td>8,053</td>
<td>910</td>
<td>9,623</td>
</tr>
<tr>
<td>Iraq</td>
<td>318</td>
<td>43</td>
<td>376</td>
</tr>
<tr>
<td>Israel</td>
<td>1,598</td>
<td>390</td>
<td>2,070</td>
</tr>
<tr>
<td>Jordan</td>
<td>862</td>
<td>69</td>
<td>977</td>
</tr>
<tr>
<td>Kuwait</td>
<td>524</td>
<td>44</td>
<td>596</td>
</tr>
<tr>
<td>Lebanon</td>
<td>1,303</td>
<td>132</td>
<td>1,494</td>
</tr>
<tr>
<td>Muscat and Oman</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2,976</td>
<td>166</td>
<td>3,301</td>
</tr>
<tr>
<td>Gatar</td>
<td>61</td>
<td>0</td>
<td>61</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>986</td>
<td>35</td>
<td>1,074</td>
</tr>
<tr>
<td>South Yemen</td>
<td>19</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Syria</td>
<td>349</td>
<td>41</td>
<td>416</td>
</tr>
<tr>
<td>Turkey</td>
<td>1,112</td>
<td>220</td>
<td>1,405</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Yemen</td>
<td>21</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>Near and Middle East**</td>
<td>18</td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Totals</td>
<td>18,601</td>
<td>2,124</td>
<td>21,946</td>
</tr>
</tbody>
</table>

*Answers for the question of sex were not provided for the total number of students reported.

**The respondents did not indicate their country of origin.

Source:

The number of Iranian students in the United States has more than tripled within the last ten years. This growth is partially due to the 22 percent increase between the years of 1973 and 1974.\textsuperscript{107} Table 6 presents the growth of the number of Iranian students in the United States in one decade. This population will continue to grow, for the number of Iranian applicants seeking admission into United States educational institutions is ever-increasing.

\textbf{The Iranian Student in the United States: A Profile}

The typical Iranian student wishing to go to the United States to study is a single, twenty-year-old male who has graduated from a high school in the capital city of Tehran. This student usually journeys to the western part of the United States, enrolls in undergraduate studies, and is privately supported.

In 1968, the American Friends of the Middle East conducted a study on the records of more than 4,000 Iranians who had applied for study in the United States between the years of 1951 and 1966. An analysis of the records revealed that 95 percent of the applicants were privately supported by either themselves or their families. Only 10 percent of the sample were female, and the majority were between eighteen and twenty years old. Higher than 80 percent were  

\textsuperscript{107}Open Doors, 1975, op. cit., p. 1.
Table 6
Number of Iranian Students in the United States
1963-64 to 1973-74

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>* Male</th>
<th>* Female</th>
<th>Undergraduate</th>
<th>Masters</th>
<th>Doctorate</th>
<th>** Special</th>
<th>*** Other</th>
<th>No Answer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963-64</td>
<td>2,900</td>
<td>262</td>
<td>2,298</td>
<td>295</td>
<td>185</td>
<td>135</td>
<td>168</td>
<td>84</td>
<td>3,162</td>
</tr>
<tr>
<td>1964-65</td>
<td>3,391</td>
<td>328</td>
<td>2,736</td>
<td>364</td>
<td>214</td>
<td>155</td>
<td>146</td>
<td>104</td>
<td>3,719</td>
</tr>
<tr>
<td>1965-66</td>
<td>3,258</td>
<td>370</td>
<td>2,688</td>
<td>397</td>
<td>205</td>
<td>134</td>
<td>169</td>
<td>35</td>
<td>3,628</td>
</tr>
<tr>
<td>1966-67</td>
<td>3,899</td>
<td>467</td>
<td>3,242</td>
<td>458</td>
<td>246</td>
<td>123</td>
<td>256</td>
<td>21</td>
<td>4,346</td>
</tr>
<tr>
<td>1967-68</td>
<td>3,780</td>
<td>496</td>
<td>3,108</td>
<td>427</td>
<td>286</td>
<td>158</td>
<td>246</td>
<td>51</td>
<td>4,276</td>
</tr>
<tr>
<td>1968-69</td>
<td>4,021</td>
<td>533</td>
<td>3,260</td>
<td>459</td>
<td>334</td>
<td>164</td>
<td>290</td>
<td>47</td>
<td>4,554</td>
</tr>
<tr>
<td>1969-70</td>
<td>4,157</td>
<td>621</td>
<td>3,447</td>
<td>523</td>
<td>374</td>
<td>278</td>
<td>327</td>
<td>226</td>
<td>5,175</td>
</tr>
<tr>
<td>1970-71</td>
<td>5,474</td>
<td>773</td>
<td>4,577</td>
<td>690</td>
<td>394</td>
<td>171</td>
<td>509</td>
<td>61</td>
<td>6,402</td>
</tr>
<tr>
<td>1971-72</td>
<td>5,772</td>
<td>724</td>
<td>4,951</td>
<td>767</td>
<td>369</td>
<td>132</td>
<td>338</td>
<td>214</td>
<td>6,771</td>
</tr>
</tbody>
</table>
Table 6 (continued)

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>* Male</th>
<th>* Female</th>
<th>Undergraduate</th>
<th>Masters</th>
<th>Doctorate</th>
<th>** Special</th>
<th>*** Other</th>
<th>No Answer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972-73</td>
<td>6,494</td>
<td>876</td>
<td>5,658</td>
<td>666</td>
<td>377</td>
<td>170</td>
<td>723</td>
<td>244</td>
<td>7,838</td>
</tr>
<tr>
<td>1973-74</td>
<td>8,053</td>
<td>910</td>
<td>6,865</td>
<td>582</td>
<td>245</td>
<td>216</td>
<td>1,321</td>
<td>394</td>
<td>9,623</td>
</tr>
</tbody>
</table>

*Answers for the question of sex were not provided for the total number of students reported.

**Includes professional, unspecified, and no degrees.

***No degree.

Source:

single, and 96 percent had lived in Tehran.

Almost one-half of the group had applied for educational institutions in the western United States, and more than 70 percent had applied for undergraduate studies. The majority of students intended to study engineering, while only 10 percent planned to study the liberal arts. Both agriculture and medicine attracted more students than the liberal arts. 108

IMPACT OF THE BRAIN DRAIN

A precise determination of the number of Iranian students who remain abroad as permanent residents is extremely difficult to ascertain. This problem exists with every nationality group, where students have left their native countries for the purpose of pursuing their education. The difficulties encountered in making such a determination arise from the fact that not only reliable data are unobtainable, but also because of the awkwardness of identifying the student who will never return to his homeland. 109

Historically the phenomenon of human migration has been evidenced as being one of the ever-enduring characteristics of mankind. The migration of people across national


boundary lines has created such a tremendous impact upon the world, that no individual's life has remained untouched by its effects. The movements of talented individuals, whether for the purpose of increasing their intellectual freedom, or in search of others of similar interests and abilities, have greatly contributed to the growth of the great historic universities of the world. The venturing scholars of the world have indeed changed the course of history.

In modern times the migration patterns of the world's educated have been closely noted by every country's leaders and policy planners. The rapid growth of migration and its selectivity are causing a great deal of international attention and concern. In keeping with the past, current trends of migration are from the poor to the rich countries, from the under-developed to the developed regions, and from the under-privileged to the privileged nations. Great numbers of those students who leave their native countries in search of education programs which are more advanced than those available in their homelands, never return. Social scientists have termed this migration of people the "brain drain." Deutsch defines this phenomenon as:


... a one-sided movement of trained personnel from the developing nations to the developed nations. This phenomenon is referred to by the generic term "brain drain," which includes the more specific problem of non-returning foreign students and trainees.\textsuperscript{112}

Research studies on the brain drain indicate that the loss of trained intellectuels has exerted the greatest impact upon the nations in the greatest need of educated manpower — the developing countries. Students coming from these countries are the least likely to return. One study found that 20 to 90 percent of the students from the countries of Greece, India, Iran, Israel, Pakistan, and the Philippines do not return.\textsuperscript{113}

\textbf{Factors Causing Non-return}

There are numerous factors involved in making a decision not to return to one's native country. These factors which motivate a student to remain abroad can be categorized into two types: the "push" factors, being the negative inducements to return home; and the "pull" factors, being the positive inducements to remain.\textsuperscript{114}

The decision to return or not to return is made by the individual as a result of his attraction to, or repulsion from, the professional and social environments of both


\textsuperscript{114}Pan American Health Organization, \textit{Migration of Health Personnel, Scientists and Engineers from Latin America}, \textit{Scientific Publication 142}, (September 1966), p. 12.
countries involved. The causes underlying the push factors are as follows:

1. The inappropriateness of the educational policies in developing countries to absorb the educated in their labor market.

2. The improper balance between the economic growth and the capacity to absorb educated manpower into the economy.

3. Inappropriate manpower planning in developing countries.

4. Inconsistencies between the salary structure and the retention of highly educated manpower.

5. The social and traditional prejudices of some societies hinder the efficient use of high-level manpower.

6. Discriminatory attitudes and legislations against minority groups in some countries.

7. In some countries the political regime hinders the creation of academic freedom.

The causes which underly the "pull" factors of the more developed countries have been outlined as follows:

1. In developed countries, the demand for highly qualified manpower is increasing faster than what their educational institutions can produce.

2. The legislative acts toward the migration of highly qualified professionals from other countries are too lenient.

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3. The converse of all other push factors can be regarded as being pull factors.\textsuperscript{117}

Walton stresses the significance of the psychological alienation of the student from his home country and its culture as being a powerful "push" factor. Conditions in the developed countries which are recognized as being important "pull" factors include the high standards of living, high salaries paid, the rapid advancement opportunities available in the professional fields, and among others, marriage.\textsuperscript{118}

Other researchers have attributed a variety of other factors influencing one's decision to remain. Many students prolong their stay solely for the purpose of attaining work experience. Practical training is recognized by the students as being a means of enhancing employment opportunities at home. There is, however, a high rate of immigration among those students who engage in work experience in the United States.\textsuperscript{119} Students who are able to secure work in the United States which is suitable to their educational background are more likely to remain. Eighty-two percent of the non-returning Iranian students in one study

\begin{footnotes}
\footnote{117} Ibid., p. 16.
\end{footnotes}
reported that they had obtained work which was relevant to their training. In another survey conducted in Chile, the respondents gave the following reasons for migration: professional progress, 29 percent; better remuneration, 24 percent; better recognition of technical and scientific work, 16 percent; and more opportunity to carry out research, 13 percent.

The field of study chosen by students has also been cited as being an important factor causing students to remain abroad. Certain groups of professionals are more likely to immigrate than others. The most outstanding example of this phenomenon is the medical profession. During the years of 1956 to 1963, 1,700 foreign doctors and 500 foreign nurses residing in the United States applied to remain permanently.

The Brain Drain and the Subsequent Financial Loss

In the world wide movement of people, intellectuals and scientists move to the countries where they can make

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the best of their talents and skills. In this respect, Western Europe and the United States are the recipients or the "beneficiaries," and the developing countries are the losers or the "source" nations. Europe at the same time, however, loses as many scientists to the United States, as she receives from the developing countries. Figures 1 and 2 illustrate the migration of high-level manpower in 1967 to the United States, Canada and the United Kingdom.

There were 84,919 engineers, scientists, and physicians who migrated to the United States from 1948 to 1964. From this figure, 15,523 entered the United States in 1963-64 alone. Approximately 27 percent of all hospital residents and interns have graduated from universities outside the United States, as well as sixteen out of forty-three Nobel Prize winners who have represented the United States in physics and chemistry have been immigrants.

There are costs and benefits involved in the migration of skilled individuals. These financial losses and gains have affected the individual who migrates, his home country, and the country of his destination. One estimate of this loss was made on the basis of the value of a person's

Figure 1
Migration of High-Level Manpower to the United Kingdom 1967.
Figure 2
Migration of High-Level Manpower to the United States and Canada 1967.
life earnings to the community. As an example, England loses two hundred million pounds per year as a result of her medical doctors who migrate to the United States.\(^\text{126}\)

The financial loss of educating Iranian students abroad has been a prime concern of policy planners and administrators. In the late 1950's the government of Iran was spending as much money on the financing of foreign studies, as she was spending on all of her five provincial universities.\(^\text{127}\) In a speech delivered by His Imperial Majesty, he stressed this financial drain on the country and remarked:

> According to the reports presented to me by the government, the cost of educating the Iranian students abroad is estimated to be ninety million dollars annually. It would be better for the country if this money could be spent for the development of the Iranian universities.\(^\text{128}\)

The financial stress on Iran has been intensified by the fact that many of these students have not returned home. In the field of medicine alone, 10,000 of the 20,000 Iranians who recently graduated from medical schools abroad have not returned to Iran.\(^\text{129}\) Another report estimated

\(^{126}\) International Migration of Talent from and to the Less Developed Countries, op. cit., p. 13.


that up to 90 percent of the trained physicians of Iran, Argentina, Greece, Korea, Peru, the Phillipines, and Turkey are being lost to the United States. 130 There are reported to be more Iranian physicians practicing in New York state, than there are in all of Iran. 131

In a four year period from 1962 to 1966, the number of immigrants from the nine countries of the Middle East to the United States totalled 3,159 trained people. Table 7 presents the breakdown of this immigration index to the population index of these respective countries.

Not only do the developing countries suffer from the loss of high-level manpower and its consequent financial drain, but they also face a critical shortage of middle-level manpower. This category includes such skilled personnel as technicians, nurses, and agriculturists. It has been estimated that for every doctor or engineer to perform to his greatest capacity, three or four workers of middle-level skills are needed to assist him. In Iran, as in all of the developing countries, this under-supply of middle-level manpower is accompanied by an overabundance of graduates in non-productive and non-technical fields. The absorption

130 Barbara Walton, Foreign Student Exchange in Perspective, op. cit., p. 17.
Table 7

High-Level Emigration to the United States From the Middle East in Relation to Population Size 1962-1966

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Population in Millions</th>
<th>(2) Five-Year Emigration to United States</th>
<th>(3) Population Index (Turkey=100)</th>
<th>(4) Emigration Index Five-Year Total (Turkey=100)</th>
<th>Ratio of Columns 3 and 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greece</td>
<td>8.4 (1961)</td>
<td>569</td>
<td>27</td>
<td>102</td>
<td>3.8</td>
</tr>
<tr>
<td>Iran</td>
<td>25.8 (1966)</td>
<td>530</td>
<td>83</td>
<td>98</td>
<td>1.2</td>
</tr>
<tr>
<td>Iraq</td>
<td>8.3 (1965)</td>
<td>158</td>
<td>26</td>
<td>29</td>
<td>1.1</td>
</tr>
<tr>
<td>Israel</td>
<td>2.2 (1961)</td>
<td>647</td>
<td>7</td>
<td>120</td>
<td>17.2</td>
</tr>
<tr>
<td>Jordan</td>
<td>1.7 (1961)</td>
<td>117</td>
<td>5</td>
<td>220</td>
<td>44.0</td>
</tr>
<tr>
<td>Lebanon</td>
<td>2.4 (1965)</td>
<td>300</td>
<td>8</td>
<td>55</td>
<td>6.8</td>
</tr>
<tr>
<td>Syria</td>
<td>4.6 (1960)</td>
<td>113</td>
<td>15</td>
<td>210</td>
<td>14.0</td>
</tr>
<tr>
<td>Turkey</td>
<td>31.4 (1965)</td>
<td>541</td>
<td>100</td>
<td>100</td>
<td>1.0</td>
</tr>
<tr>
<td>United Arab Republic</td>
<td>30.1 (1966)</td>
<td>184</td>
<td>96</td>
<td>34</td>
<td>0.35</td>
</tr>
</tbody>
</table>

Source:

of these people into the labor market presents another serious problem. 132

Although the number of students in Iran enrolled in technical secondary schools increased from 9,117 to 47,451 within a ten-year period, the corresponding number of students enrolled in non-technical secondary schools was recorded as being 1,140,995 in the same year. 133 The enrollment of students at the various faculties of the Iranian higher educational institutions indicates that almost half of the students were engaged in non-productive fields of study during the sixties. 134 The government of Iran, in an effort to encourage students to study in the technical fields, has supported foreign study as a means of furthering the national development.

Non-returning Iranian Graduates

Iranian institutions of higher education can accommodate approximately 10 percent of all secondary school graduates. Many Iranians therefore chose to go abroad for study. The outflow of students abroad has created the problem of their consequent repatriation. Among other countries,


133 Educational Changes During the Ten Years of Revolution (Tehran: Ministry of Education, 1972), pp. 104-114.

Iran has experienced the return of fewer than 15 percent of its nationals from the United States. 135 A report in the early sixties estimated that 60 percent of the 30,000 Iranians living abroad had no intentions of returning to Iran. 136

According to an estimate made by an official of the government of Iran, approximately 50 percent of the privately supported students from middle-class families, and 60 percent of the government, foundation, and privately supported upper-class students do not return to Iran. Approximately 90 percent of the students who have failed academically do not wish to return home from Europe and the United States. 137

In contrast to these estimates, two studies conducted on Iranian students in the United States indicated a direct relationship between the student's social class status and his decision to return home. The study concluded that the non-returning Iranian students come from significantly lower income families. 138 All of the students from upper-class


138 Iraj Valipour, op. cit., p. 29.
families questioned in another study intended to return home. 139

In addition to the social status and economic position of the student's family, there are other factors which influence the student's decision to return home. The stronger the ties between the student and his family, his personal friends, and the extent of his communication with his homeland, the greater the chances are of his return. 140

Religious affiliations also influence the student's plans to return home or remain abroad. Of the fifteen students who were members of religious minority groups, thirteen expressed their intentions of staying in the United States, and the remaining two were still undecided at the time of the study. 141

The length of the educational sojourn was also reported to influence the students' intentions to return home, particularly those who had no definite pre-departure plans to remain abroad or to return. 142 The same study indicated that forty-eight of one hundred students interviewed expressed intentions of returning to Iran. Thirty-five of the

139 M. Borhanmanesh, "A Study of Iranian Students in Southern California" (unpublished Doctor's dissertation, University of California at Los Angeles, 1965), p. 82.
140 Iraj Valipour, op. cit., pp. 34-37.
141 M. Borhanmanesh, op. cit., p. 89.
142 Ibid., p. 93.
respondents indicated that they intended to remain in the United States. The remaining seventeen subjects of the study were still undecided. The most frequent reasons given by those students committed to staying were as follows:

1. More and better opportunities for employment in the United States.

2. The high standard of living and comfortable life available in the United States.

3. Security

4. More opportunities for research and intellectual activities.

5. Respect for manual labor.

6. Respect for privacy.  

Amuzegar takes a different look at the problem of the Iranian brain drain. He stresses that the statistical data on the "brain drain" more likely represents "bodies" than "brains." He accordingly categorizes the Iranian population in the United States into three classes.

A very small group consists of highly intelligent individuals whose talents could not be used in Iran because the physical environment and working conditions necessary to utilize these people do not yet exist there. He states that this group, which represents less than one-half of 1 percent of the population under consideration, does best by staying in the United States. The entire world benefits

143 Ibid., p. 139.
from their decision to remain where they can best exercise their gifts.

The largest group, the "petit bourgeois" Iranians, comprises 40 to 70 percent of the total number. These students frequently come to the United States after failing to gain admission into a university there. They usually arrive with insufficient funds, and must take up employment in the United States to support themselves. These students often must attend an English language school, and enroll in a few courses at a small college. They frequently end up marrying American girls. They have little to return to in Iran, and therefore stay in America, where they enjoy a higher status and fulfillment than is possible for them in Iran.

The third group accounts for between 30 to 60 percent of the Iranians who stay in the United States. These people are generally from good socioeconomic backgrounds and have been successful in their academic endeavors. It is this group of students whose return to Iran would be valuable to the interests and the growth of the country.144

Brain Gain Efforts

Recognizing the need to reattract their educated citizens, many of the developing countries have been engaged

in active recruitment programs designed to persuade their nationals to return home. The problem of non-returning graduates has concerned policy planners and administrators in both the developing and developed countries.

In 1966 a special committee was held in Washington, D. C. by manpower and migration experts working with the United States Congress. The committee concluded that the country of origin of the students was the locus for effective action. In this regard Senator Walter F. Mondale placed Iran in the ranks of those countries with the highest rate of non-returning students and declared that "until the fundamental and neglected problem of manpower utilization is met in the developing countries, there will continue to be a severe drain no matter what else we do."\(^{145}\)

Recommendations, however, have been drawn for the developed countries to help alleviate the problem of non-returning foreign graduates. Walton summarizes these recommendations into the following:

1. Raising university admission requirements so that fewer foreign students will enter United States universities.

2. Providing special study programs for foreign students closely related to the needs of their home countries.

3. Admitting only those students who are part of development projects at home or who are studying in fields clearly needed by their home countries.

4. Negotiating bilateral agreements with foreign governments to restrict immigration of these students.

5. Expanding the training of Americans in certain fields, such as medicine and engineering, where shortages attract foreigners.146

Recommendations have also been drawn for the developing countries so that they will be able to attract their expatriates back home. The following is a list of a few of the recommendations that have been offered:

1. Improved arrangements should be made by government and private professional recruiting agencies to facilitate the location and repatriation of their trained citizens.

2. Measures should be taken by the developing countries to help create a professional climate more conducive to the hopes and aspirations of the scientists, engineers, and doctors.

3. Developing countries should establish better screening procedures for the students wishing to go abroad.147

In the past few years renewed efforts have been undertaken by a number of Iranian ministries, agencies, and universities to encourage the return of graduates of both

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147 International Migration of Talent from and to the Less Developed Countries, op. cit., pp. 20-21.
European and North American universities. On this account, Szyliowicz terms the efforts of the government of Iran to reduce the brain drain as being part of a plan to initiate a "brain gain." Efforts have been made to reduce the flow of Iranian students abroad, and major recruiting programs have been formulated and enacted to persuade those residing and working abroad to return home. The thousands of foreign-educated Iranians who are returning home every year attest to the success of the Iranian "brain gain."

RETURNED IRANIAN GRADUATES

Iran's Development Plans and the Twelve-Point-Reform Program of the White Revolution have accelerated the growth of national awakening and contributed to an increase in the economic stability of the country. The growing number of educated citizens at home and abroad is evidence of the individual's upward social mobility in the culture. The need for new skills and profession is an indication that the traditional Iran is changing into a modern industrial society. As the number of Iranian graduates increase, the growth and expansion of a new social class becomes increasingly apparent. One decade after the White Revolution and

149 Joseph Szyliowicz, op. cit., p. 411.
Land Reform, Iran has become a new center of power in the region of the Middle East. 150

The political stability and increasing economic prosperity of Iran have intensified the country's efforts toward her repatriation programs. As a result more than one thousand foreign-educated Iranians are returning home every year. Many of these returned students are occupying "important technical, scientific, and administrative positions of all sorts." 151

Factors Influencing the Student's Decision to Return

The forces which influence the student to make the decision to return to Iran have been classified into three categories:

1. The degree of attachment to the home culture
2. The degree of acceptance of the host culture
3. Comparative opportunities in the home and in the host countries. 152

A study conducted on seventy-eight Iranian students in the United States found that a comparatively strong degree of attachment of the student to his home culture was the most significant characteristic of the returning student.


151 Joseph S. Szyliowicz, op. cit., p. 411.

152 Iraj Valipour, op. cit., p. 22.
The economic position and social status of the student's family were found to be important determining factors in his return. Those students who indicated plans to return reported that they came from significantly higher socio-economic backgrounds than those who wished to remain in the United States. 153

Another study of one hundred Iranian students in the United States revealed that all of the students coming from upper class families intended to return. As the social class of the students descended, there was found to be a corresponding decrease in the percentage of those who entertained the idea of returning to Iran. 154 One-fifth of the respondents in another study indicated that the primary reason for their return to Iran was that they felt more assured of status and security at home. 155 The findings of these three studies are not surprising. In Iran the social and economic position of the family is of crucial importance. The income, wealth, social status, and influence of the student's family will strongly influence the economic security and career success of the student.

As compared with the non-returning students, the returning students were found to have stronger emotional ties

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153 Ibid., p. 47.
154 M. Borhanmanesh, op. cit., p. 82.
with their families and more satisfying relationships with their friends in Iran. This group maintained better contact with the people in their home country, and were concerned with events happening there. When asked what they missed most from Iran, the majority of students replied that they missed their parents, relatives and friends. The returning students were found to be under much greater encouragement to return than were the non-returning students.¹⁵⁶

The most frequent reasons stated by returning Iranian students for their intention to return are given below in descending order of frequency:

1. To join their families in Iran

2. More and better employment opportunities in Iran

3. Feel like a foreigner in the United States

4. To be where their friends are

5. Easier and more comfortable life in Iran

6. Feel obligated to return to their homeland

7. Life in the United States is not interesting to them; they prefer to live in Iran¹⁵⁷

As compared to those Iranian students who did not wish to return, the returning group expressed a much strong sense of belonging and identification with their home culture.

¹⁵⁶Iraj Valipour, op. cit., pp. 35-47.

¹⁵⁷M. Borhanmanesh, op. cit., p. 136.
They voiced only moderate criticism of the social and political conditions in their country, while one-fifth of the group stated that they were fairly favorable to the developments in Iran. More than four-fifths of the returning students felt optimistic about the future of their country. 158

Many students seem to be motivated to return to Iran by a sense of patriotism. When asked for their reason for returning the response given two times as frequently as any other was patriotism. These students believed that they could both aid their country and maintain an adequate standard of living. 159 The second most compelling reason to return cited by students in another study was the expressed belief that they could be more helpful and useful in Iran. 160 The personal attitudes of the Western-trained Iranian are crucial to his success as a returnee. Patriotism, optimism, and a pioneering spirit are necessary if one is to meet the needs and demands of his country. 161

Both returning and non-returning Iranian students were found to be favorable in their opinions about the

158 Iraj Valipour, loc. cit.
159 George Baldwin, loc. cit.
160 Iraj Valipour, op. cit., p. 94.
161 Habib Naficy, op. cit., pp. 6-8.
United States. The returning students were reported to be somewhat less satisfied with their academic experiences. Dissatisfaction with the host culture, however, was not found to be the overriding factor in the decision to return. The positive inducements of the home situation were reported to be the prime motivating factors influencing the student's return. 162

The main purpose of the Iranian student who goes abroad is to acquire a better education as a means of personal advancement and social prestige. One of the major contributing factors to the decision to return is the student's anticipation of the prestige and importance placed on a foreign education in his home culture. Approximately three-fourths of a group of returning Iranian students maintained that the opportunities to secure positions of importance and social responsibility were greater in Iran than in the United States. Eighty-six percent of the same group believed that their home culture would award them greater personal standing and social status. 163 Sixty-three percent of the respondents in another study on returning Iranian students reported that they perceived their opportunities of employment in Iran to be either equal to, or better than those in the United States. 164

162 Iraj Valipour, loc. cit.
163 Ibid., pp. 83-84.
164 M. Borhanmanesh, op. cit., p. 143.
Educational Characteristics of Returned Iranian Graduates

The Iranian Plan Organization conducted a study in 1960 on 414 returned Iranian graduates. This study revealed that more than one-half of the respondents had left Iran in the forties and fifties, while the remaining number had departed prior to 1940. Eighty-six percent of the returnees had studied in the four countries of France, the United States, Germany and the United Kingdom. Slightly more than four and one-half percent had received their degrees in the Soviet Union. The remaining graduates had studied in the other countries of Asia and Europe. 165

A study of the Iranian elite found that approximately one-half of the group who pursued their education abroad did so primarily in Europe. France, with 40 percent of the Iranian graduates was the most popular host country. The United States, with 20 percent of the students ranked second. 166 In later years the United States surpassed France in receiving a greater number of Iranian students.

The Iran National Institute of Psychology studied the educational records of 3,200 Iranian graduates who had returned to Iran during 1963 and 1967. Only 1 percent of the graduates had studied in Russia, 2 percent in Asia, and 3 percent in the Middle Eastern countries. The United States

165 George Baldwin, op. cit., p. 270.
with 35 percent was the most popular host country. Approximately 19 percent of the graduates had obtained their degrees in Germany, 13 percent in England, and 11 percent in France. 167

During the years of 1971 and 1973 the number of foreign-educated Iranians who return to Iran totalled 6,168 students. The United States, with a total of 2,442 graduates, remained as the number one choice of the students. 168

The following table presents the numbers of Iranians who have graduated from educational institutions around the world.

Findings of a 1960 survey of returned foreign-educated Iranians revealed that almost one out of every three returnees were graduates of medical fields. Engineering accounted for nearly one-fifth of the total number of returnees. Agriculture, law and the social sciences had attracted slightly more than 10 percent of the students. The fields of fine arts, business, and education each constituted 3 to 4 percent of the total. 169

In another study of 3,200 returned students, a


### Table 8

Number of Returned Iranian Graduates from Five Foreign Countries in a Three Year Period

<table>
<thead>
<tr>
<th>Foreign Countries</th>
<th>1971a</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>1972b</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>1973c</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>646</td>
<td>90</td>
<td>736</td>
<td>693</td>
<td>124</td>
<td>817</td>
<td>775</td>
<td>114</td>
<td>889</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>374</td>
<td>28</td>
<td>402</td>
<td>317</td>
<td>26</td>
<td>343</td>
<td>430</td>
<td>41</td>
<td>471</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>England</td>
<td>172</td>
<td>60</td>
<td>232</td>
<td>175</td>
<td>66</td>
<td>241</td>
<td>181</td>
<td>66</td>
<td>247</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>122</td>
<td>29</td>
<td>151</td>
<td>116</td>
<td>22</td>
<td>138</td>
<td>109</td>
<td>34</td>
<td>143</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>89</td>
<td>7</td>
<td>96</td>
<td>77</td>
<td>10</td>
<td>87</td>
<td>78</td>
<td>7</td>
<td>85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other countries</td>
<td>268</td>
<td>51</td>
<td>329</td>
<td>329</td>
<td>54</td>
<td>383</td>
<td>318</td>
<td>60</td>
<td>378</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1671</td>
<td>275</td>
<td>1946</td>
<td>1707</td>
<td>302</td>
<td>2009</td>
<td>1891</td>
<td>322</td>
<td>2213</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources:

- Ibid., 1972, p. 3.
remarkably high proportion was reported to be in the technical fields. The areas of study were as follows: medicine, 26 percent; engineering, 26 percent; agriculture, 17 percent; mathematics and natural sciences, 8 percent. The remaining 23 percent of the graduates had studied the social sciences, fine arts, and other disciplines. ¹⁷⁰

There is a striking contrast between graduates of the Iranian educational institutions of higher learning and the foreign-educated Iranians. In the early sixties one-half of the university graduates in Iran had received their degrees in non-productive and non-technical fields. ¹⁷¹ In the early seventies approximately 70 percent of the total number of 6,168 returned students had studied in the technical fields abroad. Figure 3 presents the breakdown of the number of Iranian returnees educated in foreign lands.

A high proportion of returned Iranian students have obtained post-graduate degrees. As high as 84 percent of the sample in a 1960 survey returned with either a master's or doctorate degree. The holders of bachelor's degrees constituted only 10 percent of the sample. The remaining students had returned without degrees. ¹⁷²


Figure 3
Breakdown of the Number of Iranian Returnees Educated in Foreign Lands.
In 1968 a survey of 3,200 returnees reported that more than 60 percent of the graduates had received bachelor's degrees or lower. Post-graduate degrees constituted for less than 40 percent of the sample. The increase in the number of bachelor's degree holders had continued. More than two-thirds of the 6,168 Iranian foreign graduates who returned between 1971 and 1973 possessed bachelor's degrees. Master's degree holders accounted for almost twice as many Ph.D. holders. Approximately 13 percent of the total number of graduates had either received a degree lower than the bachelor's level or were specialized in their fields of study.

Some Personal Characteristics of Returned Graduates

The data analysis of the 1960 survey of returned Iranian graduates from foreign educational institutions revealed that four-fifths of the respondents were married, with 87 percent of that group having one or more children. Almost one-half of the samples were either twenty-five years of age or older. A high proportion of the returnees stayed abroad for five years or more, while 14 percent resided abroad for one year or less. The financial resources of

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174 Statistical Figures on Iranian Graduates from Foreign Countries and Students Sent Abroad, loc. cit.
176 Ibid., p. 272.
the respondents varied from family or private funds to scholarships and part-time employment. Two thirds of the graduates were financed by their families. More than one-half of the group received foreign or domestic scholarships. More than one-third of the respondents reported that they had worked to earn part of their expenses.\textsuperscript{177}

In 1973 the Iran Ministry of Science and Higher Education reported that in a random sampling of 1,421 returned students, 51 percent were single at the time of their arrival to Iran. Among the married students, approximately 38 percent had foreign spouses. The mean age of the respondents was 31.5 years. Sixty-eight percent of the sample were between twenty-five to thirty-five years of age. Only 20 percent were thirty-five to forty years old. Five percent were younger than twenty-five years, and 7 percent were older than forty years.\textsuperscript{178}

An overwhelming majority of the graduates were supported by their families. Most students reported more than one source of income. In addition to parental support many of the graduates had received money through various domestic and foreign scholarships.\textsuperscript{179}

A striking contrast has been found in the occupational patterns of the returned Iranian graduates. While 64 percent

\textsuperscript{177}Ibid., p. 278.

\textsuperscript{178}Statistical Figures on Iranian Graduates from Foreign Countries and Students Sent Abroad (Tehran: Ministry of Science and Higher Education, 1973), pp. 35-37.

\textsuperscript{179}Ibid., pp. 37-40.
of the fathers of foreign graduates were merchants, office employees, or land owners. 75 percent of the sons who had been educated abroad were doctors, office employees, engineers, or educators. One hundred and five of the sons were doctors and dentists, while only twenty-two of the respondent's fathers were reported to be in the same profession. There was a much higher proportion of engineers, educators, lawyers, and judges among the foreign-educated sons than among the fathers. 180

Power and prestige which was once associated with the ownership of land is now based upon education. Being aware of the importance of education in her development, Iran has welcomed and encouraged those individuals who have the skills and knowledge to contribute. The flourishing economy and the high demand for educated manpower have resulted in the ever-increasing numbers of foreign-educated Iranians returning home.

SUMMARY

The second chapter of this study was primarily designed to review the literature related to the following areas: (1) international education and exchange; (2) problems of international students; (3) Iranian students abroad; (4) the impact of the brain drain; and (5) returned Iranian graduates.

The individual's curiosity and desire to travel, coupled with the hope of improving one's station in life, have always been the prime motivating factors for cross-cultural education. Researchers have concluded that after World War II another dimension was added to the exchange of persons across national boundary lines. International education was encouraged and supported by the leaders of many nations who wished to strive for technological and scientific advancements in their countries.

Since World War II, the growth of the international student population in the United States has been phenomenal. Research studies have concluded that many of these students face academic, social, and personal problems which in many ways are unique to this group. The foreign student placed in an unfamiliar national and cultural setting faces numerous adjustment problems. These adjustment difficulties are intensified by the fact that the student must use a second language both to function in the society and to overcome his problems.

The ever-increasing number of Iranian students in the United States and the factors contributing to this flow were discussed. High esteem for education has been a continual theme in Iranian society. Education, and particularly a foreign education, has come to be regarded as an effective means of achieving upward social mobility. In hopes of acquiring a better education which will serve to enhance one's station in life, many young Iranians pack up and leave
home at the first chance.

One of the complications of international education is the fact that many students who leave their countries never return home. The absence of these many educated young men and women has created the problem of the brain drain in their countries. The impact of the brain drain is particularly acute among the developing countries.

In recent years, enhanced economic prosperity and political stability have drawn an increasing number of educated Iranians home. In the last section of the chapter a profile of the returned students was presented. The educational and personal characteristics of the foreign-educated Iranian was discussed. In Chapter 3 the research design and the procedures used in this study will be presented.
Chapter 3

THE DESIGN AND PROCEDURES OF THE STUDY

The design and procedures of this investigation, which was briefly outlined in Chapter 1, will be presented in detail in this chapter under the following sections: (1) identification of the population; (2) development of the survey instrument; (3) survey procedures; and (4) tabulation and treatment of the data.

IDENTIFICATION OF THE POPULATION

From the Iranian alumni populations of the University of California system, the investigator delimited a more specific group which was to participate in this study. The nature of the investigation required the elimination of the Iranian alumni who had not returned to Iran. Also excluded at the onset were the students who had graduated and returned to Iran prior to 1963. The remaining group of alumni was the survey population to be sampled.

Selection of the Sample

The sample of this study upon which the merit of the findings rest was a group of Iranian alumni from the various campuses of the University of California who had graduated
within a ten-year period starting with the 1963-64 academic year, and who had returned to Iran. In May of 1974, upon the request of the investigator, the Department of Student Affairs, Ministry of Science and Higher Education of Iran made it possible for the researcher to have access to the various directories of foreign-graduated Iranians residing in Iran. Each directory contained the names, addresses, schools graduated, types of degrees received, and the fields of study.

From the list of these directories only the names of those individuals who had graduated from any of the nine campuses of the University of California were taken and recorded. Additions and corrections were then made by the individuals in the sample. Consequently, more names were secured. Finally a list of 103 alumni from the University of California system was prepared. Each alumnus met the qualifications and the limitations of this study.

DEVELOPMENT OF THE SURVEY INSTRUMENT

In order to accumulate data relevant to the purpose of this investigation, a questionnaire was designed. The questionnaire was divided into two areas: (1) general information; and (2) institutional information. The items therein were carefully selected to provide descriptive information about the alumni, to provide an indication of their satisfaction with their University of California experiences, to furnish information about the problem areas while at
University of California, and the nature of their employment in Iran.

The personal experiences of the researcher, in addition to comments and suggestions offered by other foreign students, aided in the initial formulation and wording of pertinent items of the questionnaire. A review of the assorted questionnaires utilized in similar studies was also of particular utility in the formulation of the survey instrument. The faculty advisory committee was most helpful in the selection and editing of the items when presented to them prior to field testing. The main criteria used in the selection of the items to be included in the survey instrument were as follows:

1. Does the item serve as an indicator of the individual's reactions to his academic and social experiences while at the University of California?

2. Does the item contribute any information which would have utility in characterizing the alumnus?

3. Does the item contribute any information previously unknown about Iranian alumni from the University of California system?

The selected items in the first category under general information were designed to gather information about the individual prior to, during, and subsequent to his sojourn at the University of California. Items concerning the alumnus's age, sex, marital status, fields of study, and types of degrees received were grouped under the general information category. Knowledge about the individual's financial
resources and ability while at the University of California, the nature of his employment in Iran, and the extent to which he was able to use his American training were also obtained through the selected items in the first section of the questionnaire.

The chosen items in the institutional information category were designed to measure the individual's degree of satisfaction with his University experience. These items required the individual to express his feelings of satisfaction about selected aspects of his experience at the University of California. These reaction items were presented on a four-point scale in order to enable the alumnus to express the degree of his satisfaction or dissatisfaction with each item.

From a total of the 48 selected items in the questionnaire three open-ended questions were used to secure information about the individual's occupational position in Iran. Seven items required the respondent to write in information about himself. All of the other items were structured questions in which the individual was asked to either circle or check the appropriate response. All fill-in-the-blank questions were placed in the first part of the survey instrument.

Field Testing

The instrument was field tested with a group of foreign students at the University of the Pacific at Stockton,
California. The questionnaire was given to each individual for self-administration. Upon the return of the questionnaire each individual was interviewed for the following purposes: (1) clarity and unambiguity of the questions; and (2) to provide the desired response of the individual. As a result of these interviews some omissions and modifications were made, and the instrument with 20 items in the first section and 28 items in the second section was ready for final administration.¹

Validity

The ultimate significance of a research study rests on the validity of the instrument used in the collection of data. The validity in general refers to "the degree of accuracy with which it measures what it is purported to measure."² A content analysis of the survey instrument led the researcher to believe that curricular or face validity had been established. The criteria used in establishing the face validity of the questionnaire is outlined below:

1. Is the question on the subject?
2. Is the question clear and unambiguous?
3. Does the question focus upon something stable which is typical of the individual or of the situation?

¹The survey instrument appears in Appendix B.
4. Does the question have significant educational implications?

5. Do the responses show a reasonable range of variation?

6. Is the information internally consistent, in agreement with what is known?

7. Is the time sufficiently inclusive?³

For the purpose of this investigation it was deemed important to secure as many responses as possible. The decision was therefore made to sample the total population of those individuals whose names appeared on the lists provided by the Ministry of Science and Higher Education of Iran. During the three months of May, June, and July of 1974 contacts were made with either the alumnus or with his relatives and friends. All the contacts were made by the researcher through telephone conversations. After stating the purpose of the study, an appointment was arranged to meet the potential respondent.

From a total of 103 names on the list, three alumni refused to be interviewed. Four individuals were reported by their families to be in the United States during the months of the interviews. Nine graduates could not be found at the addresses given. In some cases the addresses were incorrect and in other instances the alumnus had moved without leaving any forwarding address. Eleven alumni were working outside of Tehran. The remaining 76 alumni

participated in the interviews, representing approximately three-fourths of the total number of students.

**Administration of the Instrument**

Upon prior arrangement the investigator met with the respondents. The place of interview was left to the discretion of the respondent. The interviews were most frequently held at the respondents' offices of employment. Occasionally the interviews were held at the places of residence of the alumni. On three occasions restaurants were chosen as the meeting place. In each situation a face-to-face, schedule method of presentation was administered.\(^4\)

Each alumnus was given the questionnaire and was asked to answer all the items in the presence of the researcher. The atmosphere under which the sessions were held was relaxed and items contained in the questionnaire were frequently discussed at length. The average length of time spent in administering the instrument was 45 minutes. On a few occasions more than one hour was spent dealing with the questionnaire.

**RESEARCH PROCEDURES**

- Total number of names secured: 103
- Total number of alumni interviewed: 76

---

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average time in minutes spent on each interview</td>
<td>45</td>
</tr>
<tr>
<td>Number of months spent in securing data</td>
<td>3</td>
</tr>
</tbody>
</table>

**TABULATION AND THE TREATMENT OF DATA**

After all of the subjects were interviewed and the data was secured each item of the questionnaire was coded. A total of 112 columns were punched on two IBM cards for each individual tested. Seventy-five columns were punched for the general information category on the first card. The second card contained 37 columns which consisted of the data related to the institution attended. In order to assure maximum mathematical reliability extreme care was undertaken in the coding of the data. The coding of the data and the punching of these codes onto computer cards were done by the researcher under the supervision of his research professor.

For every subject, 88 variables on two computer cards were processed by the Burrough's B6700 computer located at the University of the Pacific. Selected computer programs from the Statistical Package for the Social Science (SPSS) provided the required computations. Analyses used in this investigation were as follows: (1) frequency distribution; (2) contingency tables for the categorical data; and (3) means, standard deviations, and Pearson Product
Moment correlation coefficients for the items relating to the degree of satisfaction. 5

SUMMARY

During the three months of May, June, and July of 1974 in Tehran, 76 Iranian alumni from the University of California were interviewed. During the interviews, each subject was asked to complete a questionnaire, which consisted of two major sections: (1) general information; and (2) institutional information.

The first section of the survey instrument was designed to obtain descriptive information about the alumnus. Selected items in the second section of the questionnaire were designed to determine the degree of satisfaction the alumnus held with his economic, social, and educational experiences while at the University of California. The nature of his subsequent employment in Iran and the extent to which he was able to use his preparation were also questioned in the survey instrument.

A total of 48 questions were asked from the alumni in the two sections of the questionnaire. The obtained data were coded and were transferred to computer cards. Two

cards were prepared for each respondent, with 88 variables analyzed. Descriptive statistics and Pearson Product Moment were used in the data analyses. The statistical analysis of the data will be presented in Chapter 4.
Chapter 4

ANALYSES OF DATA

This research study was primarily designed to investigate and analyze the educational experiences of a group of Iranian graduates from the University of California campuses who had returned to Iran. Supplementary information about the applicability of education abroad and the nature of the graduates' employment in Iran were also collected for statistical analyses. In addition the survey instrument was used to elicit reaction data about the graduates' job satisfaction and some selected aspects of their University of California experiences.

From a population size of 103 returned Iranian graduates from the University of California 76 (75 percent) responded affirmatively when contacted by the researcher. The survey instrument was consequently administered to a group of 76 respondents.\(^1\) The analyses and interpretation of the data obtained from the questionnaire are organized in this chapter under the following headings: (1) background information of the respondents, (2) educational

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\(^1\)For a detailed discussion on the identification of the population and selection of the sample, refer to Chapter 3, pp. 99-100.
characteristics of the returned graduates, (3) satisfaction with the University of California experience, (4) nature of employment and job satisfaction upon returning to Iran, (5) applicability of the University of California training for employment in Iran, and (6) problems faced by Iranian students.

BACKGROUND INFORMATION OF THE RESPONDENTS

Descriptive information concerning the respondent graduates is presented in this section. Included in the background information are such personal characteristics as age, sex, marital status, and the graduates' sources of financial support while attending the University of California. Prior educational training of the respondents in terms of the level of degrees attained, subject areas of study, and the location of the institutions attended are discussed. Reasons underlying the graduates' decision to study in the United States are also presented in detail.

Personal Data

At the time of admission into the University of California, 50 percent of the respondents were in the 21 to 25 year age group. The overall mean age computed was 21.9, the mode being 19 years. The largest percentage of respondents at the time of graduation fell into the 26 to 30 year age group (see Table 9). The computed mean age at the time of graduation was 26.8, the median was 26.4
years, and the mode was 26 years.

Of the total 76 respondents, 9 graduates (11.8 percent) were female, while the remaining 67 (88.2 percent)

Table 9
Age Distribution of the Alumni at the Time of Entrance to and Graduation from the University of California

<table>
<thead>
<tr>
<th>Age Group (Years)</th>
<th>Age at Admission</th>
<th>Age at Graduation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absolute Frequency</td>
<td>Relative Frequency (Percent)</td>
</tr>
<tr>
<td>18-20</td>
<td>29</td>
<td>38.2</td>
</tr>
<tr>
<td>21-25</td>
<td>38</td>
<td>50.0</td>
</tr>
<tr>
<td>26-30</td>
<td>8</td>
<td>10.5</td>
</tr>
<tr>
<td>31-35</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Total</td>
<td>76</td>
<td>100.0</td>
</tr>
</tbody>
</table>

were male (See Table 10). the mean age of the female students

Table 10
Number of Respondents by Sex and Marital Status

<table>
<thead>
<tr>
<th>Sex</th>
<th>Absolute Frequency</th>
<th>Single</th>
<th>Married</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>67 (88.2%)</td>
<td>47 (83.9%)</td>
<td>20 (100.0%)</td>
</tr>
<tr>
<td>Female</td>
<td>9 (11.8%)</td>
<td>9 (16.1%)</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>76 (100.0%)</td>
<td>56 (100.0%)</td>
<td>20 (100.0%)</td>
</tr>
</tbody>
</table>
upon the time of their entrance into the University of California was found to be 19.5 years, while the mean age of the male students was computed at 22.5 years.

Fifty-six of the graduates (74 percent) were single while attending the University of California, while the remaining 20 students (26 percent) were married. All of the 20 married students were males, and all were accompanied by their spouses. Six of the married students had 1 child, 3 students had 2 children, and 1 student had 3 children in his family. The 10 remaining married students had no children.

Respondents were asked to indicate their primary and secondary sources of support while they were attending the University of California. These data are presented in Table 11. The 4 major primary sources of support reported by the graduates are given as follows in descending order of frequency:

1. Family 47%
2. Iranian government 17%
3. University of California assistantship 16%
4. Employment in the United States 11%

The student's family was the most frequently indicated primary source of financial support. Forty-seven percent of the entire group were primarily supported by their relatives. The Iranian government was reported to be the primary source of financial support for 17 percent of the sample. Various assistantship programs offered at the University of California served as the primary source of support for almost
Table 11
Primary and Secondary Sources of Financial Support Reported by the Alumni

<table>
<thead>
<tr>
<th>Sources of Support</th>
<th>Primary Absolute Frequency</th>
<th>Relative Frequency (Percent)</th>
<th>Secondary Absolute Frequency</th>
<th>Relative Frequency (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>36</td>
<td>47.4</td>
<td>6</td>
<td>7.9</td>
</tr>
<tr>
<td>Business in Iran</td>
<td>2</td>
<td>2.6</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Iranian government</td>
<td>13</td>
<td>17.2</td>
<td>4</td>
<td>5.3</td>
</tr>
<tr>
<td>Employment in United States</td>
<td>8</td>
<td>10.5</td>
<td>16</td>
<td>21.1</td>
</tr>
<tr>
<td>U. S. business</td>
<td>1</td>
<td>1.3</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>U. C. scholarship</td>
<td>2</td>
<td>2.6</td>
<td>6</td>
<td>7.9</td>
</tr>
<tr>
<td>U. C. Assistantship</td>
<td>12</td>
<td>15.8</td>
<td>15</td>
<td>19.7</td>
</tr>
<tr>
<td>Personal savings</td>
<td>2</td>
<td>2.6</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Not applicable</td>
<td>0</td>
<td>0.0</td>
<td>27</td>
<td>35.5</td>
</tr>
<tr>
<td>Total</td>
<td>76</td>
<td>100.0</td>
<td>76</td>
<td>100.0</td>
</tr>
</tbody>
</table>
16 percent of the respondents. Approximately 11 percent of the students worked their way through school.

In addition to a primary source of support, 64.5 percent of the sample indicated a secondary source of financial aid. The 4 most frequently mentioned secondary sources of support are listed below in descending order of frequency:

1. Employment in the United States 21%
2. University of California assistantship 20%
3. University of California scholarship 8%
4. Family 8%

Twenty-one percent of the students supplemented their primary income through employment undertaken while residing in the United States. Almost 20 percent of the students indicated that the assistantship programs served as a secondary source of financial support. Almost 8 percent of the total 76 respondents stated that their family served as a secondary source of support, while another 8 percent supplemented their income through scholarships received.

The adequacy of financial support was rated on a four-point scale ranging from very inadequate, inadequate, adequate, to very adequate. Almost two thirds of the graduates indicated that their financial support had been adequate. One fifth of the total group reported their support to be very adequate. Approximately 85 percent of the 76 respondents, therefore, considered their support while attending the University of California to be satisfactory. The remaining
15 percent of the graduates rated their financial support as being either inadequate or very inadequate. These data are shown in Table 12.

Table 12

Adequacy of Financial Support Reported by the Graduates

<table>
<thead>
<tr>
<th>Adequacy of Support</th>
<th>Absolute Frequency</th>
<th>Relative Frequency (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very adequate</td>
<td>17</td>
<td>22.4</td>
</tr>
<tr>
<td>Adequate</td>
<td>48</td>
<td>63.2</td>
</tr>
<tr>
<td>Inadequate</td>
<td>8</td>
<td>10.5</td>
</tr>
<tr>
<td>Very inadequate</td>
<td>3</td>
<td>3.9</td>
</tr>
<tr>
<td>Total</td>
<td>76</td>
<td>100.0</td>
</tr>
</tbody>
</table>

As previously stated, the most frequently indicated primary sources of support mentioned by the respondents were family, the Iranian government, assistantship programs offered by the University of California, and employment in the United States. Approximately 65 percent of the graduates who indicated family as the primary source of support reported their income as being adequate, while 24 percent were supported very adequately by their families. The income received from the family for the remaining 11 percent was reported to be either inadequate or very inadequate. These data are presented in Table 13.
Ten students, more than three-fourths of the respondents supported by the Iranian government, reported their income as being adequate. The government financial assistance for the remaining 23 percent was described as being inadequate. Nearly 55 percent of the respondents who were financed by the various assistantship programs offered by the University of California rated this support as being very adequate. For more than one-third of the same group, the income obtained through assistantship programs was adequate. Only 9 percent of the students on assistantship programs described their primary source of support as being inadequate.

One-half of the students who worked in the United States to provide their primary source of support reported that the income received from their salaries was adequate.

The wages obtained through employment was indicated by one-

Table 13
The Adequacy of the Four Most Frequently Reported Primary Sources of Support (in Percent)

<table>
<thead>
<tr>
<th>Adequacy of Support</th>
<th>Family</th>
<th>Iranian Government</th>
<th>University Assistantship</th>
<th>Employment in the U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inadequate and very inadequate</td>
<td>11.1</td>
<td>23.1</td>
<td>9.1</td>
<td>25.0</td>
</tr>
<tr>
<td>Adequate and Very Adequate</td>
<td>88.9</td>
<td>76.9</td>
<td>90.9</td>
<td>75.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
fourth of the working students as being very adequate. The remaining 25 percent of those students who worked in the United States to provide their primary source of support reported that this income was not adequate.

There was found to be a positive relationship between both the sex and marital status of the respondents and the reported financial adequacy of the primary source of support (see Table 14). None of the female respondents in the sample reported their support to be either inadequate or very inadequate, while approximately 17 percent of the male respondents indicated dissatisfaction with the adequacy of their financial support. Ninety-five percent of the married students indicated their support to be either adequate or very adequate, as contrasted with 82 percent of the single students.

### Table 14
Adequacy of Financial Support by Sex and Marital Status

<table>
<thead>
<tr>
<th>Adequacy of Support</th>
<th>Sex</th>
<th>Marital Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Inadequate</td>
<td>16.6</td>
<td>0</td>
</tr>
<tr>
<td>Adequate</td>
<td>83.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Training Prior to Admission into the University of California

From the information reported by the respondents, it was found that approximately one-fourth of the students had received degrees in countries other than Iran prior to their entrance into the University of California. Sixteen percent of the total sample had obtained training from institutions in the United States. Approximately 8 percent of the graduates held degrees from European institutions.

The majority of students were admitted into the University of California with a high school diploma. Nearly two-fifths of the sample entered with bachelor's degrees. Those holding master's degrees represented only 4 percent of the group. The degrees held by the survey group upon admittance to the University of California and the countries in which the students obtained their training are shown in Table 15.

Thirty-four respondents of the sample interviewed had obtained degrees from institutions of higher education prior to their admission into the University of California. Approximately two-thirds of this group held degrees in the engineering fields. The remaining students were distributed among various scientific and mathematical fields. No students had graduated with a degree in the humanities, liberal, or fine arts. The 34 students who had previously graduated from other institutions of higher learning entered the University of California with degrees in the following fields:
<table>
<thead>
<tr>
<th>Country</th>
<th>High School Diploma</th>
<th>Associate of Arts</th>
<th>Bachelor's Degree</th>
<th>Master's Degree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iran</td>
<td>40</td>
<td>0</td>
<td>18</td>
<td>0</td>
<td>58</td>
</tr>
<tr>
<td>United States</td>
<td>1</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>England</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Germany</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>2</td>
<td>29</td>
<td>3</td>
<td>76</td>
</tr>
</tbody>
</table>

In addition to the 12 individuals who had received degrees from American educational institutions prior to their entrance into the University of California, 47 respondents indicated that they had previously resided in the United States. The length of residence reported ranged from 1 to 8 years, the mean being 2.4 years and the model span being 1 year.
Reasons for Choosing the United States for Study

The graduates were asked to indicate the reasons underlying their decision to choose the United States for study. The most frequently stated reasons for choosing the United States for study were as follows in descending order of frequency:

1. Superior education available in the United States 75%
2. Interest in the United States 12%
3. Inability on the part of the student to gain entrance into institutions of higher learning in Iran 7%

Nearly 75 percent of the respondents indicated that they had chosen the United States because they believed that it offered an education which was superior to the education available in other countries. Approximately 12 percent of the total group stated that they had come to the United States because of their interest in America. Almost 7 percent chose the United States because they had been unable to gain entrance into the universities in Iran.

Three individuals stated reasons which were not listed in the questionnaire. One girl replied that she had gone to the United States because of a "lack of choice" stemming from the fact that her brother was engaged in study there. Another respondent said that he had chosen America because of his "fascination for living abroad." "Adventure" was stated as being the motivating force which prompted another student to journey to the United States.
Scholarship opportunities were instrumental in directing 3 students to the United States. These scholarships were awarded by various Iranian institutions with the stipulation that the recipient would undertake study in the United States.

EDUCATIONAL CHARACTERISTICS OF THE RETURNED GRADUATES

Four campuses of the University of California were represented in the respondent sample. The largest group of students were Berkeley graduates. With 59 graduates, Berkeley was represented by more than three fourths of the total number of interviewees. The University of California at Los Angeles had 10 graduates included in the study. Six respondents were from the Davis campus and one student had graduated from the University of California at San Diego.

The number of years spent at the University of California by the 76 respondents ranged from 1 to 14 years. The median enrollment was 4.6 years and the mode was computed at 5 years. Only 1 individual attended the University for 1 year, and another student for 14 years. The length of enrollment at the University of California is shown in Table 16.

Fields of Study

The General Catalogue of the University of California at Berkeley was followed as a pattern in classifying the fields of study undertaken by the respondent graduates. For
the purpose of simplicity, names of the 5 professional colleges at Berkeley were used as general fields of study.

Table 16
Length of Enrollment at the University of California

<table>
<thead>
<tr>
<th>Number of Years</th>
<th>Absolute Frequency</th>
<th>Relative Frequency (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3</td>
<td>18</td>
<td>23.7</td>
</tr>
<tr>
<td>4-6</td>
<td>46</td>
<td>60.5</td>
</tr>
<tr>
<td>7-9</td>
<td>10</td>
<td>13.2</td>
</tr>
<tr>
<td>10-12</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>13-15</td>
<td>1</td>
<td>1.3</td>
</tr>
</tbody>
</table>

These areas are: (1) the natural resources; (2) chemistry; (3) engineering; (4) environmental design; and (5) letters and sciences. The fields of study undertaken by the subjects of the study were thus classified as follows:

1. Natural resources: agricultural sciences, forestry, and conservation
2. Chemistry: chemistry and chemical engineering
3. Engineering: civil, electrical and computer sciences, industrial and operations research, mechanical, and material sciences
4. Environmental design: architecture, city and regional planning, and landscape architecture
5. Letters and sciences: communications and public policy, environmental studies, genetics, neurobiology, religious studies,
social welfare, humanities, biological sciences, physical sciences, social sciences, history, literature, and programs ranging from art to zoology

The engineering fields, with 34 of the respondents, attracted nearly 45 percent of the Iranian students. Eighteen students (24 percent) graduated from the College of Letters and Sciences. Fourteen of the respondents (18 percent) held degrees in chemistry. The College of Natural Resources and the College of Environmental Design each attracted 5 students, or 7 percent of the total sample. The fields of study undertaken by the subjects of the study are shown in Table 17.

Table 17
Fields of Study Reported by the Student Sample

<table>
<thead>
<tr>
<th>Fields of Study</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Resources</td>
<td>5 (7.4%)</td>
<td>0</td>
<td>5 (6.6%)</td>
</tr>
<tr>
<td>Chemistry</td>
<td>14 (20.9%)</td>
<td>0</td>
<td>14 (18.4%)</td>
</tr>
<tr>
<td>Engineering</td>
<td>33 (49.3%)</td>
<td>1 (11.1%)</td>
<td>34 (44.7%)</td>
</tr>
<tr>
<td>Environmental Design</td>
<td>4 (6.0%)</td>
<td>1 (11.1%)</td>
<td>5 (6.6%)</td>
</tr>
<tr>
<td>Letters and Sciences</td>
<td>11 (16.4%)</td>
<td>7 (77.8%)</td>
<td>18 (23.7%)</td>
</tr>
<tr>
<td>Total</td>
<td>67 (100.0%)</td>
<td>9 (100.0%)</td>
<td>76 (100.0%)</td>
</tr>
</tbody>
</table>

Forty-nine percent of the males in the sample majored in engineering, as compared with 11 percent of the females. While none of the female students took up studies in either the natural sciences or chemistry, 7 percent of the males received degrees in the natural sciences, and 21 percent of the males graduated in chemistry. The largest portion of the women graduates (78 percent) completed their education in the letters and sciences, as contrasted with only 16 percent of the men. The fields of environmental design attracted 11 percent of the female subjects, almost twice the proportion of male students graduating in the same area.

Degree Attainment

The levels of degrees attained by the respondents were almost evenly divided among the bachelor's, master's, and doctoral degrees. Twenty-six graduates (34 percent) received bachelor's degrees, as compared with 24 students (32 percent) who emerged from the University of California holding master's degrees. The remaining 26 graduates (34 percent) received doctoral degrees (see Table 18).

Many of the respondent graduates reported earning more than 1 degree while enrolled at the University of California. Seventeen percent of the total group received both a bachelor's and a master's degree. Those who possessed both a master's degree and a doctorate constituted 22.5 percent of the total group. Four students (5.3 percent)
entered the University of California as freshman and graduated with doctoral degrees.

Table 18
Degrees Attained and Fields of Study

<table>
<thead>
<tr>
<th>Fields of Study</th>
<th>Bachelor's</th>
<th>Master's</th>
<th>Doctorate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Sciences</td>
<td>0</td>
<td>1 (4%)</td>
<td>4 (16%)</td>
</tr>
<tr>
<td>Chemistry</td>
<td>7 (27%)</td>
<td>2 (8%)</td>
<td>5 (19%)</td>
</tr>
<tr>
<td>Engineering</td>
<td>10 (38%)</td>
<td>14 (58%)</td>
<td>10 (38%)</td>
</tr>
<tr>
<td>Environmental Design</td>
<td>1 (4%)</td>
<td>4 (17%)</td>
<td>0</td>
</tr>
<tr>
<td>Letters and Sciences</td>
<td>8 (31%)</td>
<td>3 (13%)</td>
<td>7 (27%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26 (100%)</strong></td>
<td><strong>24 (100%)</strong></td>
<td><strong>26 (100%)</strong></td>
</tr>
</tbody>
</table>

Six of the female students (66 percent) were bachelor's degree holders, while the remaining 3 females (33 percent) had obtained master's degrees. The largest portion (39 percent) of the males held doctorates, while the remaining male graduate population was almost evenly divided among bachelor's and master's degree holders. These data are shown in Table 19.

While the total group of engineering students constituted approximately 45 percent of the 76 respondents, the graduates with engineering degrees represented only 38
percent of the total group of bachelor's degree holders. Engineering degrees also constituted 38 percent of the doctoral degrees granted, while 58 percent of the master's degrees granted were earned by those students majoring in engineering.

Table 19
Males and Females and the Level of Degrees Attained

<table>
<thead>
<tr>
<th>Level of Degree</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's</td>
<td>20 (29.9%)</td>
<td>6 (66.7%)</td>
<td>67 (100.0%)</td>
<td></td>
</tr>
<tr>
<td>Master's</td>
<td>21 (31.3%)</td>
<td>3 (33.3%)</td>
<td>0</td>
<td>9 (100.0%)</td>
</tr>
<tr>
<td>Doctoral</td>
<td>26 (38.8%)</td>
<td>0</td>
<td>26 (38.8%)</td>
<td>67 (100.0%)</td>
</tr>
</tbody>
</table>

Graduates of the Letters and Sciences tended to be either bachelor's or doctoral degree holders. The same phenomenon was found to be true with those who graduated in chemistry. In contrast, 80 percent of the students of the natural sciences held doctoral degrees. Graduates in environmental design were usually master's degree holders (80 percent), while none of them had obtained a doctorate. Fifty-eight percent of the engineering graduates were evenly divided among the bachelor's and doctoral degree categories, while the remaining 42 percent had obtained master's degrees.
SATISFACTION WITH THE UNIVERSITY OF CALIFORNIA EXPERIENCE

The determination of the degree of satisfaction of the Iranian graduates with their University of California experience was a major objective of this investigation. Twenty-five reaction items pertaining to this aspect were designed and implemented in the questionnaire. The reaction items were presented on a four-point scale ranging from very satisfied (1.00), satisfied (2.00), somewhat satisfied (3.00), to dissatisfied (4.00). An additional column assigned the value of zero was included for those individuals who found any of the questions to be not applicable to their experience.

The 25 reaction items, which were placed under the institutional information category of the questionnaire, were used to determine the degree of satisfaction with selected aspects of the student experience. The questionnaire contained 11 items pertaining to the physical and social aspects of the student experience. This area was deemed important, as each individual was a participating member of his community in addition to being a student while enrolled at the University of California. A total of 14 questions were provided on the survey instrument to ascertain the degree of satisfaction of the respondents with their academic experience.

The graduates were asked to indicate the level of their satisfaction with each item by marking the appropriate answer provided in the questionnaire. The analysis of the
reaction data obtained from the reported satisfaction are presented in this section under the following headings:
(1) physical and social aspects of the sojourn experience; (2) academic aspect of the University of California experience; (3) general satisfaction; and (4) correlation of the satisfaction items.

Physical and Social Aspects of the Sojourn Experience

The list of 11 satisfaction items pertaining to the physical and social aspects of the student experience included:

1. On-campus residence halls
2. Cost of university housing in relation to accommodations provided
3. Off-campus housing facilities
4. Cost of living at your located campus
5. University food services
6. Medical services provided by the University
7. Contact with the foreign student advisor
8. Appropriateness of the office of the foreign student advisor
9. Participation in intra-mural activities of your choice
10. On-campus recreational activities
11. On-campus social activities

The above-mentioned items were further classified into 3 categories: (1) living facilities; (2) services
provided by the University; and (3) social and recreational activities. These categories and associated variables are analyzed separately.

Living facilities. In this category items related to the campus residence halls, cost of University housing in relation to accommodations provided, off-campus housing facilities, and the cost of living at the respective campuses are discussed. Data related to these items are shown in Table 20.

Forty-three percent of the total sample had resided in residence halls while attending the University of California. Of this group, 73 percent expressed satisfaction with their place of residence. Married students and single students were almost equally satisfied in this area. Female students were more satisfied with the residence halls than the male students. The most satisfied group according to campus location were those students who had graduated from Davis, followed by the students from Berkeley, and those from the Los Angeles campus.

Forty-six graduates (61 percent) expressed opinions about the University housing facilities. When asked about their degree of satisfaction regarding the cost of the University accommodations provided, 65 percent expressed dissatisfaction. The female population reported a slightly higher degree of satisfaction than the men. Single students were more dissatisfied than the married students with this
Table 20

Computed Satisfaction Means Related to Living Facilities at the University of California

<table>
<thead>
<tr>
<th>Reaction Item</th>
<th>Sex</th>
<th>Marital Status</th>
<th>Percent Satisfied</th>
<th>Satisfaction Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Single</td>
<td>Married</td>
</tr>
<tr>
<td>On-campus resident halls</td>
<td>2.39</td>
<td>1.60</td>
<td>2.28</td>
<td>2.20</td>
</tr>
<tr>
<td>Cost of University housing in relation to accommodations provided</td>
<td>2.67</td>
<td>2.33</td>
<td>2.75</td>
<td>2.30</td>
</tr>
<tr>
<td>Off-campus housing facilities</td>
<td>2.21</td>
<td>2.20</td>
<td>2.23</td>
<td>2.05</td>
</tr>
<tr>
<td>Cost of living on located campus</td>
<td>2.67</td>
<td>2.66</td>
<td>2.71</td>
<td>2.55</td>
</tr>
</tbody>
</table>
aspect. Graduates from Los Angeles were the most dissatisfied group according to campus location, while those from the Davis campus were the most satisfied.

Fifty-two (69 percent) of the 75 students who had lived off-campus reported satisfaction with their living quarters. The female group reported satisfaction with this aspect, while the males tended to be somewhat less satisfied. Married students expressed a higher level of satisfaction than the unmarried respondents. Graduates from the Davis campus were the most satisfied group according to campus location. The Los Angeles students were found to be dissatisfied with the off-campus living facilities they had acquired.

All of the 76 graduates responded to the question regarding the cost of living at their respective campuses. Only 49 percent were satisfied with this aspect of their student experience. The females and males expressed the same level of satisfaction with this aspect. Single students were slightly less satisfied than the married students. According to campus location, the graduates from Davis were the most satisfied group, followed by those from Berkeley, and San Diego. The Los Angeles students were the most dissatisfied group with the cost of living.

Services provided by the University. In this category items related to the University food services, medical services, contact with the foreign student advisor,
and appropriateness of the office of the foreign student advisor are discussed. Data related to these items are shown in Table 21.

Of the 68 students (89 percent) who replied to the query regarding the food services provided by the University, 57 percent expressed satisfaction. The males and the single students were slightly less satisfied than the females and the married students. Graduates from the Davis campus were dissatisfied with this aspect, while those from Los Angeles were slightly more satisfied. The respondents who graduated from San Diego and Berkeley were satisfied with the food services provided.

Only 2 students reported that they had no experience with the medical services provided by the University. Eighty percent of the respondents to this item reported satisfaction with this aspect. Males, females, single students, and married students were equally satisfied with the medical services they received while attending the University of California. Berkeley graduates were highly satisfied, followed by those from Davis and the Los Angeles campuses.

Of the 70 students (92 percent) who had contacted their foreign student advisors, 57 percent expressed satisfaction with their experience. There was little discrepancy between the levels of satisfaction of the males and females, or between the single and married students. According to campus location, those from Davis reported that they were
Table 21
Computed Satisfaction Means Related to Services Provided by the University of California

<table>
<thead>
<tr>
<th>Reaction Item</th>
<th>Sex</th>
<th>Marital Status</th>
<th>Percent Satisfied</th>
<th>Satisfaction Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Single</td>
<td>Married</td>
</tr>
<tr>
<td>University food services</td>
<td>2.38</td>
<td>2.25</td>
<td>2.44</td>
<td>2.07</td>
</tr>
<tr>
<td>Medical Services provided by the University</td>
<td>1.84</td>
<td>1.88</td>
<td>1.87</td>
<td>1.80</td>
</tr>
<tr>
<td>Contact with the foreign student advisor</td>
<td>2.34</td>
<td>2.28</td>
<td>2.34</td>
<td>2.33</td>
</tr>
<tr>
<td>Appropriateness of the office of the foreign student advisor</td>
<td>2.40</td>
<td>2.25</td>
<td>2.38</td>
<td>2.38</td>
</tr>
</tbody>
</table>
satisfied with this aspect, while the students from the Los Angeles and Berkeley campuses were somewhat less satisfied.

Seventy-two (94 percent) of the graduates expressed opinions about the appropriateness of the office of the foreign student advisor. Fifty-six percent were found to be satisfied, with females being somewhat more satisfied than the male group. Single and married students expressed the same degree of satisfaction. Graduates from Davis were the most satisfied group according to campus location, followed by the graduates from Los Angeles, and then by those from Berkeley. Those with doctoral degrees were found to be satisfied, while bachelor's program graduates were somewhat dissatisfied.

**Social and recreational activities.** In this category items related to intra-mural activities, recreational, and social activities are discussed. Data related to these items are shown in Table 22.

Seventy-one percent of the 56 students who participated in intra-mural activities expressed satisfaction with this aspect. Males and females, single and married students were reported to be almost equally satisfied with the intra-mural activities offered at the University. Davis graduates were the most satisfied campus group, followed closely by those from San Diego, Berkeley, and Los Angeles.

A striking difference in the reported levels of satisfaction was found between the students who received adequate
Table 22
Computed Satisfaction Means Related to Social and Recreational Activities at the University of California

<table>
<thead>
<tr>
<th>Item</th>
<th>Sex</th>
<th>Marital Status</th>
<th>Income</th>
<th>Satisfaction Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male Female</td>
<td>Single Married</td>
<td>Adequate</td>
<td>Inadequate</td>
</tr>
<tr>
<td>Participation in intra-mural activities of your choice</td>
<td>2.13 2.20</td>
<td>2.19 2.21</td>
<td>1.99 2.66</td>
<td>2.14</td>
</tr>
<tr>
<td>On-campus recreational activities</td>
<td>2.06 1.75</td>
<td>2.03 2.00</td>
<td>1.87 2.50</td>
<td>2.02</td>
</tr>
<tr>
<td>On-campus social activities</td>
<td>2.04 1.71</td>
<td>2.05 1.87</td>
<td>1.76 2.72</td>
<td>2.01</td>
</tr>
</tbody>
</table>
financial support and those who described their support as being inadequate. Those with adequate support were considerably more satisfied with the intra-mural programs offered than the students who had inadequate financial incomes.

The same phenomenon was found to occur regarding the level of satisfaction concerning the on-campus recreational activities. Students with adequate financial incomes were considerably more satisfied with the recreational programs at their campus than those with inadequate financial support. Of the 72 graduates who replied to the question regarding their opinion about the quality of recreational programs at the University, 76 percent expressed satisfaction. Female students were more satisfied than the males, while the single and married students were equally satisfied. Graduates from the Davis and Los Angeles campuses were highly satisfied, followed by those from Berkeley and San Diego.

Seventy students (92 percent) participated in on-campus social activities. Both female and married students were highly satisfied with this aspect, while the males and single students were moderately satisfied. The graduates from Davis were highly satisfied, followed by those from Berkeley and Los Angeles. The 1 student from San Diego reported dissatisfaction with the on-campus social activities. Those who described their income as being adequate were more satisfied with this aspect than the respondents with inadequate incomes. Students who attended the University of California from 4 to 6 years were found to be more satisfied
with the social activities.

The reactions expressed as being either "very satisfied" or "satisfied" with the items pertaining to the physical and social aspects of the sojourn experience are presented as percentages below:

| Medical services provided by the University | 80 |
| On-campus recreational activities | 76 |
| On-campus resident halls | 72 |
| On-campus social activities | 71 |
| Participation in intra-mural activities | 71 |
| Off-campus housing facilities | 69 |
| University food services | 57 |
| Contact with the foreign student advisor | 57 |
| Appropriateness of the office of the foreign student Advisor | 56 |
| Cost of living at your located campus | 49 |
| Cost of University housing in relation to accommodations provided | 35 |

The mean satisfaction for the 11 items pertaining to the physical and social aspects of the graduates' experience was computed to be 2.26 on the four-point scale with 1 representing very satisfied. This indicates that the level of satisfaction among the sample group was slightly less than "satisfied."
Academic Aspects of the University of California Experience

Fourteen reaction items were introduced to examine selected aspects of the academic experience of the respondents. These items included:

1. Orientation program at the University of California
2. University recognition of your previous academic work
3. Academic standards expected of you
4. Quality of general education programs
5. Availability of courses meeting your interests and goals
6. Academic quality of your specific area of study
7. Appropriateness of the University of California training for your major field of study
8. Opinion about your training at the University of California
9. Faculty advisory system
10. Relationship with your academic advisor
11. Faculty assistance with your academic problems
12. Amount of academic work required each semester
13. System of assignments, quizzes, and examinations
14. Quality of classroom instruction

The above items were further classified into 3 categories: (1) academic programs and standards; (2) faculty advisory system; and (3) classroom instruction. These
categories and associated variables are analyzed separately.

Academic programs and standards. In this category items related to orientation, University recognition of academic work, expected academic standards, quality of general education, availability of courses, quality of specific areas of study, appropriateness of University training for major fields of study, and opinion about the training at the University of California are discussed. Data related to these items are shown in Table 23.

Fifty-six students (68 percent) in the sample participated in University orientation programs. Sixty-three percent of the respondents to this item expressed satisfaction, with females being slightly more satisfied than males, and single students reporting a higher degree of satisfaction than the married group. According to campus location, Davis graduates were very satisfied, followed by Los Angeles and Berkeley graduates. Those who had graduated from doctoral programs were the most satisfied group, while those who obtained their bachelor's degrees were the least satisfied with the orientation programs.

Among the 67 students (88 percent) who replied to the question regarding the University's recognition of their previous academic work, 88 percent were satisfied. Both males and females were satisfied, with females being slightly more satisfied. Both single and married students were satisfied, with single students being slightly more satisfied. Davis
Table 23

Computed Satisfaction Means Related to Academic Programs and Standards at the University of California

<table>
<thead>
<tr>
<th>Item</th>
<th>Sex</th>
<th>Marital Status</th>
<th>Percent Satisfied</th>
<th>Satisfaction Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Single</td>
<td>Married</td>
</tr>
<tr>
<td>Orientation program</td>
<td>2.24</td>
<td>2.00</td>
<td>2.19</td>
<td>2.30</td>
</tr>
<tr>
<td>Recognition of previous academic work</td>
<td>1.78</td>
<td>1.60</td>
<td>1.75</td>
<td>1.83</td>
</tr>
<tr>
<td>Academic standards expected of students</td>
<td>1.70</td>
<td>2.00</td>
<td>1.82</td>
<td>1.50</td>
</tr>
<tr>
<td>Quality of general education programs</td>
<td>1.54</td>
<td>1.77</td>
<td>1.62</td>
<td>1.41</td>
</tr>
<tr>
<td>Availability of courses meeting interests and goals</td>
<td>1.58</td>
<td>1.33</td>
<td>1.67</td>
<td>1.20</td>
</tr>
<tr>
<td>Academic quality of specific area of major study</td>
<td>1.52</td>
<td>2.22</td>
<td>1.69</td>
<td>1.35</td>
</tr>
</tbody>
</table>
Table 23 (continued)

<table>
<thead>
<tr>
<th>Item</th>
<th>Sex</th>
<th>Marital Status</th>
<th>Percent Satisfied</th>
<th>Satisfaction Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Single</td>
<td>Married</td>
</tr>
<tr>
<td>Appropriateness of UC training for major field of study</td>
<td>1.58</td>
<td>2.22</td>
<td>1.76</td>
<td>1.35</td>
</tr>
<tr>
<td>Opinion about training at the University of California</td>
<td>1.65</td>
<td>2.11</td>
<td>1.80</td>
<td>1.45</td>
</tr>
</tbody>
</table>
graduates were very satisfied, followed by Berkeley and Los Angeles graduates. Those who graduated with doctorate degrees were the most satisfied, as compared with those who earned master's and bachelor's degrees.

In relationship to the academic standards expected of them, 87 percent of the respondents indicated that they were satisfied. Males and married students expressed a greater degree of satisfaction concerning this area than the females and single students. Graduates of both the Davis and San Diego campuses were very satisfied. Berkeley graduates reported that they were satisfied with this aspect, while Los Angeles graduates were somewhat less satisfied. Doctoral students were found to be very satisfied, and bachelor's degree holders were the least satisfied.

Seventy graduates (92 percent) responded to the item inquiring about the quality of general education programs offered at the University. Ninety-four percent of the respondents indicated that they were satisfied with this aspect. Males and married students expressed greater satisfaction regarding this area than the females and single students. The graduates from Berkeley and Davis were equally satisfied with the quality of the general education programs they received, while those from Los Angeles and San Diego were not as satisfied. Doctoral degree holders were found to be the most satisfied, while master's degree graduates were the least satisfied.

Ninety-one percent of the 76 graduates expressed
satisfaction with the availability of courses which met their educational goals and interests. Females and married students were found to be more satisfied than males and single students. The Davis graduates expressed the highest degree of satisfaction among the campus groups, followed by the Berkeley, San Diego, and Los Angeles graduates. The students working toward doctorate degrees were the most satisfied group according to degrees received. The next group of students, also highly satisfied, were those working for their bachelor's degrees, followed by the master's degree candidates.

Eighty-seven percent of the graduates reported satisfaction with the academic quality of their specific areas of study. Male students were very satisfied with this area, while females were less satisfied. Single and married respondents were satisfied with this aspect, while the married students reported a slightly higher degree of satisfaction. According to campus location, Davis graduates were very satisfied, followed closely by those from Berkeley. The group of graduates from San Diego and Los Angeles also expressed satisfaction with this aspect of their academic experience. Doctoral graduates were the most satisfied group, while those who graduated with bachelor's degrees were the least satisfied.

When questioned regarding the applicability of their University of California training for their major field of study, 83 percent of the graduates indicated that they were
satisfied with this aspect. Males and married students were found to be more satisfied than females and single students in this area. Of the campus groups, those from Davis were very satisfied, followed by the graduates from Berkeley, Los Angeles, and San Diego. The doctoral students were highly satisfied with their training, while the master's and bachelor's candidates were also satisfied in this respect.

Those students who majored in environmental design were the most satisfied group of respondents with the appropriateness of their training for their major field of study. Graduates in the natural resources and chemistry ranked second and third in the expressed level of satisfaction, followed by the graduates of engineering, and by those who had studied in the letters and sciences.

Eighty-eight percent of the respondents were satisfied with the training they received at the University of California. Males and females were both satisfied, but males were considerably more satisfied with their training. Married students were more satisfied than the single students. Davis students expressed high satisfaction in this regard, followed by Berkeley graduates. The graduates from the Los Angeles and San Diego campuses were also found to be satisfied with this aspect. Doctoral graduates were highly satisfied, followed by master's degree holders. Those graduates who obtained bachelor's degrees also expressed satisfaction with the training received.
Graduates of environmental design were the most satisfied group according to fields of study with their University of California training. In contrast, those who studied chemistry, although still satisfied, were the least satisfied group. Students of the natural resources and of engineering ranked second and third, respectively, in their degrees of satisfaction. The letters and sciences graduates expressed a slightly higher degree of satisfaction with their training than the chemists.

Faculty advisory system. In this category items related to faculty advisory system, relationship with the academic advisor, and faculty assistance with academic problems are discussed. Data related to these items are shown in Table 24.

Sixty-four percent of the 76 respondents were satisfied with the faculty advisory system encountered at the University of California. Males and females expressed the same degree of satisfaction in this area, while married students were slightly more satisfied. Davis graduates, followed by San Diego, were the most satisfied groups. The graduates from Berkeley were less satisfied, while those from Los Angeles were the least satisfied. Graduates of the doctoral programs were the most satisfied, followed by bachelor's degree holders. Master's degree holders were found to be the least satisfied.

Fifty-nine percent of the total sample indicated satisfaction with the relationship with their academic
Table 24
Computed Satisfaction Means Related to Faculty Advisory System at the University of California

<table>
<thead>
<tr>
<th>Item</th>
<th>Sex</th>
<th>Marital Status</th>
<th>Percent Satisfied</th>
<th>Satisfaction Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Single</td>
<td>Married</td>
</tr>
<tr>
<td>Faculty advisory system</td>
<td>2.38</td>
<td>2.33</td>
<td>2.42</td>
<td>2.25</td>
</tr>
<tr>
<td>Relationship with academic advisor</td>
<td>2.28</td>
<td>2.11</td>
<td>2.32</td>
<td>2.10</td>
</tr>
<tr>
<td>Faculty assistance with academic problems</td>
<td>2.36</td>
<td>2.00</td>
<td>2.41</td>
<td>2.05</td>
</tr>
</tbody>
</table>
advisor. Female and married students were somewhat more satisfied than the males and single students. The student from San Diego reported that he was very satisfied with this aspect. The graduates from the 3 remaining campuses expressed the same degree of satisfaction with this item. Those who received doctoral degrees were the most satisfied group, with the graduates possessing master's degrees expressing the least amount of satisfaction.

Seventy-one (93 percent) of the sample responded to the query regarding faculty assistance with their academic problems. Fifty-eight percent reported satisfaction in this area. Male and single students were somewhat less satisfied than the females and married students. Davis graduates were highly satisfied with this respect to their University of California experience. The group of graduates from Los Angeles and San Diego were the least satisfied. Doctoral degree holders were the most satisfied, while the master's and bachelor's degree holders were somewhat dissatisfied.

Classroom instruction. In this category items related to amount of academic work required, system of assignments, and quality of classroom instruction are discussed. Data related to these items are shown in Table 25. Of the 74 graduates who replied to the question regarding the amount of academic work expected of them, 92 percent were found to be satisfied with this area. Females and married students were high satisfied,
Table 25

Computed Satisfaction Means Related to Classroom Instruction at the University of California

<table>
<thead>
<tr>
<th>Item</th>
<th>Sex</th>
<th>Marital Status</th>
<th>Percent Satisfied</th>
<th>Satisfaction Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of academic work required each semester</td>
<td>Male: 1.72</td>
<td>Female: 1.12</td>
<td>Single: 1.87</td>
<td>Married: 1.50</td>
</tr>
<tr>
<td>System of assignments, quizzes, and examinations</td>
<td>Male: 2.04</td>
<td>Female: 2.20</td>
<td>Single: 2.16</td>
<td>Married: 1.78</td>
</tr>
<tr>
<td>Quality of classroom instruction</td>
<td>Male: 1.54</td>
<td>Female: 1.77</td>
<td>Single: 1.62</td>
<td>Married: 1.41</td>
</tr>
</tbody>
</table>
while males and single students were somewhat less satisfied. Davis graduates were the most satisfied group according to campus location, followed by the graduates from Berkeley, San Diego, and Los Angeles. Doctoral graduates were the most satisfied, and bachelor's degree holders were the least satisfied group of degree holders with the required amount of academic work.

The graduates were asked to indicate the level of their satisfaction regarding the system of assignments, quizzes, and examinations at the University of California. Seventy-seven percent of the respondents expressed satisfaction with their experiences encountered in this area. Males were slightly more satisfied than females, while married students were considerably more satisfied than the single students with this aspect of classroom instruction. Davis graduates were very satisfied with the system. Graduates from the 3 remaining campuses expressed equal satisfaction with this area. Doctoral graduates were the most satisfied, followed by master's degree and bachelor's degree holders.

Seventy-six percent of the sample indicated satisfaction with the quality of classroom instruction. The male students were somewhat more satisfied than the females with this aspect, while the married students were considerably more satisfied than the single students. The student from San Diego was very satisfied, followed by the graduates
from the Davis campus. Berkeley graduates were satisfied, along with the Los Angeles graduates. The respondents who held doctoral degrees were the most satisfied group of degree holders with the quality of classroom instruction, while the bachelor's degree holders were the least satisfied group. The data related to the level of degrees received and the 14 academic aspects are shown in Table 26.

Table 26
Mean Satisfaction of Items Related to Academic Aspects According to Level of Degree Received

<table>
<thead>
<tr>
<th>Item</th>
<th>Bachelor's</th>
<th>Master's</th>
<th>Doctoral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation program at the University of California</td>
<td>2.55</td>
<td>2.18</td>
<td>1.92</td>
</tr>
<tr>
<td>University recognition of your previous academic work</td>
<td>2.00</td>
<td>1.74</td>
<td>1.68</td>
</tr>
<tr>
<td>Academic standards expected of you</td>
<td>2.04</td>
<td>1.80</td>
<td>1.35</td>
</tr>
<tr>
<td>Quality of general education programs</td>
<td>1.58</td>
<td>1.64</td>
<td>1.46</td>
</tr>
<tr>
<td>Availability of courses meeting your interests and goals</td>
<td>1.56</td>
<td>1.77</td>
<td>1.33</td>
</tr>
<tr>
<td>Academic quality of your specific area of study</td>
<td>1.88</td>
<td>1.56</td>
<td>1.39</td>
</tr>
</tbody>
</table>
Table 26 (continued)

<table>
<thead>
<tr>
<th>Item</th>
<th>Bachelor's</th>
<th>Master's</th>
<th>Doctoral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicability of the University of California training for your major field of study</td>
<td>1.88</td>
<td>1.80</td>
<td>1.24</td>
</tr>
<tr>
<td>Opinion about your training at the University of California</td>
<td>2.12</td>
<td>1.64</td>
<td>1.35</td>
</tr>
<tr>
<td>Faculty advisory system</td>
<td>2.68</td>
<td>2.81</td>
<td>1.64</td>
</tr>
<tr>
<td>Relationship with your academic advisor</td>
<td>2.48</td>
<td>2.64</td>
<td>1.53</td>
</tr>
<tr>
<td>Faculty assistance with your academic problems</td>
<td>2.62</td>
<td>2.63</td>
<td>1.62</td>
</tr>
<tr>
<td>Amount of Academic work required each semester</td>
<td>2.00</td>
<td>1.75</td>
<td>1.58</td>
</tr>
<tr>
<td>System of assignments, quizzes, and examinations</td>
<td>2.44</td>
<td>2.13</td>
<td>1.62</td>
</tr>
<tr>
<td>Quality of classroom instruction</td>
<td>2.32</td>
<td>1.99</td>
<td>1.59</td>
</tr>
<tr>
<td>Overall Mean</td>
<td>2.15</td>
<td>2.01</td>
<td>1.52</td>
</tr>
</tbody>
</table>

The respondents' reactions expressed as being either "satisfied" or "very satisfied" with the items pertaining to the academic aspects of their sojourn experience are presented as percentages below:
| Quality of general education programs | 94 |
| Amount of academic work required each semester | 92 |
| Availability of courses meeting your interests and goals | 91 |
| University recognition of your previous academic work | 88 |
| Opinion about your training at University of California | 88 |
| Academic standards expected of you | 87 |
| Academic quality of your specific area of study | 87 |
| Appropriateness of University of California training for your major field of study | 83 |
| System of assignments, quizzes, and examinations | 77 |
| Quality of classroom instruction | 76 |
| Faculty advisory system | 64 |
| Orientation program | 63 |
| Relationship with your academic advisor | 59 |
| Faculty assistance with your academic problems | 58 |
The mean satisfaction for the 14 items pertaining to the academic aspects of the graduates' experience was computed to be 1.90 on a four-point scale, with 1 representing very satisfied. This indicates that the graduates were "satisfied" with the academic aspects of their University of California experience.

General Satisfaction

The analyses of the data suggest that the respondent graduates were generally satisfied with the various aspects of their University of California experience. The satisfaction mean for the 11 items pertaining to the physical and social aspects of the graduates' experience was computed at 2.26. The mean satisfaction for the academic aspects of the respondents' experience was found to be 1.90. A comparison of these 2 mean values indicates that the graduates as a group were more satisfied with the academic aspects of their sojourn experience than with the physical and social aspects of their stay at the University of California campuses. The 25 reaction items which were used to determine the level of satisfaction of the Iranian graduates with the various aspects of their University of California experience,
accompanied by the computed mean for each item, are shown in Table 27.

### Table 27

**Rank Order of Satisfaction Items Related to the Physical, Social, and Academic Aspects of the Student Experience**

<table>
<thead>
<tr>
<th>Reaction item</th>
<th>Absolute Frequency</th>
<th>Satisfaction Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Availability of courses meeting your interest and goals</td>
<td>76</td>
<td>1.55</td>
</tr>
<tr>
<td>2. Quality of general education program</td>
<td>70</td>
<td>1.57</td>
</tr>
<tr>
<td>3. Academic quality of your specific area of study</td>
<td>76</td>
<td>1.60</td>
</tr>
<tr>
<td>4. Appropriateness of U.C. training for your major field of study</td>
<td>76</td>
<td>1.65</td>
</tr>
<tr>
<td>5. Opinion about your training at U.C.</td>
<td>76</td>
<td>1.71</td>
</tr>
<tr>
<td>6. Academic standards expected of you</td>
<td>76</td>
<td>1.73</td>
</tr>
<tr>
<td>7. Amount of academic work required each semester</td>
<td>73</td>
<td>1.77</td>
</tr>
<tr>
<td>8. University recognition of your previous academic work</td>
<td>67</td>
<td>1.77</td>
</tr>
<tr>
<td>9. Medical services provided by the University</td>
<td>74</td>
<td>1.85</td>
</tr>
<tr>
<td>10. Quality of classroom instruction</td>
<td>76</td>
<td>1.98</td>
</tr>
<tr>
<td>11. On-campus social activities</td>
<td>70</td>
<td>2.04</td>
</tr>
<tr>
<td>Reaction item</td>
<td>Absolute Frequency</td>
<td>Satisfaction Mean</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>--------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>12. On-campus recreational activity</td>
<td>71</td>
<td>2.06</td>
</tr>
<tr>
<td>13. System of assignments, quizzes, and examinations</td>
<td>75</td>
<td>2.06</td>
</tr>
<tr>
<td>14. Participation in intramural activities of your choice</td>
<td>56</td>
<td>2.14</td>
</tr>
<tr>
<td>15. Off-campus housing facilities</td>
<td>75</td>
<td>2.18</td>
</tr>
<tr>
<td>16. Orientation at U.C.</td>
<td>52</td>
<td>2.21</td>
</tr>
<tr>
<td>17. Relationship with your academic advisor</td>
<td>76</td>
<td>2.26</td>
</tr>
<tr>
<td>18. On-campus resident halls</td>
<td>34</td>
<td>2.27</td>
</tr>
<tr>
<td>19. Faculty assistance with your academic problems</td>
<td>71</td>
<td>2.32</td>
</tr>
<tr>
<td>20. Contact with foreign student advisor</td>
<td>70</td>
<td>2.34</td>
</tr>
<tr>
<td>21. University food services</td>
<td>67</td>
<td>2.36</td>
</tr>
<tr>
<td>22. Faculty advisory system</td>
<td>75</td>
<td>2.38</td>
</tr>
<tr>
<td>23. Appropriateness of the office of the foreign student advisor</td>
<td>72</td>
<td>2.38</td>
</tr>
<tr>
<td>24. Cost of University housing in relation to accommodations provided</td>
<td>46</td>
<td>2.63</td>
</tr>
<tr>
<td>25. Cost of living on your located campus</td>
<td>74</td>
<td>2.67</td>
</tr>
<tr>
<td>Overall Mean</td>
<td></td>
<td>2.06</td>
</tr>
</tbody>
</table>
Items with which the students were most satisfied were those which were academic in nature. The graduates expressed the greatest amount of satisfaction with the academic item concerning the availability of courses. The least amount of satisfaction was expressed for the cost of living. In regard to the physical and social aspects, the graduates expressed the highest degree of satisfaction for the medical services provided. This item ranked 9th in terms of mean satisfaction of all items.

The computed mean for the 25 reaction items was found to be 2.06. This indicates that the graduates were "satisfied" with their sojourn experience. Females were found to be more satisfied than males with the physical and social aspects, while the male respondents were more satisfied with the academic aspects of the University of California experience. Both married students and doctoral students were consistently satisfied with all the various items tested.

**Correlation of the Satisfaction Items**

The data from the satisfaction items were tested to determine the existence of correlations among specific variables. Twenty pairs of items were found to exhibit high positive correlations. Each pair of items will be discussed separately.

1. A high positive correlation was found between the items related to the satisfaction with the office of the
foreign student advisor and the graduates' contact with the foreign student advisor. The value of the correlation coefficient was computed at 0.87.

2. A positive correlation was found between the item related to the satisfaction with the amount of academic work required each semester and the item inquiring about the satisfaction with the quality of classroom instruction. The value of the correlation coefficient was 0.52.

3. The respondents who expressed satisfaction regarding the faculty advisory system also tended to be satisfied with their relationship with the academic advisor. The value of the correlation coefficient of these 2 items was 0.77.

4. The expressed satisfaction concerning the faculty advisory system was found to demonstrate a positive correlation with the satisfaction expressed for the faculty assistance with academic problems. The correlation coefficient was computed at 0.70.

5. A positive correlation was found to exist between the item questioning the relationship with the academic advisor and the item regarding the satisfaction with faculty assistance concerning academic problems. The correlation coefficient for these 2 items was computed at 0.51.

6. Respondents who tended to indicate satisfaction with the system of assignments, quizzes, and examinations also tended to express satisfaction with the academic
standards expected to them. The correlation coefficient for these 2 items was 0.68.

7. A positive correlation was found between the replies concerning the quality of classroom instruction and the expressed satisfaction with the expected academic standards. The correlation coefficient in this instance was 0.51.

8. The respondents who indicated satisfaction with the system of assignments, quizzes, and examinations also tended to be satisfied with the quality of general education programs offered at the University of California. The correlation coefficient of these 2 items was 0.55.

9. A positive correlation was found to exist between the item regarding the availability of courses meeting the student's goals and interests and the University's system of quizzes and examinations. The computed value of the correlation coefficient was 0.53.

10. The availability of courses meeting the students' goals was also found to be positively correlated with the item inquiring about the respondent's expected academic standards. The value of the correlation coefficient for the 2 items was 0.63.

11. There was found to be a positive correlation between the item related to the availability of courses and the appropriateness of the University of California training for the major field of study. The value of the correlation coefficient was 0.87.
12. The availability of courses offered by the University of California was also found to positively correlate with the quality of the general education programs at the University. The value of the correlation coefficient was 0.75.

13. The appropriateness of the University of California for study exhibited a positive relationship with the amount of academic work carried each semester. The computed value of the correlation coefficient was 0.50.

14. There was found to be a positive correlation between the appropriateness of the University of California for study and the system of quizzes and assignments. The value of the correlation coefficient was 0.52.

15. The appropriateness of the University for study exhibited a positive correlation with the academic standards expected of the respondents, with a correlation coefficient of 0.61.

16. There was found to be a positive relationship between the item related to the appropriateness of the University of California for study and the item pertaining to the graduates' opinion about their training at the University.

17. The appropriateness of the University of California for study was also found to be correlated with the quality of general education programs offered at the institution. The correlation coefficient value was 0.65.
18. There was found to be a positive correlation between the item related to the amount of academic work carried each semester by the respondents and the item regarding their opinion about their training at the University of California. The value of the correlation coefficient was 0.51.

19. The graduates' satisfaction with their training at the University of California exhibited a positive correlation with the degree of satisfaction with the system of examinations. The correlated coefficient was found to be 0.72.

20. There was found to be a positive correlation between the graduates' opinion about their training at the University of California and their satisfaction with the quality of general education offered. The value of the correlation coefficient was 0.59.

NATURE OF EMPLOYMENT AND JOB SATISFACTION UPON RETURNING TO IRAN

The primary objective of cross-cultural education has traditionally been the personal and professional development of the individual. The desire to improve one's station in life still continues to be the prime motivating factor in international education. The personal development of an individual is often judged by the degree of success he establishes in his professional attainment and development.\(^3\)

\(^3\)For a more detailed discussion, refer to Chapter 2, pp. 18-28.
The preceding analyses were related to the physical, social, and academic aspects of a group of Iranian students while attending University of California campuses. Data were also included related to background information of the students and the educational characteristics of the respondents upon their return to Iran. Having completed their studies, the graduates returned to Iran, and were faced with the need to establish or re-establish themselves professionally.

Nature of Employment

Eight items contained in the first portion of the survey instrument were designed to determine the nature of the employment undertaken by the graduates upon their return to Iran, and their desire to repeat their experience again. Sixteen of the 76 respondents held positions of employment in Iran prior to their admission into the University of California. Seven worked in Iran as engineers, 5 as teachers, 3 as technicians, and 1 as a manager. When this group was asked if the University of California training had aided them in securing promotions, 15 responded in the affirmative.

The individual who replied that his training had not aided him had worked as a technician in Iran prior to his University of California training. He graduated from the University with a bachelor's degree in engineering. The remaining respondents in the group occupied positions as follows: 2 technicians became assistant professors; of the 7 engineers, 1 worked as an engineer, 3 as university teachers, and 3
as managers. From the 5 teachers, 4 became assistant professors, and 1 became an administrator. The respondent who had a managerial position prior to leaving Iran returned to another administrative job.

Forty-seven students (62 percent) of the entire sample reported that they had secured a place of employment in Iran prior to their departure from the United States. The remaining 29 graduates (38 percent) left the United States with no definite plans regarding their future employment. Three-fourths of the total sample indicated that they obtained full-time employment immediately upon their return. With the exception of 1 student, the remaining graduates obtained employment within 6 months after their return. The 1 unemployed graduate stated that he had not sought work because he was awaiting a decision regarding his military draft status.

Upon their return to Iran, the graduates reported that they were engaged in a variety of job categories. Forty-one graduates (54 percent), the largest group of respondents, obtained teaching positions in institutions of higher learning. Sixteen (21 percent) of the sample found work as engineers. Nine graduates (12 percent) of the sample secured administrative and managerial positions upon their return to Iran. The remaining graduates occupied the following positions:

<table>
<thead>
<tr>
<th>Position</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secretary</td>
<td>2</td>
</tr>
<tr>
<td>Economist</td>
<td>2</td>
</tr>
<tr>
<td>Computer analyst</td>
<td>1</td>
</tr>
<tr>
<td>Art consultant</td>
<td>1</td>
</tr>
</tbody>
</table>
When the graduates were questioned regarding the length of time they retained their first position secured after their return, 11 percent indicated that they changed their jobs within 6 months. Eight percent located new positions after 6 months to 1 year. Those graduates who remained in the same position from 1 to 2 years constituted 12 percent of the sample. Five percent indicated that they had held their position for more than 2 years before changing their employment. The remaining 64 percent at the time of the interviews were still occupying the positions they had obtained subsequent to their arrival in Iran.

In order to determine the employment promotions received by the graduates since their return, the respondents were asked to indicate the title of the position they held at the time of the interviews. Forty-one returning graduates (54 percent) had initially obtained teaching jobs, but 9 (20 percent) moved into administrative positions, and 2 went into field work in architecture and engineering. Six of the 16 respondents working as engineers were promoted to managerial positions, and 1 became a teacher.

All 9 graduates who were working in an administrative capacity after their return retained the same positions. One secretary (a female) was still working in the same job, while another secretary had retired to become a housewife. The only graduate working initially as an architect was promoted to a
managerial position. Two economists, 1 business consultant, 1 art consultant, 1 commercial contractor, and 1 computer analyst remained in the same positions they initially had secured upon their return to Iran.

From the entire sample, 69 percent of the respondents remained in their initial jobs, while 21 percent moved into administrative positions. The remaining 10 percent changed the entire nature of their work, with 2 members of this group becoming housewives. The decline in the proportion of teachers and engineers was mainly the result of promotions into managerial positions. The initial and final positions held by the respondents who occupied jobs in the 3 most populated occupational categories are presented in Table 28.

Table 28
The Initial and Final Positions Held by the Respondents in the Three Largest Occupational Groups

<table>
<thead>
<tr>
<th>Occupational Category</th>
<th>First Position</th>
<th>Final Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absolute Frequency</td>
<td>Relative Frequency (Percent)</td>
</tr>
<tr>
<td>Teaching</td>
<td>41</td>
<td>54</td>
</tr>
<tr>
<td>Engineering</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td>Administrative</td>
<td>9</td>
<td>12</td>
</tr>
</tbody>
</table>
The graduates were asked to indicate who their employers were. Eight graduates (11 percent) indicated they were self-employed, and 21 respondents (29 percent) worked for private enterprise. The bulk of the sample, 44 graduates, who comprised the remaining 60 percent, were employed by the Iranian government. Approximately two-thirds of those working for the government were teachers, while the remaining one-third was involved in government business and services. Twenty-three percent of the government employees had desk jobs in offices. One-third of those working in the private sector were involved in teaching, while the remaining two-thirds were involved in private business enterprises.

Job Satisfaction

The graduates were questioned regarding the degree of satisfaction they had for the position of employment they held at the time of the interviews. Seventy percent indicated that they were satisfied with their jobs. The males and married graduates were more satisfied than the females and the single respondents. Doctoral degree holders were very satisfied, followed closely by those with master's degrees. Bachelor's degree holders were also satisfied, but were the least satisfied members of the group. The engineering graduates were highly satisfied, followed by graduates from the letters and sciences, and by the chemistry and natural resource majors. Those in environmental design comprised the least satisfied group.
Thirty percent of those employed by the government, and 30 percent of those employed by private enterprise were very satisfied with their jobs. An additional 36 percent of the government employees were satisfied, while 4 graduates stated that they were dissatisfied with their positions. Forty-five percent of those working in the private sector stated that they were satisfied, while none expressed dissatisfaction. All of the self-employed respondents were satisfied, with 50 percent of them being highly satisfied.

The job satisfaction in relation to occupations was highest among those who held administrative positions. Three-fourths of this group indicated that they were either satisfied or very satisfied with the nature of their employment. Seventy-one percent of the teachers expressed satisfaction with their jobs. Those in engineering who were either satisfied or highly satisfied comprised 69 percent of the engineers. With the exception of 1 economist and 1 commercial contractor who were very satisfied, the rest of the respondents working in the other fields were all satisfied with their positions of employment.

APPLICABILITY OF UNIVERSITY OF CALIFORNIA TRAINING

Sixty-five graduates (85 percent) replied to the item inquiring about the degree of satisfaction they had for the applicability of their University of California training to the needs of Iran. Those who expressed
satisfaction regarding this aspect comprised 63 percent of the respondents to the question. Males and single graduates were considerably more satisfied than the females and married graduates. Doctoral degree holders expressed the highest degree of satisfaction regarding his area. Master's degree holders were slightly more satisfied than those who had graduated with bachelor's degrees.

The students of chemistry were the most highly satisfied group with the applicability of their training to the needs of Iran. Engineers and the graduates in the letters and sciences expressed satisfaction about their training. Those who majored in environmental design and those who studied the natural resources were the most dissatisfied groups.

Seventy-six percent (71 graduates) answered the question regarding the level of satisfaction they held for the opportunities they had for using their University of California training in Iran. Married students and males were found to be highly satisfied, while the singles and females were considerably less satisfied. Doctoral graduates expressed a high degree of satisfaction in regard to this question. Master's degree holders also reported that they were satisfied, while bachelor's degree holders were considerably less satisfied.

The graduates of environmental design were highly satisfied with the opportunities afforded them for using their University of California training in Iran. Engineers
were slightly more than "satisfied," followed by the graduates of the letters and sciences. Those who majored in the natural resources and in chemistry were the least satisfied respondents.

The graduates were asked to indicate the extent to which they were able to utilize their University of California training in their respective employment. Five percent indicated that they had been unable to use their training; 43 percent had used their training to some degree; and the remaining 52 percent reported that they had been able to use their University of California education to a high degree. Data related to the applicability of University of California Training are shown in Tables 29 and 30.

The graduates were asked if they would go back to the United States again to study, provided the opportunity to do so arose. Only 2 respondents answered "no" to this question. Both were male graduates from the Berkeley campus. One held a bachelor's degree in business administration, and the other was an engineer with a master's degree. No reasons were given for the negative answers.

Eighty-five percent of the respondents who answered "yes" to the first question also indicated that, if they were to go back to the United States for study, they would again choose the University of California. Eleven graduates indicated that they would seek other institutions for any further study they might undertake. Two of these respondents were graduates from the Los Angeles campus, while the remaining 9 were
Table 29

Mean Satisfaction of Applicability of University of California Training and Present Job According to Major Field of Study

<table>
<thead>
<tr>
<th>Item</th>
<th>Natural Resources</th>
<th>Chemistry</th>
<th>Engineering</th>
<th>Environmental Design</th>
<th>Letters and Sciences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicability of University of California training for needs of Iran</td>
<td>2.75</td>
<td>1.80</td>
<td>2.16</td>
<td>2.50</td>
<td>2.29</td>
</tr>
<tr>
<td>Opportunities for using University of California training in Iran</td>
<td>2.20</td>
<td>2.30</td>
<td>1.96</td>
<td>1.60</td>
<td>2.05</td>
</tr>
<tr>
<td>Opinion about present job</td>
<td>2.20</td>
<td>2.21</td>
<td>1.77</td>
<td>2.80</td>
<td>1.93</td>
</tr>
</tbody>
</table>
Table 30
Mean Satisfaction of Applicability of University of California Training and Present Job According to Sex and Marital Status

<table>
<thead>
<tr>
<th>Item</th>
<th>Sex</th>
<th>Marital Status</th>
<th>Percent Satisfied</th>
<th>Satisfaction Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Single</td>
<td>Married</td>
</tr>
<tr>
<td>Applicability of University of California training for needs of Iran</td>
<td>2.15</td>
<td>2.30</td>
<td>2.89</td>
<td>2.31</td>
</tr>
<tr>
<td>Opportunities for using University of California training in Iran</td>
<td>1.98</td>
<td>2.50</td>
<td>1.65</td>
<td>2.19</td>
</tr>
<tr>
<td>Opinion about present job</td>
<td>1.98</td>
<td>2.14</td>
<td>1.85</td>
<td>2.05</td>
</tr>
</tbody>
</table>
Berkeley graduates. Nine of the 11 respondents held bachelor's degrees. Among the group, 7 individuals were engineering majors, while 2 were graduates from the College of Letters and Sciences. The reasons underlying the negative answers were most frequently stated as being the difficulties faced by students in undergraduate work at large institutions.

The sample was then asked the hypothetical question if they would again choose the same major field of study. A relatively large number of individuals, a group of 22 graduates, stated that they would not choose the same major field of study. Nineteen Berkeley graduates and 3 graduates from the Los Angeles campus composed the group, which consisted of 20 males and 2 females. Thirteen engineers, 4 graduates with degrees in the letters and sciences, 2 psychologists, 2 architects, and 1 chemist expressed second thoughts about their professions. There were 3 graduates with doctoral degrees, 6 with master's degrees, and 13 with bachelor's degrees who wished they had chosen a different field of study.

When the graduates were asked if they would consider returning to the United States for employment purposes, 13 respondents replied "yes." The reasons given varied from individual to another except in 2 categories. Three respondents indicated that they would do so for better working conditions available in the States. Another group of 3 based their answer on the fact that they believed they could achieve better living conditions there. Other replies
Higher occupational status  
Higher salary paid  
Just to live  
To be in the United States for awhile  
Just living my life  
More peace of mind and social security  
For better personal contact

PROBLEMS FACED BY IRANIAN STUDENTS

The 76 graduates in the sample were asked to respond to 25 selected items related to the physical, social, and academic aspects of their University of California experience. Three additional items were included to elicit reactions from the graduates concerning their opinions about their present jobs and the applicability of their University of California training for Iran. In the first part of the questionnaire, 3 items were also introduced to acquire information about the respondents' adequacy of support, proficiency in the English language, and difficulty in finding housing while attending the University of California.

The reaction items were presented on a four-point scale, with 4.00 representing "dissatisfied." It was assumed that an expression of dissatisfaction by the respondents with any 1 of the items would be indicative of the existence of a problem in that area of concern. This section includes an analysis of the problems faced by the graduates (1) while attending the University of California, and (2) upon returning to Iran as indicated by responses from the questionnaire.
While Attending the University of California

An analysis of the data indicated that 10 to 45 percent of the respondents experienced problems in several areas while attending the University of California. Approximately 15 percent of the graduates reported that they experienced financial problems. This group of students indicated that they had received either inadequate or very inadequate financial support while attending the University of California.

The cost of living at their respective campuses created problems for 18 percent of the graduates who replied to this item. This group consisted of 12 males and 2 females. Two of the students were married. One of the respondents reported that his financial support was inadequate with the remainder experiencing cost of living problems. Four of the students were from Los Angeles and the remaining 10 were from Berkeley.

Seventy-five of the total 76 students answered the question concerning the problem of finding housing at their respective campuses. Thirty-four students (45 percent) reported that they had encountered problems in finding housing. The graduates were asked to indicate the primary means by which they had located housing. The answers given are listed below, along with the number of students who replied to this item:

<table>
<thead>
<tr>
<th>Housing Resource</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Housing Office</td>
<td>30</td>
</tr>
<tr>
<td>Other Iranian students</td>
<td>13</td>
</tr>
<tr>
<td>Newspaper advertisements</td>
<td>11</td>
</tr>
<tr>
<td>Relatives</td>
<td>8</td>
</tr>
<tr>
<td>---------------</td>
<td>---</td>
</tr>
<tr>
<td>Walking around</td>
<td>8</td>
</tr>
<tr>
<td>Office of the Foreign Student Advisor</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>75</strong></td>
</tr>
</tbody>
</table>

Three of the students who experienced problems in locating housing had financial problems while attending the University of California. Two of the 34 students were females, while 11 members of the same group were married.

A group of 5 male students, 1 at Los Angeles and the remaining 4 at Berkeley, indicated difficulties in living in the campus residence halls. Of the 5 dissatisfied students, 1 was married, and 3 were graduate students.

Two females and 8 males expressed dissatisfaction with the food services provided by the University. The main problems were related to adjusting to American food. This group which consisted of 9 singles and 1 married student, comprised 15 percent of the respondents to this item. Three graduates attended the Los Angeles campus, 5 studied at Berkeley, and 2 attended the Davis campus.

Although the majority of the respondents engaged in English language courses before their admission into the University of California, some reported experiencing language difficulties. One-fourth of the graduates rated their English ability as being either poor or very poor at the time of their admittance into the University of California. As indicated by the respondents, their inability in the usage of the English language was the most serious problem they had to overcome while in the United States.
Three students who had English language problems and 2 who had financial difficulties were among a group of 12 students who expressed dissatisfaction with the appropriateness of the office of the foreign student advisor. These students, all males, comprised nearly 17 percent of the 72 students who replied to the question. Nine of the respondents were single. Seven were undergraduates and the remaining 5 were graduate students.

Eleven males and 1 female stated that they had not been satisfied with their contact with the foreign student advisor. Two of these students had financial problems, and 3 students had experienced language problems. Three were married, and 9 students were undergraduates. One student was from Los Angeles and 11 were from the Berkeley campus. This group of 12 students represented 17 percent of the 70 respondents to the item. In oral interviews these students felt the advisor should have been of more assistance and more concerned with the students' problems.

Three students who had English problems were among the group of 17 students who expressed dissatisfaction with the faculty advisory system. Fourteen males and 3 females comprised 22 percent of the total number of respondents to this item. There were 9 bachelor's degree students and 8 master's degree students who experienced academic difficulties in this area. Ten students were in engineering, 5 were in the letters and sciences, 1 was in chemistry, and another student was in architecture. Fifteen members of this
group attended Berkeley, 1 was at Davis, and 1 was at Los Angeles.

Ten respondents (13 percent) encountered difficulties in the relationship with their academic advisor. This group of 9 males and 1 female were all single. Five were in engineering, 2 were in the letters and sciences, 2 were in chemistry, and 1 student was in environmental design. Six of the students were working toward their master's degrees, while 4 students were in undergraduate programs. Nine students attended the Berkeley campus, and the remaining student attended the Davis campus.

A total of 9 students (13 percent) of the 71 respondents to the item concerning faculty assistance with academic problems expressed dissatisfaction. Among this group of 9 males, 1 student was married. Eight of the students who experienced problems with faculty assistance were in engineering and 1 student was in chemistry. Four of the students were in undergraduate programs and 5 students were in master's degree programs. All 9 students in the group attended the Berkeley campus. Most of the graduates in this group indicated that the large size of the institution made it difficult to have contact with the faculty and to obtain assistance.

Upon Returning to Iran

Two of the 71 graduates (3 percent) who were questioned about the opportunities they had to apply their University of California training in Iran, were dissatisfied. Both
respondents were single, while 1 was a male and the other, a female. The female graduate had a bachelor's degree in letters and sciences with a psychology major, and the male graduate had a doctoral degree in chemistry. The female respondent who experienced difficulties in applying her University of California training was working as a secretary. The male graduate was working in an administrative capacity. Neither was employed in an area utilizing their education.

The graduates were questioned about the applicability of their University of California training to the needs of Iran. Seven of the 65 respondents to the item indicated that they were dissatisfied. This group, which experienced problems in applying their training, was comprised of 6 males and 1 female. Two of the respondents had graduated in the natural resources, 3 in engineering, and 2 in letters and sciences. One respondent had graduated with a doctoral degree, 2 with master's degrees, and 4 with bachelor's degrees. Four of the graduates worked in administrative and managerial capacities, 2 were teachers, and 1 was an engineer.

Four of the 70 graduates who responded to the item asking their opinion about their present job indicated that they were dissatisfied. This group contained 2 males working as engineers, 1 architect working in an administrative position, and 1 teacher. Three of the graduates held bachelor's degrees, with the remaining respondent holding a doctoral degree.
SUMMARY

The respondents of this study were a group of 76 Iranian graduates of the University of California who returned to Iran. Eighty-eight percent of the graduates were males, the remaining 12 percent being females. One-fourth of the sample group were married during their enrollment at the University of California, and one-half of the married students had children. The majority of the students entered the University between the ages of 21 to 25 years, the female group being somewhat younger at the age of entrance than the male population.

The 4 major primary sources of support received by the respondents during their enrollment were: (1) family, 47 percent, (2) the Iranian government, 17 percent, (3) University of California assistantship programs, 16 percent, and (4) employment in the United States, 11 percent. The remaining 9 percent of the students were supported by University of California scholarships, private businesses in Iran or the United States, and personal savings. Fifteen percent of the students had received inadequate financial support.

Forty-two of the students (55 percent) entered the University of California with high school diplomas, 2 (3 percent) with associate of arts degrees, 29 students (38 percent) with bachelor's degrees, and 3 (4 percent) with master's degrees. Upon graduation from the University of California, 26 (34 percent) had bachelor's degrees, 24 graduates (32 percent) held master's degrees, and 26
(34 percent) had doctoral degrees.

Approximately three-fourths of the respondents chose to study in the United States because they believed that the education available was superior to that offered in other countries. Twelve percent of the sample came to the United States because of their interest in the country. Seven percent chose the United States because they failed to gain entrance into educational institutions in Iran.

The length of enrollment of the graduates ranged from 1 to 14 years, with three-fifths of the sample spending 4 to 6 years at the University of California. When asked to evaluate their University of California experience, the graduates were found to be generally satisfied. The graduates expressed a somewhat greater degree of satisfaction with the academic aspects of the experience, as compared with the physical and social aspects.

As a group, married students were more satisfied with the University of California experience than the students who were single. The males expressed a higher degree of satisfaction with the academic aspects than the females. In contrast, the female graduates were more satisfied with the physical and social aspects of the University experience. Doctoral graduates were the most satisfied group with the academic aspects of the University experience, while bachelor's degree holders expressed the least amount of satisfaction in that area. The respondents from Davis expressed the highest degree of satisfaction for the physical, social, and academic
aspects of the sojourn experience, followed by the graduates from Berkeley, Los Angeles, and San Diego.

The respondents who graduated in environmental design were the most satisfied group in regard to the academic quality and the applicability of their training for their major field of study. They also expressed the highest degree of satisfaction for their overall training at the University of California. Graduates in the natural resources were somewhat less satisfied, followed by the engineers, chemists, and those who graduated in letters and sciences.

Upon returning to Iran 54 percent of the graduates obtained teaching positions in institutions of higher learning. The next largest group (21 percent) worked as engineers. Twelve percent of the graduates secured administrative and managerial positions. The remaining 13 percent of the graduates occupied positions in various disciplines.

Eleven percent of the respondents changed their initial place of employment within 6 months after their arrival. Eight percent changed jobs within 1 year, and 12 percent found new positions after 1 to 2 years. The remaining 64 percent of the sample still occupied their initial positions at the time of the interviews.

Eleven percent of the graduates were self-employed, while 29 percent worked for private enterprise. The remaining 60 percent worked for the Iranian government. Fifty percent of the self-employed graduates, 30 percent of those who worked for the government, and 30 percent of those who
worked for private enterprise indicated they were very satisfied with their jobs. The males and married respondents were found to be more satisfied with their jobs than the females and single graduates. Doctoral degree holders were very satisfied, followed by those with master's degrees and bachelor's degrees.

The graduates in chemistry, engineering, and the letters and sciences expressed satisfaction with the applicability of their training to the needs of Iran. Those who majored in environmental design and the natural resources were the least satisfied groups with this aspect. Males and married respondents were found to be more satisfied with the opportunities in their employment to apply their training than the females and single graduates. Doctoral graduates were very satisfied with this aspect, while bachelor's degree holders were the least satisfied.

The analyses of the data indicated that 10 to 45 percent of the respondents experienced problems in a variety of areas related to the physical, social, and academic aspects of their training. Finding housing was the most frequently mentioned problem, encountered by 45 percent of the graduates. Twenty-four percent of the respondents indicated that they experienced difficulties with the English language. Twenty-two percent of the sample expressed dissatisfaction with the faculty advisory system. Inadequacy of support was mentioned as being a problem by 15 percent of the respondents.

Other problem areas reported by the graduates were
the cost of living (18 percent), campus residence halls, and the food served on campus (15 percent). Seventeen percent reported dissatisfaction with the appropriateness of the office of the foreign student advisor, and 17 percent were dissatisfied with the contacts made with this office. Thirteen percent of the respondents reported dissatisfaction with the relationship with academic advisors and faculty assistance with academic problems.

A summary of the study, conclusions, implications, and recommendations will be presented in Chapter 5.
Chapter 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This investigation was designed to evaluate the educational experience of a group of Iranian graduates from the University of California who returned to Iran. The study was also directed to probe into the nature of employment of the graduates in Iran, and the applicability of the University of California training to employment. In this chapter, the investigator will conclude the study in the following sections: (1) summary of the study, (2) conclusions and implications, and (3) recommendations.

SUMMARY OF THE STUDY

The sample of this study upon which the merit of the findings rests was a group of Iranian graduates from the University of California who returned to Iran. A list of 103 graduates was prepared under the auspices of the Ministry of Science and Higher Education in Iran. The graduates were contacted on the telephone by the researcher and 76 confirmations for interviews were arranged.

During the course of the interviews, a structured questionnaire was administered and items therein were discussed.
at length. The data were secured during the 3 months of May, June, and July of 1974 in Tehran. The data were then transferred onto computer cards and were processed by the Burrough's B6700 computer located at the University of the Pacific, Stockton, California.

Selected computer programs from the Statistical Package for the Social Science (SPSS) provided the required computations. The analyses used in this investigation were: (1) frequency distribution; (2) contingency tables for the categorical data; and (3) means, standard deviations, and Pearson Product Moment Correlation Coefficients for the items relating to the degree of satisfaction.

The conclusions and implications of this study should be viewed with the specific limitations in mind. This study was limited to: (1) a group of Iranian graduates who returned to Iran, and (2) Iranian graduates who received degrees from the University of California within a ten-year period starting with the 1963-1964 academic year.

CONCLUSIONS AND IMPLICATIONS

The general purpose of this investigation, as stated in Chapter 1, was primarily two-fold: (1) to analyze the sojourn period in terms of the academic, social and physical experiences of a selected group of Iranian alumni who returned to Iran, and (2) the relevancy and applicability, as perceived by the graduates, of their American training in Iran.
The descriptive analysis of the 76 graduates indicated that three-fourths of the group were single, with 12 percent being females. Forty-seven percent of the graduates were supported by their families, 17 percent by the Iranian government, 16 percent by the University of California assistantship programs, and 11 percent by employment in the United States. The remaining 9 percent were supported by 4 other sources.

Fifty-five percent of the graduates entered the University of California with high school diplomas, while the remaining group held college degrees at the time of admission. The respondents stayed 1 to 14 years at the University, receiving 1 or 2, and in some instances, 3 degrees. Upon graduation from the University of California 26 held bachelor's degrees, 24 held master's degrees, and 26 graduates held doctoral degrees. The conclusions and implications of this study will be discussed under each stated objective.

1. The first objective of this study was to: **Identify the problems faced by Iranian students in terms of academic, economic, and social experiences encountered while attending American universities.** The findings of this study indicated that 10 to 45 percent of the respondents encountered problems in 11 specific areas of their sojourn experience. The most frequently stated problem by the respondents was related to finding housing. The difficulties in securing housing facilities was reported by 45 percent of the respondents. This problem was particularly prevalent among the
married students. More than one-half of this group experienced difficulties in securing housing.

The English language was a major problem for one-fourth of the respondents. Aspects related to the office of the foreign student advisor were reported by 17 percent of the students as being a problem area. The students felt that the advisor should have been of more assistance to the needs of foreign students. The academic advisor and faculty assistance with academic problems also created difficulties for 13 percent of the respondents. Twenty-two percent of the students experienced problems with the faculty advisory system.

Other difficulties encountered by 15 to 18 percent of the respondents were the cost of living, inadequate financial support, campus residence halls, and the University food services. It can be concluded from this study that the major problems related to the academic, economic, and social areas are: finding suitable housing, using the English language effectively, and student advising.

The findings of this study imply that some of the problems encountered by the student were the result of a lack of preparation on the part of the students. The problems of lack of skill in English, finances which were inadequate for the high cost of living, and finding housing were partially due to insufficient planning, and possibly, poor advice prior to the students' admittance.
Difficulties encountered with the foreign student advisor, faculty advisor, and faculty assistance with academic problems imply that there was insufficient communication between the students and the University staff members. This may at least in part be attributed to the large size of the University, and the inevitable impersonal relationships which may occur in an institution of that size.

2. The second objective of this study was to:

Identify the degree of satisfaction of Iranian alumni in terms of their personal assessment of the academic, social, and physical aspects of their American university experience. The degree of satisfaction of the Iranian alumni was computed on a four-point scale with 1.00 representing very satisfied and 4.00 representing dissatisfied. The overall mean of satisfaction related to the 25 reaction items pertinent to the physical, social, and academic aspects of the graduates' experience was computed at 2.06. This indicated that the respondents were "satisfied" with the University of California experience.

Females expressed a higher degree of satisfaction with the various social and physical aspects of their sojourn experience than did the males. In the contrast the male members of the group indicated greater satisfaction with the academic areas of their experience than did the females. The married students were more satisfied than the single students with both the social and academic aspects of their sojourn experience.
Respondents with doctoral degrees were the most satisfied group of the graduates with the academic aspects of their University of California experience. Master's degree holders were also satisfied, followed by the recipients of the bachelor's degrees. According to campus location, the graduates from the Davis campus were the most highly satisfied group of respondents, followed by Berkeley, Los Angeles, and the San Diego campus of the University of California. It can be concluded from this study that the academic, physical, and social aspects of the sojourn experience are satisfactory.

The findings imply that the University of California offers an educational experience which meets the needs and expectations of Iranian students. Among the 4 campuses, the graduates from the Davis campus expressed the highest degree of satisfaction with their educational experience. The results of the study imply that females as a group adjusted more readily into the student social life at the University, whereas the males exhibited more satisfaction with the academic side of the educational experience. Those who graduated with a higher level of degree tended to be more satisfied with their education than those who received lesser degrees.

3. The third objective of this study was to: Determine the relevancy and applicability of American education for Iranian alumni upon their return to employment in Iran. Males and single graduates expressed considerably
higher satisfaction with the relevancy and applicability of their training in Iran than did the females and married graduates. Those with doctoral degrees were highly satisfied, followed by those with master's degrees and bachelor's degrees. The respondents who studied chemistry were the most satisfied group in respect to the applicability of their training to the needs of Iran. The engineers and the graduates in the letters and sciences also expressed satisfaction in this respect. The respondents who studied environmental design and the natural resources were the least satisfied groups.

When the graduates were asked about the opportunities they had for using their University of California training in Iran, the graduates of environmental design reported that they were highly satisfied, followed by the engineers. Graduates in the letters and sciences were also satisfied, followed by those who had graduated in the natural resources and chemistry.

Five percent of the respondents indicated that they had been unable to utilize their training in their employment. Forty-three percent reported using their training to some degree, while the remaining 52 percent had been able to utilize their training to a high degree. It can be concluded from this study that American education is relevant and applicable to employment in Iran.

Based upon the findings of this study, it can be implied that the University of California training received
by the vast majority of subjects in this study is relevant and applicable to the needs of Iran. The findings also imply that the positions of employment open to the returned graduates have enabled them to utilize their education obtained at the University of California. Graduates in engineering and environmental design were the most satisfied groups with the opportunities to apply their training in their employment.

4. The fourth objective of this study was to: Determine the nature of the Iranian alumni's employment and the degree to which American education has enhanced their employment opportunities. The findings of this study indicated that 16 respondents held positions in Iran prior to their admission into the University of California. Seven had worked in Iran as engineers, 5 as teachers, 3 as technicians, and 1 as a manager.

Upon returning to Iran, respondents in the group occupied positions as follows: 2 technicians became assistant professors; and 1 worked as an engineer. Of the 7 engineers, 1 worked as an engineer, 3 as university teachers, and 3 held managerial positions after their return to Iran. From the 5 teachers, 4 became assistant professors, and 1 became an administrator. The respondent who had a managerial position prior to leaving Iran returned to another administrative job.

Three occupational categories which accounted for 87 percent of the total number of respondents were:
professorships (assistant or associate), 41 percent; administrative positions, 33 percent; and engineering, 13 percent. The remaining 13 percent of the graduates held positions in 7 different disciplines. The Iranian government was the sole employer for 60 percent of the returned graduates. Twenty-nine percent reported working for private enterprise, while 11 percent were self-employed.

It can be concluded from this study that the government of Iran utilizes the skills and training of the majority of the American-educated Iranian returnees. It can also be concluded that American education aids the employment opportunities of returned graduates. The findings of this study imply that the rapid development in Iran has created a great demand for university teachers, engineers, and for managers and administrators.

RECOMMENDATIONS

The underlying assumptions of this study, as stated in Chapter 1, were to (1) understand the nature of the sojourn experience of Iranian alumni, (2) formulate a possible solution to the academic, economic, and social problems of study abroad, and (3) re-examine the objectives of education abroad in terms of the relevancy of American education. Based upon the finding of this investigation, a list of recommendations to be considered by the Iranian government, the prospective Iranian student, and the administration of the University of California is presented.
1. Adequate information should be provided for the student who wishes to study in the United States. The prospective university should supply the student with accurate information which is related to the academic, physical, and social aspects of the institution.

2. Sufficient knowledge of the English language should be required of students prior to admittance into universities. Students seeking admission who are not proficient in English should be referred to the appropriate agencies or institutions which offer intensive training in the English language.

3. The government of Iran should direct and encourage Iranian students who wish to study abroad into fields of study which are in demand and are readily applicable in Iran.

4. Iranian students need to be given complete advice and assistance in making plans to attend American universities.

5. Foreign student advisors and faculty advisors need to give greater attention and help to foreign students.

6. It is recommended that this study be replicated using other American educational institutions in an effort to substantiate the findings of this study and to generalize them to a wider population sample.
SUMMARY

In this chapter the investigator summarized the study of the educational sojourn of the returned Iranian alumni from the University of California with a presentation of the related conclusions and implications. Recommendations based upon the findings were drawn for the concern of Iranian students who wish to study in the United States, Iranian government officials, and for the staffs of American educational institutions. Since the number of returned foreign-educated Iranians is increasing, the investigator urged that other researchers conduct replications of this study. Thus, the findings could be further verified and generalized to a wider population.
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Dediger, Stevan. "Why Did Daedalus Leave?" Science, 133 (June, 1961), 2047-2052.


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THE LAW PROVIDING FOR FOREIGN STUDY

In 1928 the Majlis passed a bill for the education of students abroad. In its first article it authorized the government to send one-hundred students abroad each year for a five year period of study. (See Chapter Two). In every group 35 per cent were to prepare themselves for teaching in the higher institutions in Iran. The amount of 1,000,000 rials a year, not to exceed 6,000,000 rials in all, was allocated for this purpose. Article II define the qualifications of applicants and the process of selection, and the subsequent article made provisions for their employment on their return to Iran. A further amendment stipulated that graduates of higher institutions would be hired with the Civil Service rating of grade three. Article Four of the same law provided for a student advisory office and an operating budget of 1,200,000 to 2,400,000 rials, an amount which has since been increased. The facilities and staff of advisors needed to aid the fifteen thousand or more students in foreign lands has increased the expenses of the advisory office to 9,300,000 rials ($120,000) annually. Moreover, certain restrictions have lately been imposed on foreign study. Only students in the fields of agriculture, veterinary medicine, medicine, engineering and education receive government support. Because the language of the host country is a prerequisite, they must take minimal language qualifying examinations. Applicants must also promise not to take part in political activities.
APPENDIX B
A STUDY OF IRANIAN ALUMNI UNIVERSITY OF CALIFORNIA

Please read all questions carefully, and respond to all items. Most of the questions can be answered by making a check mark (✓), while some are "fill in the blank" where the space is provided.

Expression of your actual feelings about each item, whether favorable or unfavorable, will help determine more accurately how Iranian students view their University of California experiences. Your response will be kept completely CONFIDENTIAL.

A. GENERAL INFORMATION

1. Please indicate your age upon entering University of California ________ years
   a. Your age upon graduation from UC ________ years

2. What was your marital status while at UC? ______ Single
   Married
   a. If married, did your spouse accompany you? Yes No
   b. How many children accompanied you? ________

3. List in the table below the names of all colleges and universities you attended in the United States, dates attended, major field of study, and degrees received. Start with the institutions LAST attended.

<table>
<thead>
<tr>
<th>College or University</th>
<th>Dates Attended</th>
<th>Major Field of Study</th>
<th>Degree Received</th>
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</tr>
<tr>
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<td>To ________, 19</td>
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<td>From ________, 19</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>To ________, 19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Write in the space the total number of years you have lived in the United States ________ years.

5. Indicate your source(s) of financial support while at UC
   ___ Family, relatives, or friends
   ___ Foundations or business in Iran
   ___ Iranian government
   ___ Employment in U. S.
   ___ United States foundations, industries, or business
   ___ United States government
   ___ UC scholarship
   ___ UC assistantship
   ___ Other -- specify: ________________________________

   NOW INDICATE YOUR PRIMARY AND SECONDARY SOURCES OF SUPPORT BY PLACING NUMBERS 1 and 2 NEXT TO THE ABOVE CHECKED ITEMS

6. How adequate was your financial support while at UC?
   ___ Very adequate ___ Adequate ___ Inadequate
   ___ Very Inadequate

7. How did you feel about the problem of finding housing on your located campus?
   ___ Very difficult ___ Difficult ___ Slightly difficult
   ___ No problem

8. Please indicate the PRIMARY means by which you located housing on your arrival at UC
   ___ University housing office
   ___ Foreign student office
   ___ Other Iranian students
   ___ University faculty members
   ___ Newspaper advertisement
   ___ Other -- specify: ________________________________

9. How soon after you returned home did you obtain full-time employment?
   ___ Immediately ___ Within 6 months ___ Within 12 months
   ___ Later

10. What was your first official title of your first position you held after leaving UC and returning home?

   a. How long did you hold this position?
      ___ Less than 6 months ___ 6 to 12 months
      ___ 12 to 24 months ___ Longer than 24 months
11. Check below the extent to which your employment has enabled you to use your UC training.
   a. First position after UC.
      ___ Much  ___ Some  ___ None
   b. Present position
      ___ Much  ___ Some  ___ None

12. Check below the category which describes your present occupational status
    ___ Self employed
    ___ Employed by government
       ___ a. In business or industry
       ___ b. In educational institutions
       ___ c. In other government services
    ___ Employed by non-government organizations
       ___ a. In business or industry
       ___ b. In educational institutions
       ___ c. In other non-government agencies
    ___ Unemployed
    ___ Other -- specify:_____________________________________

Write the official title of your present position
________________________________________________________________________

13. If you were to recommend the University of California to an Iranian student, would you recommend the University
    ___ Without reservation  ___ With some reservations  ___ Would not recommend

14. From which UC campus did you graduate? __________________________

15. Give the title of your position you held in Iran before entering UC
    __________________________________________
    a. If you held a position, do you feel that your training at UC aided you in job promotions?
       ___ Yes  ___ No

16. Indicate your English language ability while you were enrolled at UC
    a. First semester: ___ Very poor  ___ Poor  ___ Good
       ___ Excellent
    b. Last semester: ___ Very poor  ___ Poor  ___ Good
       ___ Excellent
17. If you were given the opportunity once again to study abroad,
   a. Would you have come to the United States?
      ___ Yes ___ No
   b. Would you have chosen University of California?
      ___ Yes ___ No
   c. Would you have chosen the same major of study?
      ___ Yes ___ No

18. Indicate the main reason why you went to the United States to study
   ___ Superior education
   ___ Interest in the United States
   ___ Scholarship funds awarded only if used in U.S.
   ___ Could not receive acceptance from Iranian Universities

19. Did you have a specific job waiting for you when you returned to Iran?
    ___ Yes ___ No

20. If you were given the opportunity, would you consider going back to the United States?
    ___ Yes ___ No
   a. If yes, would you do so for the purpose of
      ___ obtaining additional education and training
      ___ working
   b. If you consider going to the United States to work, would you do so for the purpose of
      ___ Better salary offered
      ___ Higher social status
      ___ Higher occupational status
      ___ Better working conditions
      ___ Other -- specify: ____________________________
B. INSTITUTIONAL INFORMATION

Please circle the one which describes best your opinion. To do so, the symbols to be used are defined as follows:

| VS | if you were very satisfied with the item |
| S  | if you were satisfied with the item      |
| SS | if you were somewhat satisfied with the item |
| D  | if you were dissatisfied with the item   |
| N  | if the item is not applicable            |

Indicate the campus of the University of California which relates to these questions

<table>
<thead>
<tr>
<th>Orientation activity at UC</th>
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</tr>
</thead>
<tbody>
<tr>
<td>On-campus resident halls</td>
<td>VS S SS D N</td>
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<tr>
<td>Off-campus housing facilities</td>
<td>VS S SS D N</td>
</tr>
<tr>
<td>University food services</td>
<td>VS S SS D N</td>
</tr>
<tr>
<td>Cost of University housing in relation to accommodations provided</td>
<td>VS S SS D N</td>
</tr>
<tr>
<td>Medical services provided by University</td>
<td>VS S SS D N</td>
</tr>
<tr>
<td>Cost of living in your located campus</td>
<td>VS S SS D N</td>
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<tr>
<td>On-campus social activities</td>
<td>VS S SS D N</td>
</tr>
<tr>
<td>On-campus recreational activities</td>
<td>VS S SS D N</td>
</tr>
<tr>
<td>Preparation in intra-mural activities of your choice</td>
<td>VS S SS D N</td>
</tr>
<tr>
<td>University recognition of your previous academic work</td>
<td>VS S SS D N</td>
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<tr>
<td>Amount of academic work carried each semester</td>
<td>VS S SS D N</td>
</tr>
<tr>
<td>Faculty advisory system</td>
<td>VS S SS D N</td>
</tr>
<tr>
<td>Relationship with your academic advisor</td>
<td>VS S SS D N</td>
</tr>
<tr>
<td>Faculty assistance with your academic problems</td>
<td>VS S SS D N</td>
</tr>
<tr>
<td>System of Assignment, Quizzes, and Examination</td>
<td>VS S SS D N</td>
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<tr>
<td>Quality of classroom instruction</td>
<td>VS S SS D N</td>
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<tr>
<td>Academic standards expected of you</td>
<td>VS S SS D N</td>
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<tr>
<td>Contacts with foreign student advisor</td>
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<td>Appropriateness of the Office of Foreign Student Advisor</td>
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<tr>
<td>Appropriateness of UC training for your major field of study</td>
<td>VS S SS D N</td>
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Appropriateness of UC training to needs of Iran.........................VS S SS D N
Opportunities for using UC training after returning to Iran..............VS S SS D N

Opinion about your present job..................VS S SS D N
Opinion about your training at UC...............VS S SS D N
Quality of general educational program.......VS S SS D N
Academic quality of your specific area of study at UC..................VS S SS D N
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DATA RELATED TO THE APPLICABILITY OF UNIVERSITY OF CALIFORNIA TRAINING IN IRAN AND JOB SATISFACTION

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<tr>
<td>Opinion about your present job</td>
<td>23</td>
<td>26</td>
<td>17</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>

Check below the extent to which your employment has enabled you to use your U.C. training.

39 Much 32 Some 5 None