

Bangor University

DOCTOR OF PHILOSOPHY

Manpower planning and development in Oman

Ali, Ali Hassan

Award date:
1990

Awarding institution:
Bangor University

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

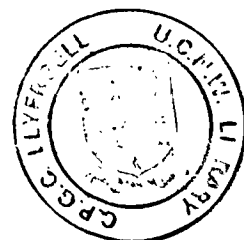
Download date: 24. Apr. 2025

**MANPOWER PLANNING AND
DEVELOPMENT IN OMAN**

VOLUME I

ALI HASSAN ALI

January 1990



In the Name of God, the All-Merciful,
the All-Compassionate.

Dedication

This thesis is dedicated to all my family with love, especially my wife, Khadija, and my children Firas, Nibras, Mohammed and Noora who have all been a constant source of the inspiration and encouragement, and have made considerable personal sacrifices to allow me to complete my studies. Equally, I am grateful to my brothers and personal friends who have been most supportive.

TITLE THESIS : MANPOWER PLANNING AND
DEVELOPMENT IN OMAN

A THESIS SUBMITTED TO THE UNIVERSITY OF WALES
IN FULFILMENT OF THE REQUIREMENT FOR THE DE-
GREE OF PHILOSOPHIAE DOCTOR IN THE SCHOOL OF
EDUCATION, UNIVERSITY COLLEGE OF NORTH WALES,
BANGOR, UNITED KINGDOM

By

ALI HASSAN ALI

(...23rd..February.... 1990)
27th Rajab 1410 H

ACKNOWLEDGEMENT

I wish to acknowledge with gratitude my indebtedness to all my committee members who were tremendously supportive of my efforts in this study. In particular, I wish to thank my Director of Studies and supervisor - the Head of School of Education at the University College of North Wales, Professor Iol^Vwyn Williams, for his advice, continuous consultation, evaluation, and [^]constructive assessment at every step throughout the entire study, which were very helpful to me and they are highly appreciated.

I wish to thank also my Co-supervisors Dr. Glyn O Phillips, Dr. G.R.H. Jones and Dr. Brinley Williams whose insights and comments have been valuable to my study. Also my thanks to Mr Ross McKay in the Department of Economics at the University of North Wales for his valuable assessment and advice. My thanks are also forwarded to Professor Taher A. Razik at Bafallo Univesity U.S.A., Stacey Birks at University of Exeter and staff at the Education Research Centre in the Kingdom of Saudi Arabia, King Saud University for their advice and support.

My sincere thanks for Mr. Keith Jones, Representative at the British Council, Muscat who kindly arranged a special programme to visit some of the training organizations in UK. I am also obliged to thank Mr. Peter Hall, Overseas Training * Coordinator at

the British Council, Mr. Rex Dunham, Principal Training Adviser at EITB, Mr. Hardy Jones, Assistant Director, Education and Training, Adviser at City and Guilds of London Institute, Mr. J. Long and Mr. Graham Pulham at Manpower Services Commission, Mr. Hubbard, Principal at Letchworth College and also the Principal at Lombeth Skill Centre. I also acknowledge gratefully my Secretary Miss. Sajida, the typists and computer operators especially Mr Muhammad Ghazanfar at the Directorate General of Vocational Training - Ministry of Social Affairs and Labour for their continuous help and assistance.

I owe gratitude of the sacrifices which my wife Khadija and my sons Firas and Mohammed and my daughters Nibras and Noora have made to assist me in completing my studies. Finally I wish to thank my brothers and friends for their encouragement and support.

I hope that this study will be a source of development for the new Ministry which has recently been established as Ministry of Labour and Vocational Training by Royal Decree 5/1990 on 2nd January 1990. My sincere congratulation to His Excellency Sayed Mo'tasam in his new job as Minister of Labour and Vocational Training.

I hope that the faith which my family, my professors, my Ministry and my country have placed in me will lead to a fruitful future work as an educator and manpower developer in Oman.

ALI HASSAN ALI

PROLOGUE

The author of this study gratefully acknowledge the support provided by the Ministry of Social Affairs and Labour, Sultanate of Oman, during his studies at the University College of North Wales at Bangor.

The Ministry has not only supplied all of the local resources necessary to undertake and complete these studies, but has also made important Ministry reference materials available.

The Ministry assisted also in the survey by facilitating the return of questionnaires to the researcher. Because of this cooperation there has been an opportunity to base this present study on the actual situation in Oman and on the real needs expressed by its educators, economists and labour market specialists.

The author wishes to thank all those who assisted and submit his gratitude to H.E. Sheikh Mustahail bin Ahmed Al-Mashany - Minister of Social Affairs, H.E. Sayed Hamad bin Hilal Al-Busaidy - the under-secretary in the Ministry of Social Affairs, and H.E. Yahya bin Mahfoodh Al-munzary, Minister of Education and Youth Affairs for their encouragement. I also wish to express my sincere desire and intention to make future contributions to the success and progress of the Sultanate of Oman. May Oman prosper in all sectors and develop its indigenous manpower.

**MANPOWER PLANNING AND TRAINING
NEEDS IN OMAN**

PREFACE

1. The Sultanate of Oman is the second largest country in the Arabian Peninsula with a total population of approximately two million. Young people below the age of 15 account for a large proportion (46 per cent) of the population. According to studies carried out by various organizations, (i.e. World Bank, ECWA), it has been found that a majority of the population live in rural areas.
2. Before 1970, Oman had a great shortfall in most economic and social aspects. The dawn of development started after 1970, following Sultan Qaboos Bin Said's accession to the leadership and the launching of a broad plan to modernize and develop the country.
3. Oil is the main source of its economy. According to the Development Council statistics, the share of oil revenue in 1988 accounted for 79.6 per cent of the total. The oil net revenue was (993.6) million Rials Omani from a total of (1247.6) million Rials Omani. Actual development investment increased from (3341) million Rials Omani during the First Development Plan (1976-1980) to (7872) million Rials Omani during the Second Development Plan (1981-1985). The planned development investment during the Third Development

plan (1986-1990) is estimated as (8164) million Rials Omani. One important factor to be noticed is the attempt of the government to diversify its strategy so as in the long run to depend on other sources rather than oil. Manufacturing is one of the main concerns of development for the government. Despite the dominance of the modern sector (in terms of contribution to the gross domestic product), Oman still remains a predominantly rural society. Up to 80% of the Omani population is estimated to live in rural areas.

4. The rural labour force has been steadily declining, emigrating to urban areas at a rate of 5000 people (mostly economically active males) annually. At present, Omanis form 30 percent of the total labour force employed in the modern sector; most of them occupy jobs at an unskilled and semi-skilled level. At present more than 200 thousand expatriates are working in the modern sector in Oman, which represents 70 percent of the total labour force in that sector.
5. The size of population and its rate of growth are obviously very important elements in the manpower assessment in the long term of the next 15 to 20 years. It becomes a more critical issue when the labour market patterns are not clearly known and defined.
6. Oman relies on a large number of non-Omani workers, essentially because human resource development (education and training of the population to produce an effective modern workforce) cannot keep pace with

economic growth demands in terms of skilled manpower requirements.

7. The basic fact which should be considered is that manpower requirements are related proportionally to economic growth. In Oman, with late development, high priority was given to economic growth to build up the infrastructure and have a modern state. Economic planners, the executers of development projects and the contractors wish to see as high a rate of economic growth as possible. Although economic planners may acknowledge that reliance on non-Omani workers may present problems, they are not thought important enough to warrant any limitation of economic growth. Clearly then, the planning of human resources development in the Omani context lags behind general economic planning.
8. To cope with manpower requirements, due to the needs created by economic development, Education and Training plans were drawn up to form a human resource development plan.
9. No educational system existed before the 1970s. Only 3 primary schools were available with 900 students. No education for girls was provided. The present situation of education is the result of rapid development. An education ladder was formed which was based on a 6-3-3 structure. Technical and vocational education and training systems were established. The establishment operation of the university has added a new

dimension in completing the educational system. In 1984/85, more than 225 thousand students were enrolled in educational institutions.

10. Despite the development of education in recent years, Oman is still not capable of meeting its manpower requirements internally. A large segment of the population is functionally illiterate, including a sizeable population of young males with a strong desire to share in the country's new economic prosperity. The quality of education has also suffered considerably due to the rapid expansion in education.
11. Due to the great demand for labour and the shortage of Omani labour supply, manpower development has become an important issue. The Council of Education and Vocational Training under the Chairmanship of HM the Sultan Qaboos with 9 members at minister's level was formed in 1978 to set general policies of education and training in the context of manpower development.
12. The present trends in manpower development, whether from the education or training side, do not match with the long term objectives, set by the government, nor have they realized the potential to cope with future requirements.
13. This present study of manpower planning and development in Oman discusses manpower development in relation to manpower planning. This research will analyse the past and present trends of manpower development and anticipate its effectiveness in the future. The manpower

development concept is discussed in terms of its objectives, manpower requirements and social demand. The discussion will highlight the main problems in the present system of manpower development: in the context of manpower planning in Oman. The system of manpower development is also analysed in terms of its relevance to, and possible conflict with the purpose of manpower development schemes. The present focus of such schemes is closely examined.

14. The main problems related to manpower development lie in:

[1] The role of the technical and vocational education and training system and its performance in operating

(a) The Vocational Education system run by the Ministry of Education and Youth (MOEY).

(b) The Vocational Education System run by the Ministry of Social Affairs and Labour (MOSAL).

[2] Social pressures from the student population in terms of their expectations on completing their general education versus the government policies in having a sound output of manpower requirement to fulfill the country's needs. This creates a conflict in the definition of objectives.

[3] Lack of enrolment in vocational and training system due to the lack of vocational guidance, the social attitude towards it, and due to the closed

pattern existing in technical education and training system, in not providing the student with access to further studies. This also affects manpower development schemes.

[4] The unstable educational output in relation to manpower requirements.

15. The arguments are developed so ~~asto~~ propose a new model of manpower development for the future. This model aims to achieve a new target in producing an integration of educational and training concepts in manpower development.
16. In discussing the various hypotheses, and analysing the various concepts in comparison with other countries, a new manpower development model will be proposed to meet the objectives and to overcome the above stated problems. This model aims to integrate manpower demands and educational and training outputs in relation to individual aspirations and manpower targets.

TABLE OF CONTENTS

	Page
CHAPTER I : INTRODUCTION	1
Climate	3
Background History	3
Population and Labour Force	4
Manpower Development through Education	5
Manpower Development through Policies and Strategies	8
Manpower Development through Technical Institutes	9
Economic Development	10
CHAPTER II : POPULATION AND MANPOWER IN OMAN	16
The Impact of Population Size and its Growth upon the Manpower Assessment.	16
The Impact of Real Economic Growth on Manpower Assessment	18
Economic Growth and Human Resource Development	18
The Planning Environment.	20
Manpower Situation in Oman.	24
Factors Influencing National Manpower Supply In Oman	25
Manpower Situation in the Public Sector	31
Manpower Situation in the Private Sector	36
Non-Omanis by Economic Sector in the Private Sector	39
Non-Omanis by Occupation in the Private Sector	40
Non-Omanis by Skill and Educational Level	42
Omani Workforce in Private Sector	46
Manpower Situation in Informal Sector	49
CHAPTER III : EDUCATION AND TRAINING IN OMAN	53
Development of Education in Oman	54
Education Aims and Priorities	55
The General Education System (Primary, Preparatory, Secondary and Adult Education)	58
Post Secondary and Specialist Education (Islamic, Commercial, Agricultural and Industrial and Vocational Training)	66
Teacher Training	71
Oman Technical Industrial College	71
Institute of Health Sciences	72
Higher Education - Sultan Qaboos University	73
Preservice Training	75
In-service Training	78
Student Population - Inputs and Outputs of ETS	89
Educational resources	94
Management of Education and Training in Oman	104

CHAPTER IV :	COMPARATIVE ANALYSIS OF RELATED DEVELOPING COUNTRIES AND LITERATURE REVIEW	112
	Introduction	112
	Population and Population Growth	113
	Population Growth in the Arab Gulf States	122
	Manpower in Arab Gulf States	126
	Manpower Problems in the Arab States	128
	Affects of Expatriate Employment in the Arab Gulf States.	133
	Education and Training Input and Output	139
	Educational System in the Arab States	146
	Educational Problems in Arab States	150
	Manpower Planning	157
	Manpower Planning Techniques and Models	160
	Manpower Planning in Arab World	177
	Labour Markets in Arab States	182
	Manpower Planning in Oman	183
CHAPTER V :	PROBLEM IDENTIFICATION AND MANPOWER DEVELOPMENT MODELS	189
	The Role of Education and Training	190
	Female Labour Force	197
	Adult Education in Rural Areas	198
	Educational Issues	200
	Training Issues	203
	Training Issues for Rural Development	204
	Models and Systems	205
	Manpower Development Models	208
CHAPTER VI :	METHODOLOGY AND RESEARCH DESIGN	214
	Objectives of the Survey	215
	Designing of Questionnaires	216
	Targets Groups	216
	Pilot Test and Sample Procedure	216
	Results of Pilot Tests	218
	Modification of the Questionnaires	219
	Data-Collection Instruments	220
	Methodology on the Application of the Questionnaire and the Choice of Samples	221
	Future Manpower Requirements	225
	Students Enrolment Estimates	227
CHAPTER VII :	FINDINGS AND RESULTS	231
	National Population and Manpower	231
	Sectoral Distribution of Manpower	234
	Occupational Distribution of Employment	239
	Supply of National Manpower	241
	Results of the Survey	250
	Manpower Imbalances	276

CHAPTER VIII: MANPOWER DEVELOPMENT MODEL	283
Planning Process	283
Manpower Development Model	285
Priorities of Training	290
Omanization Process	297
Recommendation and Conclusion	299
ABBREVIATIONS	308

TABLES IN THE TEXT

Table I	: Progressive Ratio from one Educational Stage to Another	30
Table II	: Public Sector Employment	32
Table III	: Non-Omanis Employed in the Private Sector	38
Table IV	: Distribution of Participants in IPA 1978-1985	88
Table V	: Omani Students in Various Education Programmes 1987-88	90
Table VI	: Indication of Comparative Resources in Some Countries in 1979	116
Table VII	: Development of Population Density for Arab Gulf States	117
Table VIII	: Major Arab States - GNP in 1982	121
Table IX	: Indication Related to Life Expectancy	123
Table X	: Average Population Growth Rates in Arab Gulf States	123
Table XI	: Distribution According to Age Group in the World	124
Table XII	: Labour Force Characteristics of Some Arab Countries	125
Table XIII	: Labour Force Situation in Arab Gulf States	127
Table XIV	: Population Age Group Structure in Arab Gulf States	130
Table XV	: Distribution of Population Age Group in Different Regions	131
Table XVI	: Employment in the Traditional Sector in Some Arab States	132
Table XVII	: Percentage of Female Labour Froce in Some Arab States.	134

Table XVIII	: Education in Some Arab Countries	143
Table XIX	: Development in General Education in the Arab World	148
Table XX	: Rate of Wastage in Arab Universities	154
Table XXI	: Rate of Illiteracy in Various Regions in the World (1980)	155
Table XXII	: Deviation of Forecast Demand to Real Actual Date for 1976 in Egypt	178
Table XXIII	: Direct Cost of Educating and Training an Omani Student Per Year	196
Table XXIV	: Population Size and Sample Size of Participants	223
Table XXV	: Employment in Oil and Gas Sector	227
Table XXVI	: Comparison of Total National Manpower Supply and Total Manpower Demand	232
Table XXVII	: Percentage of Omani National Population According to Age Group	233
Table XXVIII	: Indicators of Omani Position in World Development	236
Table XXIX	: Labour Force Employment By Economic Sectors 1985	237
Table XXX	: Future Manpower Requirements by Economic Sector 1990 - 2005	238
Table XXXI	: Distribution of Workers According to Occupational Level in 1985	240
Table XXXII	: Estimates of Manpower Requirements According to Occupational and Educational Level (1990 - 2005)	242
Table XXXIII	: School Leaver Summary by Course Level and Year for 1980 - 1990	245
Table XXXIV	: School Leaver Summary by Course Level and Year for 1991 - 1995	246
Table XXXV	: Residuals from Preparatory Stage with no Post-Preparatory Education and Training	248
Table XXXVI	: Residuals from Secondary Stage with no Further Education and Training	249
Table XXXVII	: Manpower Situation in Oman in 1995	279
Table XXXVIII	: Manpower Situation in Oman in 2000	280

Table XXXIX	: Future Employment Growth in Economic Sectors	289
Table XL	: Employment of National and Their Participation Rate in Various Economic Sectors	292
Table XLI	: Matrix of Priority Level for Economic Sector for Omani Labour Market	297

LIST OF FIGURES IN THE TEXT

Figure I	: Non-Omanis in the Public Sector	34
Figure II	: Total Modern Sector Employment	50
Figure III	: Structure of Oman Educational and Vocational Training System	60
Figure IV	: Distribution of Technical Specialization in VTIs	70
Figure V	: Process of Vocation and Place of Work	99
Figure VI	: Organizational Chart of Ministry of Education and Youth Affairs	110
Figure VII	: Organizational Chart of Ministry of Social Affairs and Labour	111
Figure VIII	: Past and Projected Population	120
Figure IX	: United Educational Ladder in Arab Countries	147
Figure X	: Linkages of the Sub Models	147
Figure XI	: Skeleton of the Compound Model	176
Figure XII	: Emigration from the Villages to Cities - Problem Tree	201
Figure XIII	: Emigration from the Villages to Cities - Solution Tree	202
Figure XIV	: Model for Models	207
Figure XV	: Stock and Flows Model	209
Figure XVI	: Mastery Learning Evaluation Model	210
Figure XVII	: Formal Model of Manpower Planning	212
Figure XVIII	: Manpower Imbalances in Oman in 1995	282
Figure XIX	: Manpower Planning Model	284

Figure XX	: Manpower Development Model	286
Figure XXI	: Development of Education and Training System	307

APPENDICES

VOLUME II

Appendix A	: The Oman National Workforce
Appendix B	: Ministerial Circular No. 10/1978
Appendix C	: Present and Future Population and Education in Arab Countries
Appendix D	: Updated Labour Market Projections for the Sultanate of Oman using the "Compound Model".
Appendix E	: Manpower and Education Model (MEM) - A New Tool for Manpower Analysis
Appendix F	: Possible Studies for Proposed Manpower Planning Unit
Appendix G	: Questionnaires About Technical and Vocational Education
Appendix H	: Manpower Porjections 5 Years Output, Employment and Productivity 1985

TABLES OUT OF TEXT

Table 1	: Civil Service Employees Classified by Ministries and Other Government Organizations, Nationalities, Sex and Groups of Grades as on 31st December 1984
Table 2	: Employment of Non-Omanis in the Private Sector Classified by Major Economic Activities During 1980 to 1984
Table 3	: Occupational Distribution of Non-Omanis in the Private Sector Classified by Major Occupational Groups During 1980 to 1984
Table 4	: Number of Labour Cards Issued by the Directorate General of Labour Affairs to Non-Omanis Working in the Private Sector by Major Occupational Groups
Table 5	: Non-Omani Workforce by Occupational Level in the Private Sector and Percentage of their Increase or Decrease During the Period 1980 to 1984
Table 6	: Number of Labour Cards Issued by Ministry of Social Affairs and Labour to Non-Omanis Working in the

Private Sector During 1984 Classified by Major
Occupational Groups and Monthly Basic Salary

- Table 7 : Various Estimates of Omani Employment in the Modern Sector
- Table 8 : Coverage of the AES Since 1974
- Table 9 : Comparison of Expatriate Employees Recorded on AES and LC
- Table 10 : Estimates of Omani Employment in the Modern Private Sector
- Table 11 : Total Modern Sector Employment of Omanis
- Table 12 : Major Government Agencies concerned with Governance and Administration of the Education and Training System of Oman
- Table 13 : Number of Students Enrolled and Estimated Outputs in Primary Education
- Table 14 : Number of Students Enrolled and Estimated Outputs in the Preparatory Stage
- Table 15 : Number of Students Enrolled and Estimated Outputs in the Secondary Stage
- Table 16 : Estimates of Student Enrolments and Output from Vocational Training Institutes

BIBLIOGRAPHY

309

SUMMARY

The Sultanate of Oman is the second largest country in the Arabian peninsula with a total population approaching 2 million. Modern economic development in Oman began in 1970. Modernization and development was facilitated by oil revenues, and coordinated by a Development Council. Oil revenue accounts for more than 90% of the total state revenue. The developments in various economic sectors over the past decade have resulted in increased employment both in the public and private sectors. While the rapid growth of the private sector is important for the overall growth of the economy, it appears likely that the expansion of the modern private sector is closely linked with the imports of non-nationals.

To analyse the manpower situation in Oman, a survey approach and other field information was used to obtain data regarding the evaluation of manpower development in Oman.

Given the continued economic growth, the present enrolments and progressive rates of school leavers from the education and training system yields a manpower imbalance. It is expected that Oman is likely to rely upon more than 150,000 non-Omani workers in 1990 to achieve its planned sectoral GDP. A particular problem is the low rate of female participation in training and in employment.

Manpower imbalance becomes even more severe by 1995, when 190,000 foreign workers are expected to be needed in Oman and around 80,000 Omanis are likely to have skills unsuited for available jobs.

Current literature in the field suggests that there are three major dimensions to be addressed: Manpower Demand, Manpower Supply and Manpower Development. The author presents a conceptual model designed to integrate these dimensions and to show that the process involved in each dimension function similarly, are interconnected and are responsive on one another. This manpower development model should clearly be adopted in parallel with manpower planning. The integrative conceptual model demands careful planning and continuous adjustment of all aspects of the manpower development process. In the model, trained evaluators are considered functionally equivalent to planners, and their activities are interwoven with those of planners, implementers and "consumers" (students) in each stage of programme planning, development and implementation. Their purpose is to determine not only what changes may be needed, but also how changes in one part of the manpower development system may be harmonized with changes in other parts of the system.

It is assumed that a more comprehensive evaluation strategy is needed for the Omani labour market, and that the model prepared would help to unify the theory and practice of manpower development in Oman. It would enable economic and manpower development planners and executives to examine complex interactions in all three dimensions, and thereafter, to effect needed improvements from all three perspectives at once.

CHAPTER I

INTRODUCTION

- 1.1.1 The Sultanate of Oman is the second largest country in the Arabian Peninsula with a total land of 300,000 Sq. Kms. of rugged mountainous terrain interposed with green valleys and oases. The highest peaks are on Jabal Al-Akhdar (Green Mountains) 10,000 feet high. The coastal plains of Batinah lies to the east of mountains ranges. It is a fertile strip of 10Kms. to 30Kms. wide and 270 Kms. in length between the sea and the mountains north of Muscat (the Capital of Oman). The Omani coast line stretches for 1,700 Kms. along the Indian Ocean and the Arabian Gulf.
- 1.1.2 Oman is located in the South East corner of the Arabian Peninsula bounded to the West by Saudi Arabia and United Arab Emirates, to the South by South Yemen, to the East by the Arabian Sea and to the North by the Strait of Hormuz. It is located between latitudes 16 40'N and 26 20'N and longitudes 51 50'E and 59 40'E. Oman geographically falls into 12 distinct areas, comprising the Capital area, the Batinah area, the Western Hajar Area, the Eastern Hajar area, the Dhahirah area, Jua and Buraimi area, the Oman Interior area (Al-Joof), Sharqiya area, the Jaalan area, the Masira and Kuria Muria areas, the Dhofar Southern area and the Musandam Governrate. It is administratively composed of 7 regions divided into 41 Willayats, each

administered by a Wali, in addition to the Capital area (Muscat) responsible for 90 towns and villages and administered by a Governor. These regions as pointed out by the Development Council, (1983) are:

- (1) Musandam Region - Composed of 4 Willayats (Governorate) responsible for 172 towns and villages.
- (2) Batinah Region and Western Hajar area. - Composed of 8 Willayats responsible for 594 towns and villages.
- (3) Qurayat - Composed of one Willayat responsible for 34 towns and villages.
- (4) Dhahirah - Composed of 5 Willayats responsible for 302 towns and villages.
- (5) Oman Interior - Composed of 8 Willayats responsible for 256 towns and villages.
- (6) Sharqiya Region - Composed of 11 Willayats responsible for 386 towns and villages.
- (7) Southern Oman - Composed of one Willayat responsible for 64 towns and villages.

1.1.3 Educationally Oman is divided into nine regions;

Capital - Batinah - Al-Rustaq - Interior - Al-Wosta - Al-Dhahirah - Southern and Musandam, Ministry of Educa-

tion - (1984/85).

1.2 Climate:

1.2.1 Oman's climate varies considerably from region to region. During the summer period, from April to October the coastal area is very hot and humid, temperature rising upto 47°C and humidity upto 100%, with little rain fall mostly in April. In the Interior it is hot and dry with the exception of some higher locations where it is reasonably temperate throughout the year and decreases below 10°C on highlands. The Southern region is also temperate, although there is heavy rainfall between April and August. Elsewhere rainfall is low and irregular.

1.3 Background History:

1.3.1 Oman was one of the first countries to embrace Islam, and the Muslim religion has, through the centuries acted as a strong unifying force within the country and is today the foundation of political and legal systems in the country, and indeed the whole national life. Arabic is the Official language of its people. The country has a long history during which it has played an important role in the civilisation of Asia and East Africa. It contributed to commercial and cultural exchanges. The ancient name, 'Magan' was given to Oman by the Sumerians who used the Omani copper exported to Mesopotamia in Omani

ships during the 3rd Millennium B.C. Another ancient name "Mazoon" was given to Oman by Achaemenid Emperor Cyrus who captured the coastal region of Sohar in 563 B.C. Malallah Ali Habib, (1965).

1.3.2 Before 1970, Oman used to be a desolate undeveloped state. Although oil began to flow in 1967, the income was not used for the development of the country until H.M. Sultan Qaboos took over in 1970. The new era of Oman has started with both great hopes and realism, in order to integrate the country into the new modern world.

1.4 Population - Labour Force:

1.4.1 Although Oman is the second largest country in the Arab Peninsula covering an important geographical area of 300,000 Square Kilometres, it is not a country with a high population base. A complete census has not yet been carried out, but socio-demographic sample surveys have covered most of the country. The official estimate of the national population for planning purposes is 2 million.

1.4.2 Despite the dominance of the modern sector (in terms of contribution in GDP) Oman still remains a predominantly rural society. Upto 80% of the Oman population is estimated to live in rural areas World Bank - (1982). Most of the labour force in

rural areas is engaged in rural activities. The rural labour force, however, has been steadily declining, losing to urban areas an estimated 5,000 people (mostly economically active males) annually.

1.4.3 Omani employment in the public sector was 32,482 in 1984 comprising nearly 62% of the total civil service employment. The Omani employment in the modern private sector for the same year estimated to be about 29,000. The remainder of the Omani workforce is employed in the police and defence sectors as well as in agriculture and other rural non-agricultural activities. The latest figures available for non-Omani employment was estimated to be 19,661 in the public sector and 269,410 in the private sector mainly in modern formal private sector activities. Relatively few expatriates are employed in Agriculture. Ahuja Y.L. (1985) points out that such a reliance upon expatriate manpower is only temporary policy and the scope for providing Omani youth with employment via replacement of expatriate manpower is ample. Anyhow Oman's youth population is increasing and gradually will Omanise the labour market employment.

1.5 Manpower Development through Education:

1.5.1 The manpower development aspects are well looked after by the Government through the spread of

Education by the Ministry of Education and Youth Affairs. The general education system in Oman is composed of three stages (Primary stage of 6 years duration, Preparatory of 3 year duration and Secondary stage of 3 year duration). The enrolment at 1st Primary is at age of 6. Before 1970 education was confined to three schools attended by 909 students. At the beginning of the first five-year plan (1976 - 1977) the number of schools numbered 261 of which 213 were primary, 45 preparatory and 3 secondary. These rendered educational services to 64,975 students - (46,510 males and 18,465 females). In 1981/82, the beginning of the second five year plan, the number of schools increased to 408. Of those 177 were primary, 210 preparatory and 21 secondary. These schools provided instruction for 120,718 students - (79,396 males and 41,322 females). In 1987/88 the number of schools increased to 727 of which 414 were primary, 250 preparatory and 63 secondary attended by 274,929 students. (152,104 males and 122,825 females). In the academic year 1976/77, a class was opened for the preparation of the students in the first year of preparatory schools as teachers. The system was amended to a three year secondary institute for the preparation as teachers and those who had attained the preparatory certificate. In 1977/78, the In-

stitute for Women Teachers was opened. In 1979/80 a new one year system was introduced for those who had gained the secondary certificate. In the Scholastic year 1984/85, the Institutes of Teacher Training were upgraded to Intermediate Colleges. Secondary Agriculture education started in 1979/80 with a one year and a three year programme. In 1987/88 the number of students was 139. A Commercial Secondary class was opened in 1979/80 attached to a secondary school in the capital area. In 1987/88, the number of students in the school reached 353. In 1983/84, a Commercial secondary school for girls opened with 98 students. The field of religious education and Islamic Culture has been given equal importance. The number of students in 1987/88 reached 319. At the lower level, (in the preparatory stage) the number of students reached 567.

1.5.2 The Ministry of Education and Youth opened two model preparatory schools in 1979/80 of a vocational nature, one for boys which accommodated 142 students in 1984/85 and one for girls which provides education for 299 female students. The boys model school was upgraded to Secondary Technical School in 1984/85.

1.5.3 In 1984/85 Oman witnessed a significant increase in the number of literacy centres. These totalled 267 serving 11,360 students all over the country

(Oman Newspaper 1985).

1.5.4 The adult education programme started in 1974/75 with 25 centres giving classes to 1,353 learners. In the academic year 1987/88 the number of adult students had increased to 10,916. The scholarship program advanced during the year 1987/88 in allocating student to various universities abroad to produce specialist and high calibre manpower. The total number of students abroad in that year was 2,242. Of these 1,877 were males and 365 females. The total number of students at Qaboos University in that year were 1138 students, of these 692 were males and 446 were females (Development Council 1987).

1.6 Manpower Development through Policies and Strategies.

1.6.1 The manpower development aspects are given high priority by the Ministry of Social Affairs and Labour through a provision of the Oman Labour Law which stipulated "Every employer who employs 20 or more workers must participate in Vocational Training by one or all of the following methods : (Labour Law 1973).

(i) By establishment a training centre at his place of work.

(ii) By participating with other employers working in a similar industry to establish a training centre.

(iii) By offering financial participation in Voca-

tional training schemes administered by the Ministry. Such participation, known as the training levy, is determined as a percentage between 2 to 6 percent of the annual payroll of expatriate workers within establishment. This scheme is administered strictly provide sufficient funds for training young Omanis and also to discourage the employers from recruiting expatriate workers. The scheme yielded to O.R. 6,269,695 in 1984. These funds are used in establishing and running vocational training centres and also contribute to the development of on-the-job training programmes in and outside organisations.

1.6.2 Manpower development in the public sector has been looked after by the Ministry of Civil Service. An Institute of Public Administration has been established which offers various training courses to develop personnel in administration and management. In 1984/85 41 courses were held at the Institute and 788 trainees were trained. In 1987, the number of trainees raised to 976.

1.7 Manpower Development through Technical Institutes:

1.7.1 A technically and vocationally trained labour force is considered the basic pillar of the development process. Vocational training aimed at preparing the Omani labour force, through educational and vocational training Institutes. Study at Vocational Training Institutes usually lasts

for 3 years. The system used in the past was training at preparatory level. The system was upgraded in 1985/86 to secondary level. The number of students in 1977/78 were 256 students in 1 Institute. In 1987/88 the number of students increased to 2,581 of which 634 were in Commercial and 775 in the Technical section. The number of Institutes increased to 9 (nine). Among the Vocational Technical schools is the the Oman Technical Industrial College started in 1984/85 to train students at technician level. In 1987/88 the total number of students at the college were 620 of which 443 were males and 177 were females.

1.8 Economic Development:

1.8.1 Before the discovery of oil, agriculture, fisheries and trade were the backbone of the traditional Omani economy. With the discovery of oil and the subsequent rapid growth in petroleum production and exports, agricultural output has stagnated for want of investment and labour input.

1.8.2 Modern economic development in Oman started in 1970, following Sultan Qaboos Bin Said's accession, and the subsequent launching of a broad plan to modernise and develop the country. The national planners had no difficulty in identifying needs and priorities, the country lacked everything, and everything had to be given priority. Development expenditures increased from O.R. 20 million in

1972 to O.R. 142.9 million in 1974 and O.R. 173 million in 1975.

1.8.3 In February 1975, a Development Council was established to draw up the economic development law and provide a long term approach to economic development. The first five-year development plan (1976-1980) aimed at the diversification of the economy through :-

- Developing of sources of national income other than oil to supplement oil revenues and to replace them in future.
- Increasing investment in projects with high income returns especially in industry, mineral agriculture and fisheries.
- Distributing investment so that the less developed parts of the country could benefit and so to erase the discrepancy between the standards of living in different regions.
- Developing existing population centres in order to prevent an exodus to centres with an already high concentration of population and to protect the environment.

1.8.4 The strategy also included the development of local human resources, the completion of the country's infrastructure, the strengthening^{of} the national economy on the basis of a free enterprise economy, increasing the role of the private sector in the modern economy and the development of the

country's administrative bodies.

1.8.5 The first five year development plan (FFYDP) was approved in the second half of 1976. Oil production was expected to decline by 2.2 percent year resulting in a 19 percent annual decrease in government investment. However, it was expected that fast growth in other sectors, mainly agriculture and manufacturing would offset the forecast reduction in oil revenues. The project, therefore, had a modest annual average Gross Domestic Product (GDP) growth of only 1.6 percent Development Council FFYDP (1976 - 1980 pp. 14-16). Also World Bank Report No. 19620-OM (October 1977 para XVI).

1.8.6 The second Five-Year development plan SFYDP (1981-1985) was issued early in 1980. The plan envisages further expansion of infrastructure and public services and stresses the need for balanced regional development. The plan also emphasised the role of the private sector in development especially in agriculture, fisheries, industry, mining and traditional handicrafts. The broad financial objectives set in the plan Development Council SFYDP (1981 - 1985 p.8) were :-

- To preserve the sound and stable financial position of the country.
- To control inflation.
- To establish a General Reserve Fund financed from oil revenues.

1.8.7 In addition, for the first time " a reasonable size of the labour force " is mentioned as a possible limiting factor to economic growth. Total investment during the SFYDP is expected to reach R.O. 3,323 million with R.O. 2,155 million (65 per cent) being allocated to the government sector and the remaining R.O. 1,168 million (35 per cent) to the private sector. This should result in an average ratio of total investments to GDP during the SFYDP period of about 24 percent. The largest share of planning investments R.O. 1,163 million (35 percent), is projected to go to the oil and gas sector. The shares of other important sectors in decreasing sequence of the value are as following :-

Industries R.O. 401 million (12.1 percent); housing R.O. 396 million (11.9 percent); roads R.O. 285 million (8.6 percent); electricity and water R.O. 186 million (5.6 percent); government administration R.O. 99 million (3.0 percent); education and vocational training R.O. 88 million (2.6 percent); agriculture R.O. 84 million (2.5 percent); and posts and telephones, R.O. 67 million (2.0 percent).

1.8.8 The projected distribution of investments should help to direct more resources to "production sectors" which receives 52.8 percent in SFYDP compared to 33.1 percent for FFYDP. The service sec-

tor will also realise an increase in allocated resources rising from 23.1 percent to 25.7 percent. "Infrastructure sectors" - which include education and training will experience a sharp drop in allocations, from 43.8 percent for FFYDP to 21.5 percent for SFYDP World Bank (1981 p.6).

1.8.9 In addition to the allocations to the funds in the SFYDP. more new projects received special consideration from the government (out of the SFYDP) to be implemented in same period of SFYDP. Total money spent in the new projects within the period 1981-84, was R.O. 326.1 million. In addition to R.O. 35.5 million on Telephone and Telecommunication sector. The additional main project in the new plan was the establishment of Sultan Qaboos University.

1.8.10 One important factor to be noted is the attempt of the government to diversify its strategy in the long run so as to depend on resources other than oil. Manufacturing is one of the main concerns of development for the government. The SFYDP included a long programme of 119 million Rials Omani as an incentive to encourage the private sector to set up industries. The programme also included 16 million Rials Omani for the grants portion. The grants portion of the programme was subsequently suspended with very little of the funds having been dispersed. Some of the grant

applications have been changed to loan applications. Of the 119 million Rials Omanis, 109 million was targeted for manufacturing and 10 million for mining. During the SFYDP period (1981-85), agriculture and fisheries have been given high priority for development. Total investment in agriculture and fisheries (both private and public) amounted to R.O. 133.3 million (83.9 for Agriculture and 49.4 for Fisheries) representing 4 percent of the total investment. Government investment in the sector would amount to 84 million (2.4 percent).

CHAPTER II

II. POPULATION AND MANPOWER IN OMAN

2.0 The labour force is one of the main issues that should be examined very carefully when identifying manpower needs. Two factors have an important impact upon the man-force assessment :

- a) the population size and its rate of growth; and
- b) the rate of economic growth.

2.1 The Impact of Population Size and its growth upon the Manpower Assessment:

2.1.1 The size of population and its rate of growth are obviously very important elements in the manpower assessment in the long term of say 15 to 20 years. It becomes a more critical issue when the labour market patterns are not clearly known and defined. No definite statement can be made about the population of Oman until a population census has been carried out. Appendix 'A' gives a description on the various estimates of the Omani National work force as estimated officially and by various international organisations and private organisations. The rate of growth of the Oman population of 3 % is assumed in forthcoming projections. This is the normal rate of growth in other Gulf countries. The rate of increase of non-Omanis is, of course, greater and depends upon the rate of importation of new workers. It differs from one year to another and differs from the public to private sector. The World Bank study estimated national population in 1984 as 850,000 (Eight hundred and fifty

thousand) with 350,000 (Three hundred and fifty thousand) non-natives. The total population as estimated by the Government was around 2 million. However, in the shorter terms, the size of the population does not have greater impact upon the labour market patterns. This is because :-

a) The size of the national workforce, especially that in the modern sector, is known to be within reasonable limits.

b) The rate of entry of new workers into the labour market is also known reasonably accurate with the possible exception of those labour market entrants who have not entered schools.

c) Since most non-national workers in the Sultanate of Oman enter the modern sector, their numbers are related to the rate of expansion of the modern sector. This is determined in the short-term, by Government investment expenditures, and by the response of the private modern sector.

2.1.2 If a larger national population is assumed say 1.5 million by 1985, the decrease of non-nationals would not be too high. It is expected that Oman will have imported 10,000 less non-national workers World Bank (1981). The reason for this is that the increase in population means larger labour force in rural sector, since the employment of nationals in modern sector is limited.

2.1.3 Non-nationals are employed heavily in the modern sector. The assumed increase in population, therefore, will not have too much effect on expatriate employment in the

modern sector. This difference is not significant because other variables (such as the rate of economic growth have far greater impact on the scale of labour migration.

2.2 The impact of real Economic Growth on Manpower Assessment:

2.2.1 The manpower projections are sensitive too, and based upon the economic growth rates that the Sultanate is likely to achieve under the investment expenditure pattern of the Second Five-Year Development Plan and as estimated by the World Bank in 1981.

2.2.2 In an Omani context, with rapid development and a relative shortage of statistics, it is difficult to establish real economic growth rates (which are economic growth rates corrected to allow for inflation). The technical Secretariat of Development Council lay out growth rates in real prices, but state them in current prices.

2.2.3 There is a series of statements about the likely rate of inflation, but these are nowhere related to the current growth rates. Irrespective of the rate of inflation that exists in Oman, the reality remains in the sense that the faster the rate of economic growth the Sultanate enjoys, the larger the number of non-Omani workers will have to be imported. In the absence of a sufficiently large Omani national workforce, extra increments of government spending are very closely related to extra numbers of migrant workers imported.

2.3 Economic Growth and Human Resource Development:

2.3.1 Although in practice, the relationship between economic growth and manpower requirements becomes more complicated

by the consideration of productivity. In principle the relationship is simple and direct. The more growth, the more workers.

2.3.2 Oman imports a large number of non-Omani workers essentially because human resource development (education and training of the population to produce an effective modern workforce) takes much longer than economic growth. Teaching children and training workers takes longer than erecting buildings and workshops.

2.3.3 There is some scope in the long term for reducing the growing reliance upon non-Omani workers while maintaining a high rate of economic growth by using Omani national workers more effectively. But the only sound long term means of ensuring that Omanis take a greater real role in their economic ^{development} is to slow the short-term rate of economic growth.

2.3.4 Birks, S. (1983 - p.7) points out that basically two paths of development are available to the Sultanate over the next decade. In the first rapid, economic development path, short term financial gain and sheer expansion of the economy are the driving forces behind unfettered economic growth. The growth will be based on necessity, upon non-national expertise and unskilled labour. In the second path, real cognizance is taken of the non-economic constraints of growth as laid out in the Second Five-Year Development Plan. Under these aims, economic expansion is only justified as long as it is compatible with the effective development of local human resources and a "reasonable size of labour force" (i.e. a controlled in-

crease in the numbers of non-nationals).

2.3.5 One fact that should be considered is that excessive economic growth, by creating labour market opportunities well in excess of labour market entrants obscures the need for quality and advancement in education. Continued rapid economic growth does not favour the development of indigenous human resources. Therefore, one assumes that only restrained economic growth will allow the wider social aims (development with real Omanisation and without excessive reliance upon non-Omani workers) to be met.

2.3.6 Economic development is such that the Omani population will only through high quality education development be able to take a full part in the growing economy. The rate of growth must therefore be slow enough to allow this process of quality of education to develop properly, especially after the basic infrastructure has been completed.

2.4 The Planning Environment:

2.4.1 Manpower planning in Oman started in the early 1980s with technical assistance from World Bank. The first report carried out on manpower planning schemes was the assessment of the manpower implications of the Second Five-Year Development Plan (SFYDP).

2.4.2 As it was stated earlier the basic fact that should be considered is that manpower requirement is proportional to economic growth. If Oman really needs to decrease the employment of expatriates, the economic growth should be slowed down. In the Oman situation, the

planning of human resources development is in conflict with general economic planning. Although economic planners may acknowledge that imports of non-Omani workers should be a consideration, numbers of imported workers are not thought important enough by economic planners to a limit to growth. In Oman, with late development, the high priority was given to economic growth in building up the infrastructure and have a modern state. Economic Planners, the executors of development projects and the contractors wish to see as large a rate of economic growth as possible. The constraints to this are financial - an acceptable balance of payment situation, an acceptable rate of inflation and a good international credit rating.

- 2.4.3 If Omanisation is to be a success, Oman has to avoid larger imports of non-Omani workers in the long term, develop its human resources to have a high productivity. Birks, S. (1983 - p.11) points out a case study on Kuwait economic development and its diversification through domestic investment of oil revenues in industrialization. He stated that " With respect to the success Kuwait had in its industrial development, but by early 1970's Kuwaitis were expressing their concern at expatriate employment. It was already 74 per cent (175,000 workers were non-Kuwaiti out of total employment of 234,000), and 390,000 of population were not Kuwaiti national. Kuwaiti planners were concerned to decrease non-nationals to a target of maintaining 50% of the total population as national. By 1980 the Kuwait's had fallen to 22 per cent.

But still more significantly, the Kuwaiti share of population dropped to 38 per cent. Planners had failed to hold the 50 per cent limit despite rapid natural increase in the Kuwait national population."

2.4.4 Though there might not be exact parallels between the Kuwaiti and Omani situations, Oman can surely learn from Kuwaiti's experience. The main causes of the failure to reach the targets are :

- i) Many general economic planners do not acknowledge the existence of a labour market or population problem in the form of number or proportion of non-nationals.
- ii) A lack of emphasis on publicity about human resource development. Human resource development planner should place great emphasis on public campaigns.
- iii) Rivalry between planners in different Ministries and sectors in ensuring that its own development targets were met irrespective of labour market constraints which would be overcome either by imports of labour or by poaching nationals from other sectors.
- iv) Most of development projects are executed by private sector, profit maximising companies. Short term profit is of greater concern to them constraining labour import.
- v) No real effort is made by contractors to build up a stock of human capital for the future. The short term perspective means large numbers of workers,

probably many of low productivity and introduced to fulfil short term contracts.

- vi) Lack of distinction the planners have made between their public sector responsibility and their private sector interests. Targeting ceilings for import of labour in the overall social and national interest constrains growth.
- vii) The mobility of national worker in the labour market. Nationals seek employment of glamorous occupations rather than in those with high productivity or those comprising the critical skills that the developing economy is dependent upon.
- viii) Under-estimation of the employment of non-nationals. In an oil rich state, non-nationals, once established will often go to great length to remain there, even taking very low incomes to secure residence.
- ix) It should also be remembered that the increase in numbers of workers of low occupational status especially in informal service sector employment does much to aggravate the numbers of non-nationals and coincidentally reduces the level of productivity of the workforce in the country.

2.4.5 As the issue of manpower planning in Oman becomes very important, objectives should be clearly defined and set, and targets should be kept, to nationalise various vital sectors in the country.

2.5 Manpower Situation in Oman:

2.5.1 Manpower resource is universally regarded as an essential and important element of development, as well as the means of achieving that development. Capital, material and other factors are important for development, but yet they cannot substitute for the skilled workers since he is planner, organiser and implementer at the same time. This understanding was reflected in the resolution of the Development Council expressing the aims of Oman's development schemes. The resolution stated that "Attention should be given to expansion of Education and Training. The aim of the programmes should be the qualification of the citizens to participate in economic production and not merely to meet the demand of the administrative infrastructure of the state".

2.5.2 There are three aspects of this resolution :-

Firstly, the quantitative aspects embodied in the "expansion". If the education and training programmes fail to meet the manpower needs of development, the state must depend upon imported labour.

Secondly, it is implicit in the resolution that graduates of the education and training system must be suited to the various technical responsibilities of the development schemes in quality and level.

Thirdly, coupled with the second aspect is the importance of diversification, so that education and training systems should prepare for demands other than that of administrative infrastructure.

2.5.3 The supply of manpower must be studied within the frame-

work of total development in the Sultanate. The Government in Oman has become increasingly aware of the importance supply policy as may be seen from the establishment of the Educational and Training Council chaired personally by His Majesty Sultan Qaboos. This policy requires the provision of numbers and types of manpower to meet the needs of development plans.

2.6 Factors Influencing National Manpower Supply in Oman:

I. Demographic Factors :

- 2.6.1 a) Population is the source of national manpower which is largely dependent on the population aggregate in the Sultanate which represents the maximum level. Therefore any ambitious schemes for the development of national manpower should take this factor into consideration.
- b) The most important problem facing manpower studies in the Sultanate is the lack of a national census. All that is available at present is a number of population estimates that greatly vary among themselves. For example: an official estimation puts the total population of the Sultanate at two millions in 1984 but without adequate details (Statistical Year Book 1984). If this estimate, for instance, is to be considered that for 1985, and that the total non-Omani figure in that year is estimated as 350,000. The net national Omani population according to that estimate would be 1,650,000. The World Bank on the other hand gives

an estimate for the Sultanate population in 1980 as being 760,000. This represents 855,000 in 1984 at a net growth of 3% annually.

Another figure estimates the Sultanate population as 850,000, also in 1980 which estimates as 875,500 in 1984 at a net growth of 3% annually.

- c) It is obvious that this huge variation between the existing estimates is not very helpful to bodies responsible for the planning of education and training in the Sultanate of Oman.

The discrepancies indicate the limits imposed by the demographic factor on the quantitative aspect of manpower development and the necessity of taking this factor into consideration when planning for education and training.

- d) Another factor influencing manpower supply planning is the higher proportion of the unemployable old age groups in the population.

Despite lack of official distribution of Omani population by age groups (for lack of population census) ECWA has age group distribution estimates based on the World Bank studies.

According to these estimates the percentage of the population at employment age (15 - 59) is 49.3% for both males and females. If to this is added the comparatively large proportion not gainfully employed for social factors with proportion of unemployable people (like the disabled group), the Omani labour force becomes a little more than

1/4 of the total population.

The pattern of these estimates are as follows :-

<u>Age Group:</u>	<u>Male</u>	<u>Female</u>
0 - 14	46.8 %	46.3 %
15 - 59	49.3 %	49.3 %
60 - +	3.9 %	4.4 %
	<hr/>	<hr/>
	100 %	100 %
	<hr/>	<hr/>

II) Social Factors:

a) Attitude Towards the
Employment of Women:

Studies indicate that the proportion of Omani women participating in the labour force is a low proportion either in the traditional rural sector or the modern sector. This represents one of the limiting factors for manpower supply in Oman.

It is believed in connection with this factor that participation of Omani women in employment is positively correlated with female standard of education. No evidence for this relationship is available, however, Birks S. (1984 - p.4) states that " the female participation in the labour force, based on personal experience of Omani society and the opinions expressed by some Omanis". Personally one could accept these assumptions if the participation is geared towards modern employment. In case of rural activities are considered, then the figures are as follows :

- 5 % - Uneducated or drop-out from the primary school.
- 10 % - Graduate from the primary stage or drop-out from the preparatory stage.
- 30 % - Holders of preparatory school certificate or drop-out from the secondary school.
- 50 % - Holders of secondary school certificate or drop-out from the University.
- 100 % - Holders of University degree.

Probably the rate of participation in the labour force will increase heavily for those who have no or poor education.

b) Attitude Towards Work:

There are some indications that a negative attitude towards manual work may exist. This is evidenced in a general reluctance to join vocational training courses and a scarcity of Omanis in the industrial labour force and parts of the private sector. This is largely the case with respect to unskilled and semi-skilled technical jobs and any short term attempts to Omanize these occupations could face problems in the reluctance of Omanis to join such occupations.

c) Attitude Towards Education:

In connection with the last point there is a positive attitude to enrol in, and continue general education. This attitude explains the active

policy of expanding primary, preparatory and secondary schools. The trend of expanding primary education in large or even small rural population areas, and the increase in enrolment particularly at the higher levels of schooling will result in holding up a number of those at employment age from joining these active labour force for the duration of schooling periods. This is also connected with the rising aspirations for jobs which is reflected in two trends:

First: The large and progressive increase in enrolment in schools. Within the last fifteen years the increase was as follows :-

<u>1971/72</u>	<u>1976/77</u>	<u>1981/82</u>	<u>1984/85</u>
1905	64975	122106	192854

Second: The increase in the progressive ratios from the lower to the higher stage. Thus the percentage of enrolment at first grade preparatory (7th grade) to the enrolment in the preceding 6th grade primary and at Ist Secondary (10th grade) to the enrolment in the preceding 3rd Preparatory (9th grade) was reflected in the following pattern from 1978 to 1984. (Table - I).

We can see how this trend to continue further education at all levels is strengthened with its inevitable impact on certain types of labour supply.

ACADEMIC YEAR	6th Primary/ Ist. Preparatory	3rd Preparatory/ Ist. Secondary
1978/79 - 1979/80	76.0 %	49.6 %
2979/80 - 1980/81	79.0 %	41.0 %
1980/81 - 1981/82	82.0 %	46.2 %
1981/82 - 1982/83	85.7 %	41.4 %
1982/83 - 1983/84	87.0 %	63.6 %
1983/84 - 1984/85	90.1 %	74.5 %
1984/85 - 1985/86	97.5 %	62.0 %
1985/86 - 1986/87	99.4 %	54.1 %
1986/87 - 1987/88	95.6 %	56.4 %

Table I - Progressive Ratio from one stage to another.

III) Economic Factors:

a) The Absorptive Capacity
of the Economy:

By this term is meant the ability of the economy to provide useful and suitable employment to the additional numbers graduating from education and training institutions. Such ability depends on the speed of growth for the particular economy on the one hand and the standard with which these graduates are, on the other hand, prepared at these institutions. The two factors, however, are inseparable. Thus employment opportunities available in development schemes for the citizens have their impact on the extent to which these citizens are attracted to education and training institutions. This fact is further reinforced to the extent that programmes in these institutions are relevant to the available jobs by imparting the knowledge skills and attitudes required for the jobs.

b) Wage and Incentive Systems:

The wage and incentive system is closely related to the proceeding points. It is a well-known fact that the social attitude towards jobs is directly or indirectly influenced by wage and incentive system associated with these jobs. This in turn affects the economic appeal of the jobs and consequently the education and training opportunities associated with them.

c) Financing of Education and Training:

The volume of education and training and the resulting number of those who pass through it depends on the financing of programmes. How much the State assigns to education affects the number of possible institutions to be established, the current budget and therefore the size of manpower output expected for employment.

The financing of education and training (with some exceptions) is a government responsibility and this sets a limit to the possible supply of manpower produced by the concerned institutions.

2.7 Manpower Situation in the Public Sector:

The development in the various sectors over the past decade resulted in increased employment both in the public and private sector. The public sector employment (Table II) shows an increase from 1750 employees in 1970 to 72,260 in 1987. The employment shares differs from one Ministry to another. The main

characteristic of the employment in the public sector could be summarised as follow :-

- a) The average annual increment in the last decade from 1977 to 1987 was 9.82% annually. This represents an annual growth of nationals at 9.4% and expatriates at 10.76 percentage.
- b) The percentage of nationals decreased from 64.5% in 1977 to 59.5% in 1987 while expatriates increased from 35.5% to 40.5% in the same period. It is noticed that the participation of nationals was stable over the last two years of the last decade.

TABLE II PUBLIC SECTOR EMPLOYMENT*

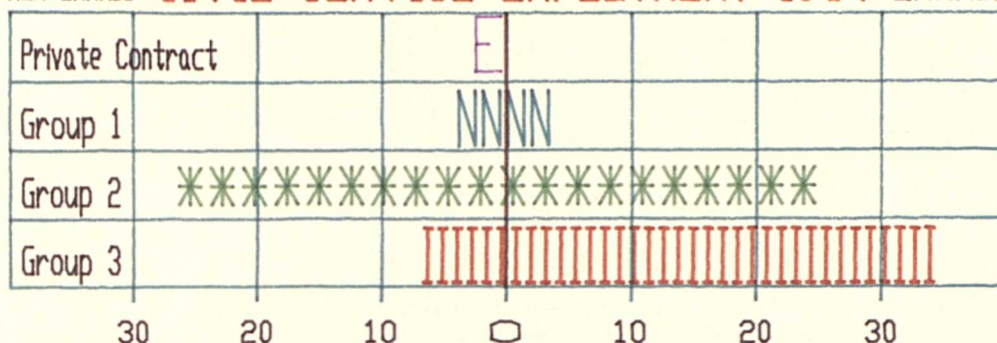
At the End of	Total	Nationals	Expatriates	Percentage Nationals
1969	1200	1115	85	92.9
1968	1250	1158	92	92.6
1969	1350	1253	97	92.8
1970	1750	1630	120	93.1
1971	3112	2857	255	91.8
1972	5318	4765	553	89.6
1973	9073	7403	1670	81.6
1974	12035	9035	3000	75.1
1975	19123	13616	5507	71.2
1976	22311	15668	6643	70.2
1977	26765	17269	9496	64.5
1978	30424	18466	11958	60.7
1979	35030	21216	13814	60.6
1980	38840	23445	15395	60.4
1981	43751	26886	16865	61.5
1982	49809	29647	20162	59.5
1983	54877	33543	21334	61.1
1984	62043	37119	24023	59.8
1985	66648	39192	27456	58.8
1986	67550	40223	27327	59.5
1987	72260	42977	29283	59.5

* Excludes Employees of Police, Defence and Central Bank of Oman.

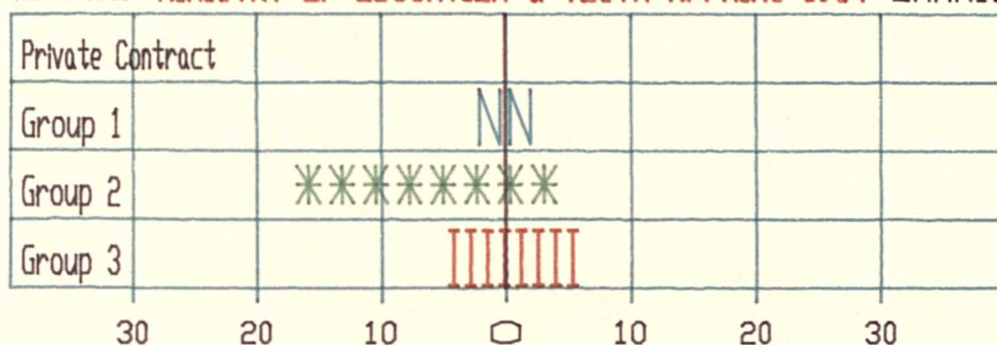
Source : Development Council Statistical Year Book 1984.

- c) A significant feature of the public sector employment is that the share of Omani women continues to be small. In 1987, its share was only 9.7% of total nationals, while female expatriates share was 36.47% of total expatriate employment. The expatriate women share was 65.1% of total female participation in public sector employment.
- d) It is to be noted that Omani participation in private contract group (Highly professional and qualified) as very low (11.35%), only while their participation in Group III (un-skilled and semi-skilled with very little education) was very high (82.7%), and their participation in middle groups I and II was moderate (66.7%) and (47.8%) respectively. (TABLE 1).
- e) It should be noted that the share of non-Omanis in 1987 was high in the Ministry of Education and Youth Affairs and Ministry of Health. Their participation was 62.2% and 46.9% respectively in these ministries. This is due to the high level of education personnel required as teachers, doctors and nurses (Figure I).
- f) Employment in the public sector is effectively considered a right by many Omanis. Those who are un-skilled and illiterates from rural areas expect and obtain jobs as drivers, gate keepers and guards. Students leaving schools are rarely refused when they ask for jobs of a clerical, office or administrative nature. Furthermore, Omanis

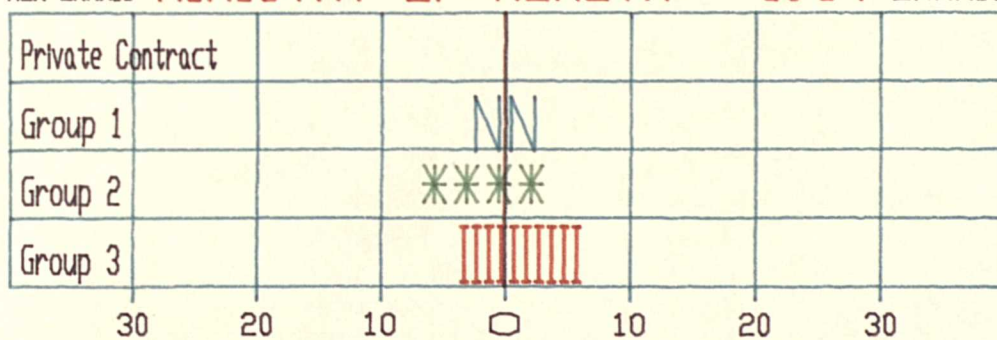
NON-OMANIS CIVIL SERVICE EMPLOYMENT 1984 OMANIS



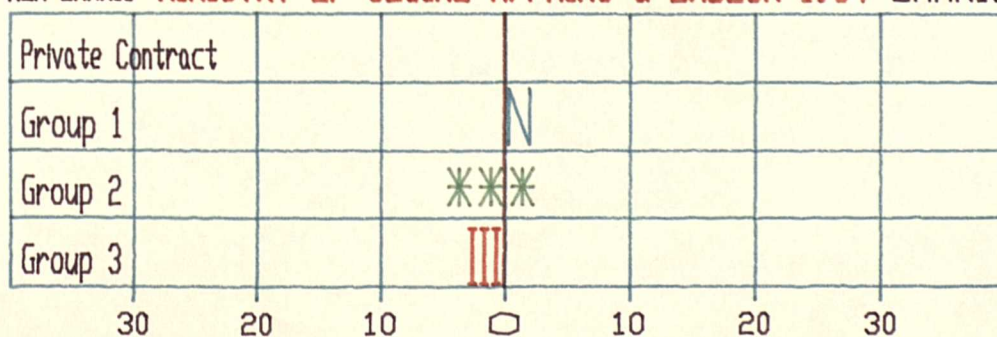
NON-OMANIS MINISTRY OF EDUCATION & YOUTH AFFAIRS 1984 OMANIS



NON-OMANIS MINISTRY OF HEALTH 1984 OMANIS



NON-OMANIS MINISTRY OF SOCIAL AFFAIRS & LABOUR 1984 OMANIS



who have enjoyed undergraduate studies under government scholarship schemes are obliged to work in the public sector. Just recently the government has agreed that twenty percent of the undergraduates can join the private sector. (Birks S. 1984 - p.2) points out that appointing Omani nationals freely into government, with almost automatic acceptance of most applications does have the following implications :-

- i) the private sector does not receive as many Omanis as it might under alternative, more stringent government recruitment policies;
- ii) the public sector conditions of employment and rates of pay become the expected norm, even though many private sector establishments cannot meet these conditions of labour employment and therefore cannot employ nationals without major restructuring;
- iii) many Omanis who are, in reality, by aptitude or training, unsuitable for public service are taken into the government;
- iv) many Omanis are appointed to government without there being a clear target for them to replace a non-Omani working in Government service;
- v) although hard data are few, all evidence suggests that productivity in the public sector is low;

- vi) the concept of government being a productive institution, providing services to the population of the Sultanate is not developing. Indeed, real understanding of this concept amongst Omanis is limited;
- vii) in many instances, morale of government staff is not as high as it should be. Many public servants find themselves places¹ in positions for which they are ill prepared, on an administrative ladder that gives them little support, and with a minimum of horizontal relationships, most of which are not developed.

Thus, the productivity, size and nature of the Omani public sector workforce, the quality of services it produces, and the degree of which it is Omanized will become increasingly important issues in the near future. Careful appointment and able to live upto the standard that preparation of Omani public servants is essential if the Omani Civil Service is to will be expected of it.

2.8 Manpower Situation in the Private Sector:

According to the SFYDP, the future diversification of the Omani economy is to be based upon private sector initiative, nurtured and guided by government controls. The rapid expansion of the private sector is, therefore,

crucial to the overall growth of the Sultanate's economy. In view of the pace of economic growth over the past decade, and the size and level of educational attainment of the Omani workforce in 1970s, it is inevitable that the expansion of the private sector has been associated with the large scale imports of non-Omanis. Indeed, a large majority, some 70 per cent of the private modern sector workforce is non-Omani today. If Omanis are to participate fully in the development of their own economy, and reap the benefits of economy diversification, they must enter the private sector in increasing numbers. Its domination by non-Omanis must be reduced.

2.9 The Non Omani Workforce:

The number of labour cards issued to non-Omanis working in the private sector reflects their position in the labour market. Since 1976 the number of labour cards issued has been rising continuously, their number having almost doubled between the beginning of the first year development plan and the first year of the Second Five Year Development Plan and almost tripled by 1984. The annual growth rate in the number of labour cards rises after 1978, following a lull reflecting the slower rate of economic growth in 1977 as shown in (Table - III). The annual growth rate has risen over the eight years upto 1983 15.2 % annually. The increase of annual growth rate in 1981 and 1983 reflects the boom in economic activities in the private sector, following the new oil fields coming on stream, and the initiation of projects under the SFYDP. The economic growth in the Sultanate has slowed down, fol-

lowing a fall in the international price for crude oil, the rate of importation of non-Omani workers shows reduction in 1986 by 9.8%. The reduction of non-Omanis in numbers depends on :-

- a) The increase of Omani workers in the private sector and their challenge to non-Omani workers is skills.
- b) The structure of private sector labour markets in terms of salaries, allowances and other social benefits.

YEAR	NUMBER	ANNUAL GROWTH RATE
1976	86,987	-
1977	96,745	11.2 %
1978	102,164	4.6 %
1979	113,062	10.7 %
1980	130,595	15.5 %
1981	160,507	22.9 %
1982	187,313	16.6 %
1983	231,362	23.6 %
1984	265,005	14.5 %
1985	274,989	3.8 %
1986	248,130	-9.8 %

TABLE III : NON OMANIS EMPLOYED IN THE PRIVATE SECTOR
(1976 - 1986)

Source:- Development Council - Statistical Year Book 1984.

2.10 Non Omanis by Economic Sector
in the Private Sector:

The sectoral distribution of non-Omani workers within the overall private sector needs evaluation; non-Omanis are not equally distributed amongst the various industrial sectors of economy. In some industrial sectors, non-Omanis dominate almost to the exclusion of Omanis. This might be undesirable if these sectors dominated by non-Omanis were strategically important, feature large in terms of their contribution to the economy, or are planned to be an important element of the strategy of diversification of the economy away from reliance upon oil revenues.

Table - 2 shows the employment of non-Omanis by economic activity for the period (1980 - 1984). Certain deductions can be drawn from the table unequivocally :-

- a) The rapid rate of increase of non-Omanis in agriculture and fishing (21.2 % annually) means that non-Omani penetration of rural areas, and, to an extent, traditional activities, continues to accelerate.
- b) Non-Omanis in manufacturing although again only small in number, rise in the same levels (21.2 % annually). Yet this is the sector upon which the diversification of Oman's economy is based.
- c) The high rate of non-Omanis in construction appears plausible (though the total increase of nearly 41.65% might be high). The sec-

toral sub-heads of "Trading and Construction" shows that it is the significant sector in employing the majority of non-Omanis.

- d) Although employment in Restaurants and Hotels is small, the growth of 41.6 per cent annually is quite substantial.
- e) Transport, storage and communication also shows a continuous increase (23.7 per cent annually).
- f) The only sector that shows a continuous decrease is Electricity, Gas and Water (09.2% annually). This is the sector where Omanis wish to work.

Most generally, it is clear from this sectoral distribution of non-Omani employment that the economy is increasingly dependent upon them in all sectors particularly when it is known that they are occupying relatively highly positions at various levels. Non-Omanis are no longer simply associated with a construction boom. Non-Omani employment in Trading, Services, Manufacturing and other sectors cannot be expected to decline on a turn down of the construction boom.

2.11 Non-Omanis by Occupation in Private Sector:

Also of importance is the occupational level at which the non-Omanis are employed. The nature of reliance upon a number of professional or highly skilled non-Omanis is quite different from the dependence associated with the

importation of unskilled workers.

The more skilled and qualified non-Omani workers have a greater impact upon the shape and direction of the economy, because of their mere senior status, and the influence associated with it. The un-skilled non-Omani workers are simply made available to execute development as determined by the decision makers within the economy. (Table - 3) shows the broad occupational distribution of non-Omanis in the private sector during the period 1980 - 1987 while (Table- 4) shows this distribution by economic activity in 1987. The main points that could be deduced from this classification are :-

- a) The non-Omanis continue to dominate the private labour market as "production and related workers, transport equipment operators and labourers".
- b) The unskilled and semi-skilled manual jobs performed by these non-Omani workers do not find favour with Omanis resulting in continued dependence on non- Omanis manpower in these occupations. This although many Omanis are not qualified, now have significant modern sector experience, they are disinclined to work in this occupational group in which the least skilled are employed. Thus it continues to be dominated by non-Omanis.
- c) There is a substantial increase in the number of non-Omani professional, technical and related workers. The increased numbers of non-Omanis in this most highly qualified and trained group reflect the increasing modernisation of the

economy. The growing numbers of these highly qualified workers workers being imported also represent a particularly significant kind of dependency upon non-Omani workers.

- d) The substantial growth in the numbers of sales and services services workers represents another issue, however. It is perhaps surprising that growth has been of non-Omanis to such a great extent (30.4 % annual growth in sales workers and 24.8 % annual growth for service workers). These rapid increases raise important questions about the role which non-Omanis are playing in the service sector, and, in part, in the formal sector (dominated by small scale, under capitalised, low return enterprises).
- e) Fewer non-Omanis work as "Clerical and related workers", indicating that more nationals are taking up these position. This is a happy reflection of the growing impact of the education systems and the fact that more literate Omanis are entering the labour market.

2.12 Non Omanis by Skill and Educational Level:

Occupational groupings in Oman are defined in the labour market surveys and on labour cards by employment which is tabulated in the form defined by the International Standard Classification of Occupations (ISCO) revised edition. This is the most widely utilized form of occupational classification in which some 1,900 occupations are described and classified into major groups which are

defined by the type of work. However, this ISCO classification into major groups does not bear any particular relation to educational or skill level. Each major group and sub-group contains an array of occupations which includes some very highly skilled jobs, but also some unskilled. For the purposes of analysing a workforce by skill level or of projecting manpower demands, a regrouping of occupations is therefore desirable. The approach used here is to allocate occupations into groups which are defined by an educational or skilled level. Herein lies the critical step in this procedure; it is assumed that groups of jobs perhaps in diverse parts of the economy, require comparable educational or skill background.

The occupational groups, or levels together with the level of educational attainment with which they are associated used by the Ministry of Social Affairs and Labour are as follows :-

- a) Occupational Group A-1, scientific and technical professional workers; entry to this occupational level requires technical, science or maths university degree or higher qualification.
- b) Occupational Group A-2, other professionals; requires non-science, non-maths university degree or higher qualifications.
- c) Occupational Group B-1, higher level technicians; requires 3 to 4 years post-secondary science and maths educations.
- d) Occupational Group B-2, other technicians and sub-

professionals; requires 1 to 3 years (not complete) post-secondary science and maths education.

- e) Occupational Group B-3, other sub-professional; requires 0 to 4 (no complete) years (drop-outs) of post-secondary non-science and non-maths education.
- f) Occupational Group C-1, skilled office occupations; requires 2 to 3 years of secondary education, or a commercial vocational equivalent.
- g) Occupational Group C-2, skilled manual occupations; require 1 to 3 years of technically oriented secondary education, or technical and vocational equivalent.
- h) Occupational Group D-1, semi-skilled office related occupations; requires one or more years of general preparatory level education or 1 year of secondary and commercial, or vocational equivalent.
- j) Occupational Group D-2, semi-skilled manual occupations; requires incomplete technical secondary and vocational training.
- k) Occupational Group-E, other semi-skilled occupations; requires primary education plus some on-the-job training, plus unskilled occupations, not required any special education and training.

(Table - 5) Shows the results of this regrouping of the non-Omani private workforce in the Sultanate.,

This table must be evaluated with some care, because of the possibilities of misclassification, and because of the numbers in some groups are small.

The share of professional occupations (A-1 and A-2), con-

tinues to be a slightly over 6 per cent during 1980 and 1981. But their annual growth is high, particularly for other professional occupations required non-science and non-maths university or higher qualifications (A-2).

The increase in other scientific occupations (B-2) is substantial although their share in both 1981 and 1980 is about the same. Similarly, the share of skilled occupations, office as well as manual (C-1 and C-2), does not change although increases occur between 1980 and 1981. The semi-skilled office occupations (D-1) record an increase during 1980 and 1981, without change in the total share they account for.

The semi-skilled manual occupations requiring incomplete technical secondary and vocational training (D-2) have increased by 26 percent. These are the "blue collar" occupations which hold little attraction for nationals, particularly when non-Omanis work at relatively low wages in these occupations.

Even the share of unskilled occupations (E) increases by nearly 2 percent in 1980. In terms of weight of numbers, accounting for over 60 percent of imported workers, these occupations dominate the private labour market. The increase between 1980 and 1984 was nearly 20.6 percent. Thus the occupational and skill characteristics of imported workforce mirror closely those of the Omani workforce, of which a substantial majority is unskilled. Looking at the changes of the labour market in the private sector, it appears that the challenge presented to the Omani education system is considerable. The

demand for manpower at higher occupational levels seems to be pulling away at a faster rate than such labour can be produced even by Omanis rapidly expanding Educational and Training System.

At the same time large and growing numbers of unskilled workers are being imported too. Means of augmentation of the supply of Omanis for occupations requiring relatively low levels of skills, particularly in the semi-skilled occupations, which are quick to produce, need careful consideration and policy decision. The potential of vocational and informal training for increasing the supply of labour market entrants to these occupations bears particular consideration. But these labour market entrants must also be properly motivated so that they enter the workforce in training related occupations. There is only low return from training Omanis if they return to the traditional or informal sectors, and do not contribute to the burgeoning modern economy.

It is significant that most of the non-Omanis at low occupational levels enter the Omani labour market on very low salaries. In 1987 about 70.2 percent were obtaining salaries of not more than 70 Rials per month. See (Table - 6).

2.13 Omani Work Force in Private Sector:

Omani employment in the modern private sector is one of the major issues that should be looked very carefully. Its employment rate in the public sector is known in quantity. They are mainly grouped accordingly to groups

but not according to economic activity. In the modern private sector, very little information is available. In fact, the expatriate employment figures and economic labour market. No clear and accurate estimates are available on them. Various estimates of Omani employment in the modern private sector were carried out by various organizations (Table - 7). For example, in 1978 the World Bank estimates was 33,400, the Development Council (SFYDP) estimated 30,000, and the estimates of Directorate General of Labour Affairs (MOSAL Manpower Report 6/85) estimated 26,200 only. This difference in various estimates causes a big problem. The disposition of Omanis within the modern sector also gives cause for concern. Omani nationals are increasingly employed in sectors which they consider desirable. The preferred sectors are public administration, banking and finance services, and wholesale and retail trade. The result of these preference patterns among new labour market entrants is that the number of Omanis working in manufacturing and construction declines.

In an attempt to improve statistics on Omani employment in the modern private sector. The Directorate of Labour in the Ministry of Social Affairs and Labour started to use Annual Employment Survey (AES) questionnaire. The practice has been conducted in Oman since 1972 (Table - 8) shows the development of the statistical converge of the AES since 1974 columns 2, 3 and 4 show the number of establishments on the three different data files (Boissiers M. - 1981) in their attempt to improve the

data, used a correction factor in their report for the degree of understatement of Omani employment on the AES based on the assumption that AES understates Omani employment by the same percentage as it understates expatriate employment. The coverage of data gathered did not include all the establishment but only the big companies who are paying the Training Levy (i.e. who have 20 employees or more). The correction factor calculated on the assumption are shown in column 5 of (Table - 9). One further adjustment was made to this estimate by including the number of Taxi drivers, an occupation reserved only for Omanis. The number of Omani Taxi drivers is taken as equal to the number of registered taxis on the road at the end of every year during the period 1974 - 1983 (Statistical Year Book, Oman No. 1984 - Table 59 p. 85). The final estimates are shown in (Table 10).

It is noticed that from 1981 there appears to be the beginning of a rising trend. In the early 1970's when the civil service was still small, the private sector was the major source of modern sector employment for Omanis (No statistics available, but based on the information of informed observers of the labour market situation). As the civil service expanded, public employment grew rapidly, at the expense of private sector employment of Omanis. It now appears that employment of Omanis in the private sector is beginning to increase again. The 1983 estimates represents 8.6 per cent increase over 1982, and for 1982 it is 7.9 per cent increase over 1981.

(Figure II shows total modern sector employment of

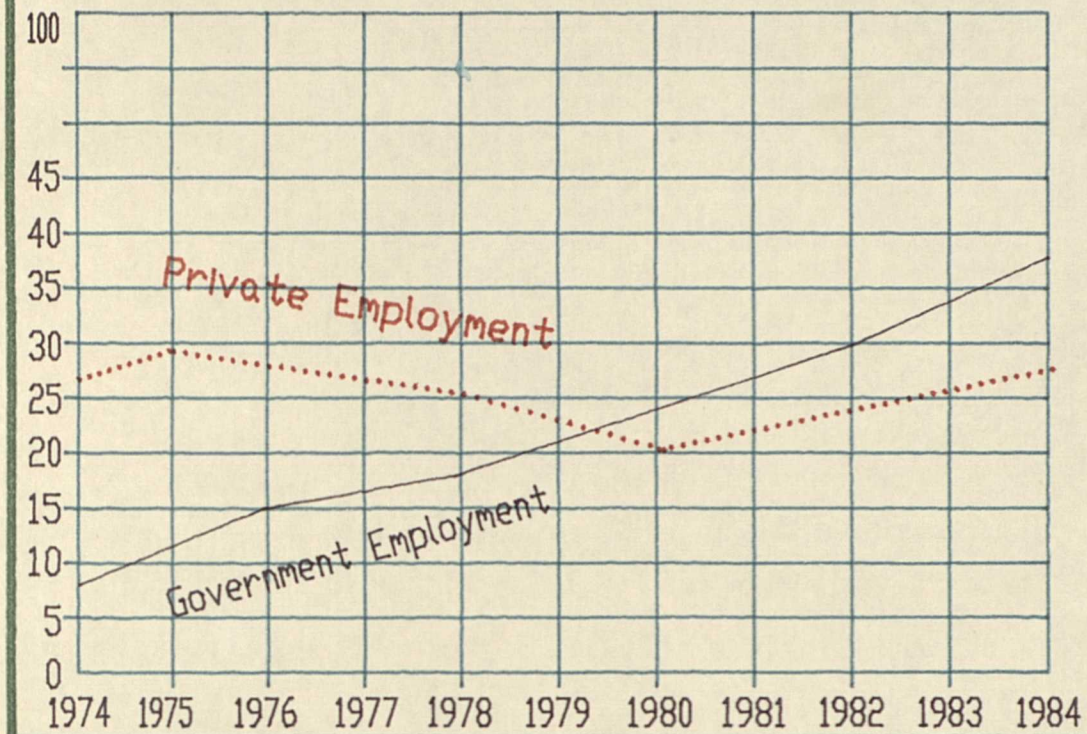
Omanis based on Table - 11). The total Omani employment in public and modern private sector in 1987 was 65,300 of total 359,634 this represents 18.2 per cent while expatriate employment represents 81.8 per cent. The Omani employment in the public sector is 59.8 per cent of the total employment in that sector while its representation in the modern private sector is 9.5 per cent of the total employment in that sector (excludes employment in rural activities which is dominated by Omanis).

2.14 Manpower Situation in Informal Sector (Rural Sector):

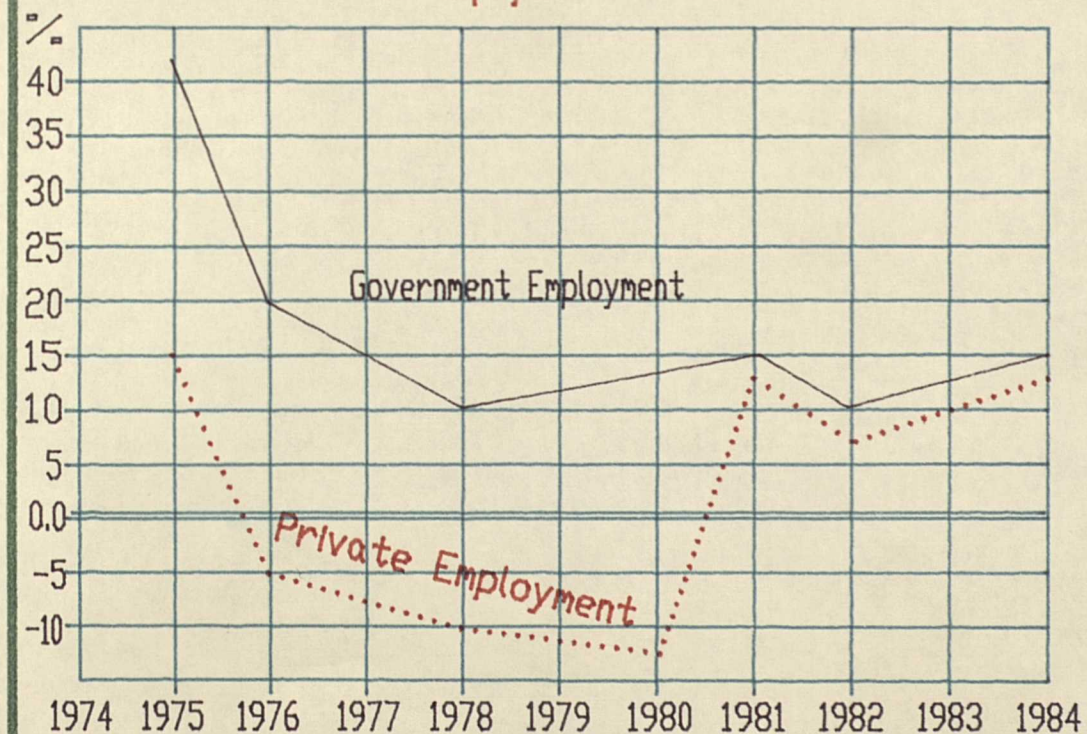
Before the discovery of oil, agriculture, fisheries and trade were the backbone of the traditional Omani economy and of a nation which had for centuries considerable historical influence not only in the Gulf region but also as far as East Africa and South Asia. With the discovery of oil and the subsequent rapid growth in petroleum production and exports, agricultural output has stagnated for want of investment and labour input. Despite the growth of a limited modern agricultural sector, the overall contribution of the sector to the economy has grown little in real terms. The present situation where oil prices have fallen to below 20 Dollars per barrel increases the importance of agriculture and fisheries in the country. About 80% of the Omani population is estimated to live in rural areas and relies on agriculture and fishing as a major source of income. Rural to urban migration means that this proportion is declining, but Oman remains a predominantly rural nation.

TOTAL MODERN SECTOR EMPLOYMENT OF OMANIS :

A : Number of Omanis Employed in Government & Private Sectors.



B : Growth Rates of Omani Employment in Government & Private Sectors.



It is estimated that the total Omani workforce in the private sector is estimated 174,000, the net workforce in rural sector is about 148,000 after deduction the Omani workforce in the modern private sector. In 1984 the employment of expatriates in the agriculture and fisheries sector was around 13,000. The labour force situation in the rural sector is therefore dominated by Omanis 92 % comparing to 8 % for expatriates. (World Bank 1982 p.3) points out that an estimated net 5,000 people migrate annually to the urban areas of Oman in search of better jobs. Some continue their search beyond the borders of the Sultanate, moving specially to the United Arab Emirates. Also it is estimated that at present 7,000 Omani families may depend on fishing as a primary or important secondary source of income.

Among the difficulties hampering the development of the rural sector, manpower clearly ranks as one of the most critical. The supply of adequate labour and the improvement of skills in the rural sector, therefore, assumes considerable significance.

A basic manpower constraint for rural development is the continuing rural to urban migration. This mainly affects the traditional rural sector. It is clear that for the long term well-being of the rural sector, effective policies and incentives will have to be designed to lessen the rate of rural to urban migration.

Out migration notwithstanding, the majority (70 per cent) of the Omani labour force is still engaged in rural economic activity. Here is the basis for providing a

sizeable pool from which a skilled agriculture workforce could be developed through education and training. The development of such a workforce is clearly the most critical factor in the development of rural sector.

CHAPTER III

EDUCATION AND TRAINING IN OMAN

3.1 Oman has a long history of education M.O.E. (1985) points out that education in any country does not derive its characteristics from itself, but rather from various social, cultural, economic and political factors and forces. Hence educational movement is related to social and economical circumstances, in the country in that certain period. On the other hand education itself influences and changes the dynamics of social and economic life in the country.

In this context, education in Oman has had a long history in its various aspects. Islam played a big role in introducing education in Oman. As soon as Islam came into Oman, a Council of Education was formed and groups of people started teaching Islamic studies in mosques, houses and under the trees. It also affected the social life in Oman. In the mid nineteenth century, enormous development took place in education, especially in terms of psychology. Unfortunately Oman could not benefit a lot from these developments for the following reasons :

- a) The Omani economy started to decline due to the opening of Suez Canal in 1869 which led many ships to by-pass Oman.
- b) Within that period, steam boats started to operate, which affected the operation of sailing boats and affected the commercial and economic activities in Oman.

- c) The hard physical nature of land in Oman, which is mostly sandy and mountaineous affected the growth of education in Oman.
- d) The production of oil in Oman started late compared to other Gulf Countries i.e. in 1967. The development of education was thus very limited until 1970 when H.M. Sultan Qaboos governed Oman.

3.1.1 Development of Education in Oman:

Before 1930 there were some individual attempts to provide learning environments, but there were no schools as such. Education was available only in houses, mosques, and under the trees. The education concentrated on teaching Arabic and religion. Even though the education was limited, it had a big impact on producing Omani erudites. The first official school started in 1930. The subjects taught were Religious studies - Arabic - Science - Health - History - Geography and Social Studies. The second official school started in 1935. The first development in education started in 1940 by opening Al-Saidi School in Muscat and closing the old school.

The new school had two stages of teaching :

- i- 2 - years pre-schooling
- ii- 6 years primary education.

The development of education continued very slowly in the days of Sultan Said bin Taimoor Al-Said, where only three schools existed with 909 students until 1970 when he was overthrown by his son.

A new dawn started in Oman from 1970 when H.M. Sultan Qaboos took over the regime. Education then had a

chance to spread all over the country.

The recent statistics (1986/87) of the Ministry of Education show that the total number of schools and Institutions in Oman are 678 of which 261 are for males, 242 for females and 175 as mixed schools. The total number of students accommodated in these schools were 268722, of which 148509 were males and 120213 were females.

3.1.2 Education Aims and Priorities:

Inspired by Oman's philosophy of education and the national social values it represents, the general aims of education have been stated by M.O.E. (1983) to deliberately emphasize the following :

- i) Education is a universal right for all members of the Omani society. The government considers itself responsible, with all the resources and education institutions at its disposal, to meet each individual's need for education without limitation;
- ii) Each individual's abilities are to be developed, unrestricted by time or place, in order that each may learn and pursue educational progress all through life. Each should be enabled to satisfy his need for a good quality of education to build his personality and make him self capable to play a positive role in society.
- iii) The necessary manpower for all sectors has to be provided, for the sake of promoting the country's development plans and projects and for providing such facilities and auxiliary resources for spe-

cialized and higher education as may be consistent with Oman's development requirements.

- iv) The Omani individual is to be enlightened about his rights, duties, and obligations towards his own country and his larger Arab Motherland leading to his comprehension that unity are collaboration among the Arab peoples and sources of power for him.

The second five-year plan established certain objectives for the current phase (1981-1985) increasing the emphasis on quality of educational programs and facilities. It considered the importance of the diversification of secondary school options, relating them to the needs of Omani society and its manpower development. It emphasized the efforts to balance educational development between the interior and populated areas and the establishment of priorities for higher education abroad, in conformance with the country's needs.

Secondary school education is not yet universally available in Oman, even though rapid advances are taking place to meet this need. The present crisis in the reduction of oil prices will obviously be an obstacle to the rapid expansion. Decisions have been taken to develop the existing Vocational Training Institutes to secondary level; this may help in providing places for students at secondary level, but if care is not taken in providing universal education, the manpower segment in Oman will suffer. Decisions about education are especially important being long term. Decisions about some aspects of politics or

finance can be made and implemented fairly quickly and tend to affect the fairly immediate future. Also the effects of these decisions - good or bad tend to show fairly quickly. If the decisions are seen to be wrong, they can be corrected within a reasonable period.

Decisions about education, in contrast take a long time to implement, and have long-term implications. It can be decades before the effects of decisions about education can be seen. It also takes a long time to correct any wrong or undesirable effects.

Birks - S. (1983) points out that in making decisions about education, we must be sure of its purpose. What do we mean by an educated man? Educated people are distinct from people with degrees and qualifications. This is sometimes ignored. What we teach, why, how, to whom and to what stage, are amongst the most important questions in the whole range of a nation's affairs.

Oman as a part of Arabian Society wishes to preserve Islamic values, to develop further strength as a merchant society, wishes to progress to an industrial civilization of high level technology and develop the communication and service industries. Sir Alex Smith (1982) in his talk at the Education Arabia Conference in Bahrain included the following essential components for planning on education strategy in the Arab region:-

- a) With schools there must be a major shift towards the development of creative talents and the imagination, through the problem - solving approach. In schools imagination is stifled and actually

suffocated as the conventional academic wisdom prevails - the very reverse ought to happen. This presents difficulties for examinations, but education must not be limited by what examiners find it easy to examine.

- b) Teaching about industry and its fundamentals must be introduced into schools. Industry designing and making, is as important at the elementary stages of education as reading, writing and arithmetic. At the advanced stages an understanding of the industry is every bit as important as an understanding of literature, history, or science. In an industrial civilization every educated person ought to have some understanding of industry.
- c) In terms of post-school education, a close relationship needs to be developed between education and industry and the practising professions.

It is logical to say that education should help the fulfilment of people in an advancing civilization, and avoid leaving them to the indignity of unemployment, underemployment or misemployment. If Oman wishes to see that education should contribute to a society based upon these characteristics, then Vocational education would become as important as academic education. Hence the philosophy of education should be looked at very carefully to maintain these characteristics.

3.2 The General Education System:

Oman with a new paradigm of government allowing for both local control and for international status of sovereign

state has moved rapidly toward national modernization and diversification. Social life, politics, economics and education have all been deeply influenced by the many forces for change which have been set in motion with supporting finance.

Systematic education began in Oman very recently. Before 1970 only primary education was available. At present a complete system exists. With the opening of first university in Oman, during September 1986, Oman now has a fully integrated system of education.

Education in Oman is based on a 6-3-3 structure six years of primary education, three years of preparatory education and three years of secondary education.

Razik (1985) points out that the primary level students receive instruction in the basic skills. At the preparatory level, they can pursue general education, health sciences, military studies, or vocational training. At the secondary level, they can pursue general or Islamic education with humanities and science sections in the second and third years, teacher training, commercial education, agricultural education, industrial education, health sciences or military science.

In the academic year 1985-86 two major changes occurred in the structure of the educational system.

- i) Vocational training was upgraded from preparatory to secondary level.
- ii) Teacher training was up graded from secondary level to post-secondary level.

The first university was opened in 1986. Earlier holders

of secondary school certificate may qualify for higher education abroad. After opening the university, holders of secondary school certificates will be qualified for higher education abroad in the specialization that does not exist in SQU. The Structure of Oman Education and Vocational Training system is shown in (Figure - III).

Age	School Year				
21	16	SULTAN QABOOS UNIVERSITY AND FURTHER STUDY OR TRAINING ABROAD			
20	15				
19	14	TEACHING TRAINING COLLEGE		INDUSTRIAL TECHNICAL COLLEGE	
18	13				
17	16	General Secondary	Islamic Secondary	Technical Secondary	Vocational Training Institutes
16	11				
15	10				
14	9	PREPARATORY			
13	8				
12	7				
11	6	PRIMARY			
10	5				
9	4				
8	3				
7	2				
6	1				

Fig: - III

STRUCTURE OF OMAN EDUCATION AND
VOCATIONAL TRAINING SYSTEM.

3.2.1 Primary Education:

Primary education is not compulsory. However, there is a continuous increase in the enrolment of boys and girls in the primary stage due to the widespread enthusiasm for education throughout the country and because of strong financial support from the government. Usually students begin their primary education by age six, but Razik (1985) points out that in 1970, 3 percent of the age group 6-11 were enrolled in primary schools. By 1980 this had increased to 62 percent. Birks, S. (1984) points out that lack of availability of generally accepted population figures and incomplete school mapping prevent dogmatic judgement. But the present capacity plus the immediate planned expansion of Ministry of Education and Youth Affairs would seem to bring primary enrolments near to 100 percent of the total age group not including overage students and repeaters. The full enrolment any how depends on the inspiration of people towards education. There is no evidence for this statement, unless it is based on low population estimates. If the government had felt that 100 percent enrolment was possible, there is no reason for not having compulsory primary education in Oman. Moreover, the abolition of illiteracy programmes in the Capital Area, the non-existence of schools in some remote villages, the teaching of special religious programmes in mosques and the social constraints the Omanis feel in, sending their girls to mixed schools, where no special girls schools are available, indicates that Oman has not yet reached 100 % primary enrolments in

its education. Most schools in Oman are segregated by sex, except in the rural areas where the shortage of facilities and staff necessitates shared schools. Before 1976 students completing six years of primary education took a national examination, and if successful, were awarded the General Primary Certificate before proceeding to the preparatory level. The Ministry of Education and Youth eliminated the award of the general primary certificate in 1976. At present all students successfully completing the sixth grade become automatically eligible to go on to the preparatory level.

Razik (1984) noted that 25.3 percent of the students who began primary education in 1973-74 successfully completed the level in six years. However, the percentage rose to 63.6 percent after eight years, the maximum time permitted for enrolment in regular classes. Birks, S. (1984) points out that the time is due then, for a change of emphasis in primary education from the atmosphere of rapid expansion (under which great gains have been made in providing access of the dispersed rural population to education) to one of consolidation and improvement in quality. Closely related to quantity is the question of efficiency of the school system. He points out that as many as 30 percent of primary students drop-out do not complete their courses. This figure is near what Razik (1984) has noted; that 36.4 percent do not complete their course. Besides the action in the labour market to reduce drop-outs and to increase primary level retention, it is important to improve the standards of the school by provid-

ing better facilities, books, better staff and more provision of preparatory places.

3.2.2 Preparatory Education:

Students who successfully complete sixth primary are eligible to go on to :

- i) the three years preparatory level for a general education.
- ii) to other career streams like Health Science institutes of the Ministry of Health, or Military Institutes of the Ministry of Defence.

Before the academic year 1985/86 Vocational Training Institutes of the Ministry of Social Affairs and Labour used to accept primary school leavers. The training system has been upgraded lately to secondary level.

It is to be noted that due to financial constraints preparatory schools generally share facilities with a primary or secondary school. The first preparatory school were established in 1972, one for boys and another for girls. By 1975-76 there were 23 schools (21 for boys, 2 for girls), which enrolled almost 1,100 students. The dramatic surge at the preparatory level continued in the following years. By 1986/87 there were 249 schools (118 for boys, 45 for girls and 67 for both sexes).

Birks, S. (1984) points out that the continuation rate from sixth grade primary to first grade intermediate in 1982 recently jumped sharply to about 89 percent. This reflects the priority aim for intermediate education to expand to take most primary completers and to ensure 9 years general education for children in the system. Apart

from a conflict with preparatory level vocational training, this is a sound policy, though it will require considerable investment and current expenditure with the Ministry of Education and Youth Affairs' budget already under strain.

At present there is not any conflict between preparatory level and general vocational training since the latter has been upgraded to secondary level, but still conflicts will exist with Health Science and Military Institutes. The expansion in the preparatory level will however, only be of maximum benefit if the quality of primary education can be improved, otherwise selection is important after primary completion.

Razik (1984) points out that only 48.9 % of the students who began preparatory education in 1977-78 successfully completed the level in three years, but the percentage grew to 53.2 percent after four years, the maximum time allowed for enrolment in regular classes in this preparatory level.

The quality of education, and its efficiency, seem to be major problems the Ministry of Education and Youth Affairs should tackle in the future.

3.2.3 Secondary Education:

Education at the secondary level is diversified in order to prepare students for the University and for careers. Secondary education in Oman has a short history. It started in 1973-74 with one class and an enrolment of 25 students. Gradually the number of students increased, but still it forms a small percentage. In 1982-83

secondary school students compromised 3 percent. In 1985-86 it increased to 5.3 percent.

Razik (1984) indicates that during the 1980-81 academic year 81.7 percent of the preparatory school graduates were enrolled in various secondary school programs. The distribution of these secondary school enrolees resulted in 47.8 percent in general secondary 8.4 percent in technical, 10.3 percent in teacher training, 4.6 percent in Islamic and 10.6 percent in Adult programs. In 1982-83 the enrolment of the preparatory school graduates increased to 93.2 percent of which 68 percent were in general secondary. A recent study Razik (1984) indicates that 63.9 percent of the students who began secondary school in 1977-78 successfully completed the level in three years. The percentage increased to 67.4 percent after four years.

Beside the general education, other streams are also available - Commercial Secondary, Industrial Secondary, Islamic secondary and vocational training.

3.2.4 Adult Education:

Since the development of education in Oman has a very short history, a lot of Omanis have not had the opportunity for schooling. Using the slogan "Education for all" the government planned to provide basic literacy and education to a large population. Literacy centres offer a two year instructional programme in the basic literacy skills. Adult education centres provide evening classes and home study programmes for adults who are unable to enrol in the regular school system. It is an open system

from primary up to the secondary. Further studies could be undertaken as home study as a part of Beirut University programme; those who obtain high grades could get a scholarship to study abroad. Oman magazine (9th April, 1986) quotes "that literacy centres have spread all over Oman. The literacy centres started in 1973-74 academic year. Males classes increased by 234 per cent between 1973-74 and 1983-84 while female classes in the period increased by 1150 percent. In 1985-86, the total number of centres increased to 287 accommodation 11,772 students compared to 210 centres in 1981-82 accommodating 6572 students".

Adults education centres in 1974-75 were established in six educational regions with a total of 25 centres accommodating 1353 students. In 1981-82 the centres increased to 134 centres accommodating 5689 students. The numbers increased in 1985-86 to 636 centres providing education to 12,401 students.

3.3 Post-Secondary and Specialist Education:

The history of specialist education and post secondary is very short. Although classes in teacher training were established in 1976, specialist education started to take shape in late 70's with further diversification of education. An attempt has been made to guard against uneven development of the various types of education. Oman's planners have viewed the educational investment plan as part of overall framework of the comprehensive national development plan. The adoption of diversification of education as their strategy aimed at the development and

evolution of the sectors of the Sultanate.

3.3.1 Islamic Secondary:

The Secondary Islamic Institute, which has been in operation since the 1978-79 academic year, provides a three year program parallel to the general secondary curriculum but stresses Islamic studies and the Arabic language. There is only one school for males with a total of 351 students.

3.3.2 Commercial Secondary:

A three year secondary program in commercial studies is offered at two commercial secondary schools. One for boys opened in 1979-80 and enrolled 290 students in 1985-86, the other for girls enrolled 163 students.

Birks, S. (1983) points out that qualified boys and girls would quickly find socially acceptable employment and displace non-Omanis in the public (and, perhaps also private) sector. Careful assessment is needed of the commercial curriculum to ensure it meets the needs of the evolving Omani economy.

3.3.3 Agricultural Secondary:

The Agricultural Institute was established in 1979, designed to introduce and upgrade farming skills. Two programs are offered at this Institute: a one-year course for primary school graduates who are at least 15 years old and a 3 years program for preparatory certificate holder. In 1985-86, 123 students were enrolled.

Birks, S. (1983) points out that as with all specialized institutes not closely tied to a Ministerial employer, a conflict of purpose arises with this institute. Is its

purpose to produce those who will go out and farm on graduating or will enter high education ?

It is important that a clear statement about the agriculture institute is spelled out to avoid any difficulty in producing coherent priorities for it. The stress on the type of education will determine the objective and type of curriculum to be used in the institute.

3.3.4 Industrial Secondary:

The Secondary Industrial school at Sohar opened in 1983 - 84 plans called for a total of 216 boys at full implementation. In 1987-88 the total enrolment was 188 students. The school offers training in Civil, Electrical, and Mechanical specialities in addition to academic subjects.

It is important that a close co-ordination and liaison between the Ministry of Education and Youth and the Ministry of Social Affairs and Labour is introduced immediately and effectively to ensure compatibility, and prevent duplication of efforts between specialist education managed by the Ministry of Education and Youth Affairs and Vocational Training Institutes managed by the Ministry of Social Affairs and Labour.

3.3.5 Vocational Training Institutes:

The Ministry of Social Affairs and Labour (MOSAL) seeks to develop a corps of skilled Omani workers and to reduce heavy dependence upon expatriate labour working in Oman. The Ministry started to build a network of Vocational Training Institutes in Oman: This network is an outgrowth of a training programme established in 1967 by Petroleum

Development of Oman (PDO) for its employees. In 1972 the training program was turned over to the Ministry of Economy and Communication. The Ministry of Social Affairs and Labour took the charge of training in 1973. Before 1975 only one V.T.I. was in operation. In 1985/86 Nine V.T.Is. were in operation all over Oman. In 1985/86 the three year programme was open to primary school graduates. To produce better quality of skilled manpower for the labour market, the Council of Education and Training in Oman decided to upgrade the studies in Vocational Training Institutes to secondary level for preparatory school graduates. The institutes also run training courses for adults as part-time, evening class or block release courses. Fig. IV shows various courses the Vocational Training Institutes have to provide in the new scheme. The curriculum emphasizes practical training, but it is necessary to avoid a conflict of purpose of these Institutes in graduating manpower for the labour market and in graduating for further studies.

Birks, S. (1983) points out that any efforts to improve the relevance and standards of pre-service training in the Vocational Training Institutes must be coupled with efforts to enhance the external efficiency of the system. The degree to which graduate trainees are prepared to work in training-related occupations. There is little point in training electricians and falaj builders if they all become government clerks.

FIG IV : DISTRIBUTION OF TECHNICAL SPECIALISATION

<u>YEAR 1</u>	<u>YEAR 2</u>	<u>YEAR 3</u>
Electrics and Electronics	Radio/TV & Electronics AC & Refrigeration General Electrics	Radio/TV & Electronics AC & Refrigeration Electrical Installation High Tension Power
General Mechanics	Fitting/Machine Tool Operation Welding/Sheetmetal working and Pipefitting	Fitting/Machine Tool Operation Welding/Sheetmetal working and Pipe Fitting
Auto Mechanics	Auto Electrics Tractors/Agricultural Equipment Mechanics Diesel/Petrol Mechanics	Auto Electrics Tractors/Agricultural Equipment Mechanics Diesel/Petrol Mechanics
Construction	Building Inspection/ Supervision Architectural Drafting	Building Inspection/ Supervision Architectural Drafting
Surveying	Land Surveying	Land Surveying
Commercial Studies	Administration Science Secretarial Science Accounting	Banking and Insurance Business Administration Secretarial Science Accounting

3.3.6 Teacher Training:

Oman has an acute shortage of Omani teachers. The teaching in schools is heavily dominated by non-Omanis. In response to the need to create an Omani cadre of teachers, the government started to establish classes in 1976 for male students and in 1977 for female students to prepare them to teach in the primary schools.

In 1979, a male teacher training at the secondary level was in operation. The objective was to prepare students to teach at the primary level. Specializations are available in three fields. General teaching, English teaching Arabic, and Islamic studies. In 1982-83 the institutes enrolled 813 students.

In addition to the three year secondary level program, the Teacher Training Institute offered a one year Diploma course for secondary graduates with previous teacher training.

With the 1984-85 school year, the Teacher training program was changed to a two year post-secondary program under a new name (Teacher Training Intermediate College). Razik (1985) points out that the curriculum is similar to what is offered in the present Diploma program, but at a higher level. Graduates are prepared to teach in the primary schools, as under the current system.

3.3.7 Oman Technical Industrial College (OTIC):

OTIC is the only post Secondary College available in Oman since 1984, offering studies in Electrical, Electronic, Civil, Mechanical Engineering technology, Draughtsman, Surveying and Lab: Technician courses. Beside these

technical studies, the college offers various courses in the business field such as Accountancy, Administration, Banking and Hotel Management. The college is run by the Ministry of Social Affairs and Labour and can cater for 480 students on full complement. The curriculum of four semesters backed by an Introductory course was designed by North East Wales Institute (NEWI) in the U.K. For preparing instructors to work in V.T.Is., the College has mounted special training programmes.

The college is equipped to produce technicians aimed at a high prior labour market need. Birks, S. (1984) states that OTIC's problem will be quality of intake. As a post secondary institution, most of high achievers will wish to go, into which many of the mediocre will also be accepted. OTIC also competes for trainees with rapidly expanding teacher training facilities, and with the recruitment into officer training in the armed force.

It is important that co-ordination and liaison should take place between various organizations governing post secondary education.

3.3.8 Institute of Health Sciences (IHS):

The IHS was found in 1982 under the auspices of the Ministry of Health. Al-Rahma School of Nursing was in operation in 1970 with a two years program and was lengthened to three years in 1976. The operation of IHS provided better facilities for training. The Institute is at secondary level with three year programs for general nurses, laboratory technicians and health assistants (Pharmacy and a two year program for nursing assistants.

In 1983-84 the total enrolment in the Institute was 250. All students become Ministry of Health employees and receive a percentage of a grade salary.

Razik (1984) points out that the 500 bed teaching hospital being developed as a part of Sultan Qaboos University, as well as the approved 500 bed Hospital for the Ministry of Health will expand employment opportunities and provide improved clinical training for Institute of Health Science students. In 1984 the Institute added three programs to prepare X'ray technologists, Physiotherapists, and public health inspectors.

Students after graduation do not receive a certificate equivalent to the secondary school general certificate. Instead they get professional certificates appropriate to their program (e.g. Registered Nursing Certificate or Laboratory Technician Certificate).

3.3.9 Military Schools:

Most of Military schools provide specific training in various technical disciplines for primary and preparatory graduates. The Ghala Military School is the only school which offers a program of secondary school studies.

3.3.10 Higher Education Sultan Qaboos University (SQU):

The foundation stone for Sultan Qaboos University was laid in November 1986. It is scheduled to be in operation in 1986 with five colleges :

i) College of Education and Islamic Studies:

The Department of Education will prepare Omani teachers to work at preparatory and secondary

level. Islamic Sciences will develop means to strengthen and uphold the beliefs and the teachings of Islam among the Omanis. In addition, the College will assist with adult education, literacy technical, and continuing education.

ii) College of Science:

The Department of Science will offer the foundation science course required in the first year at the university and the science courses for the other colleges. Degrees will be offered in Biology, Chemistry, Geology, Physics and Mathematics.

iii) College of Medicine:

The College of Medicine will prepare doctors to meet the country's needs. It will also be active in developing health care facilities and in improving health education.

iv) College of Engineering:

The College of Engineering will offer undergraduate course in Civil, Electrical and Electronic, Mechanical, Petroleum and Mining Engineering. A degree program in Agricultural Engineering will also be offered in co-operation with College of Agriculture.

v) College of Agriculture:

The College will provide courses in agriculture and fisheries.

vi) College of Arts

The new college was established in 1987/88. The College will provide courses in Arabic studies, so-

cial studies and other arts courses.

It is anticipated that the University will accommodate a total student population of 3,000 Birks, S. (1984) points out that if Sultan Qaboos University takes full enrolment and there will be heavy social pressure for it to do so, then it may take 22 percent of the secondary completers in 1986, even in 1990 there will be only 2400 male and 1600 female secondary completers and Sultan Qaboos University could be taking 14.5 percent of them.

If Sultan Qaboos University is obliged to take students of low quality in the early years, it will meet great difficulty in establishing higher quality entrance requirements in subsequent years; social demand has driven down standards in all Gulf Universities. Most notably, Kuwait University has now withdrawn from offering higher degrees.

3.4 Pre-Service Training (Formal Training):

The government in its attempt to adopt the slogan "Education for all" expands educational and training facilities at all educational levels in the Sultanate of Oman. This had led to the expansion of secondary and post secondary education. Pre-service training is taken care by V.T.Is. and institutes of special education.

The employment in the public sector is based on qualification and experience, rather than skills requirement and production. Birks, S. (1984) points out that students and trainees perceive correctly that their labour market rewards are likely to be maximised by staying within general education, or, failing that, by staying within a

training course as long as possible and then hopefully re-entering the education system in the adult education programme or as sponsored student from the ministries.

In an attempt to enrol more student into special education and vocational training, the organizations governing the Institutes offer incentives during the training period and adjust their curriculum to suit further education and training e.g.

MOSAL Provides between 50-100 Rial Omani per month (Pnd. Stg. 95-190) to students studying in VTIs and OTIC.

MOEY Provides between 60-176 Rials Omani per month (Pnd. Stg. 110-326) to students studying in commercial secondary, agricultural secondary and teacher training colleges.

MOH Provide around 180/- Rial Omani (Pnd.Stg. 330)per month to student studying at IHS.

Oman Institute of Bankers (O.I.B.) provide their trainees an incentive of R.O. 165/- (Pnd.Stg. 305) per month.

These stipends have been stopped with effect from 1989. To guarantee students to be enrolled in these organizations the Ministry of Education has started a screening process after preparatory stage. The enrolment of students at general secondary level is bound to his academic capability.

MOSAL is trying to evaluate the qualifications issued by VTIs as equivalent to Secondary level certificate. Successful students have a chance to join OTIC.

The qualification gained by students from secondary technical schools are equivalent to general secondary certificates and student have a chance to join OTIC or SQU after completing their studies.

The appointment salaries paid to successful students from specialized education in the civil service is higher than the salaries paid to their colleagues holding certificates from general education.

The private sector is a free economy market and finds difficulty in paying the same scale of salaries as paid by the government. This leads the school leaver to seek employment in glamorous occupations, rather than those with high productivity, or those which require the critical skills that the developing economy is dependent upon. Birks, S. (1984) points out that the expansion of facilities of special education and pre-service training and the strong aims of students and trainees together create a conflict. Training is costly, more costly than general education by several fold (especially in the long term form that it is practised in Oman), and should prepare trainees for training-related occupations in the labour market.

It is unrealistic to say that students should not be allowed further training or education. Education and training should be available at various levels to allow the outstanding students to progress through. But most should enter the labour market, at least for a period after each course of training. This will ensure the fulfillment of the labour market manpower requirement and

satisfy the social aspiration of education and training. The aims of training institutes and special education should be unequivocal. Their aims should concentrate to prepare trainees for the labour market. Hence the methodology and curricula should be directed towards it. Any attempt for preparing the enrollees for further education or training will lead the labour market to suffer inevitably.

The failure of on-the-job training may be due to the lack of interest the employers have in training Omanis. They found the appointment of expatriates often cheaper and productive than employing Omanis. Also the lack of incentives in training on-the-job training is a major obstacle to Omanization.

3.5 In-Service or on-the-job training (non-formal):

There is no significant difference between the term "In-service" and "on-the-job" training. Birks, S. (1982) points out that in some societies, the former term "In-service training" is preferred because it has fewer overtones associated with manual work.

The necessity for in-service training arises in Oman due to the fact of a high rate of expatriate employment in the country and technological changes. In the public sector, the total number of expatriates at higher level (i.e. private contract and group I) in 1984 were 1272. Furthermore in grade II, their numbers were 14680. All these expatriates have post-secondary qualifications. In the private sector in the same year, expatriates working in professional, technical, administration and management

amounted to 20071. Almost all these jobs should be replaced by Omanis. In-service training programs become vital. The Civil Service, in an attempt to replace non-Omanis, has operated a scheme of appointing university and VTI graduates in various ministries temporarily on special budget. The objective is that these graduates work as counterparts with expatriates and replace them in due course. It is also noted that in technical assistance ^{am}programmes for any project phase, the Omanis involved in the project should be able to operate the end product without loss of efficiency and without resource to outside aid.

Birks, S. (1982) points out that realities suggest that those aims of the replacement of non-nationals are but rarely met. The failure of on-the-job training must be one of the major reasons. If on-the-job training were succeeding then there would be much greater displacement of non-nationals.

3.5.1 Pre-condition for successful on-the-job training:

There are two contrary assumptions for on-the-job training:

- a) On-the-job training will work, and the designing of a programme is a simple and straight forward matter.
- b) On the other hand, on-the-job training cannot and will not succeed because of the complexity of the work done by the experts, or the quality of expert or counterpart.

The truth lies somewhere between these assumptions.

Birks, S. (1982) states that there is a series of important conditions which have to be met before on-the-job of a counterpart can begin. These conditions have to be met if the training of a counterpart is to be effective. The order in which these factors are listed are not of particular significance.

- i) The adviser must have a genuine wish to develop the counterpart.
- ii) The adviser must be capable of developing the counterpart, both intellectually and in terms of pedagogy.
- iii) The adviser's job must in practice allow him time to develop the counterpart, for on-the-job training requires very much time consuming inputs.
- iv) The counterpart must accept that he requires development.
- v) The counterpart must be capable of development to a level commensurate with the job in question.
- vi) The counterpart's work load must give him time to benefit from on-the-job training.
- vii) The adviser and counterpart must have a mutually agreed job description towards which the training needs to be directed.
- viii) The adviser and the counterpart must be able to agree mutually upon training at a level which is appreciated by both counterpart and adviser, and which can bring the counterpart up to the quality needed for the post in question.

- ix) The counterpart must actually want to be employed in the post in question.
- x) The administration employing the counterpart must want to employ him in the position in question.
- xi) The adviser and counterpart must be working with in a system that acknowledges the value of on-the-job training as against other, more formal, qualifications.

Anyhow, the employer has also responsibility for the success of on-the-job training. It is necessary that the employer :

- i) Must ensure that the counterpart has the right qualification for the post in question, before he is appointed as a counterpart.
- ii) Must also ensure, that the employment contract of the adviser emphasises on-the-job training for the counterparts as part of his job, and if it was found that the time limit is not enough, the contract should be extended to assure the capability of the counterpart to take over the post.
- iii) The employer should also realise, that in some cases off-the-job training will form a part of the training of the counterpart and is ready to establish this for him.

It is necessary that the above conditions are met otherwise, the efforts directed towards on-the-job training are doomed to utter failure, or very low returns at best.

3.5.2 In-Service or On-the-Job Training in the Private Sector (OJT)

The number of nationals in the modern private sector is very small. They account for around 10% of the total employment of 305 thousand workers in that sector. On-the-job training should not only cater for upgrading workers in their skills, but also to replace expatriates working. The government in an attempt to encourage training of Omanis has forced the employers in the private sector by law to train Omanis or participate financially in vocational training schemes by paying a training levy. According to MOSAL sources, the training levy paid by private sector organizations in 1988 was around R.O. 6.5 million (Pd. Stg. 11,6 million). The Ministry of Social Affairs and Labour had also issued Declaration No. 10/78 (Appendix B) to rebate training costs incurred by the organization in the private sector. Birks (1983) points out that the scheme, as presently structured, had little impact upon training. The amount rebated in 1988 (about R.O. 280,000/- = Pd. Stg. 501,000) in 1982 only comprises a small share (less than 4 percent) of the monies levied in that year.

Firms treat the levy as a tax, and do not make serious extra efforts to train as a result of the scheme. The scheme rebates costs on rather formal full-time short period courses of training. These are needed and this thrust of subsidy is justified to appoint, but the scheme does nothing to enforce OJT. There is no scheme to ensure Omanis receipt of OJT.

To encourage Omanization, it is necessary to pay great attention on pre-service and on-the-job training especially if we know that a good proportion of Omanis are illiterate. Birks, (1983) stated that "the rate of literacy in Oman today is estimated 47 percent for adult males".

This means that only about one half of the male work force can read and write. If females are considered, then it is expected that the ratio will increase dramatically due to the social constraint and the lack of educational facilities in the past. This is a fundamental and basic constraint to occupational upgrading and increasing productivity of Omani national workers. It is noticed, however, that some organisations have paid some attention to on-the-job training, specially those which feel the importance of the scheme and bear a long term objective of organization as Petroleum Development of Oman (PDO), the Port Authorities and the Banks. All these organizations have their own training centres and training programmes. The banks, in cooperation with the Central Bank of Oman have established a Banking Institute to provide preservice training for secondary school leavers and further training for banking staff. The institute is known as Oman Institute of Bankers. The cost of running this institute is born partially by the Central Bank of Oman and by the Commercial Banks operating in Oman. At present it runs a one year training programme. Study is followed to upgrade the training to a two year post-secondary course.

3.5.3 In-Service Training in the Public Sector:

In-service training in the public sector is highly concentrated on management and administrative aspects. No doubt management training plays an important role in the development process in the country. Abdulla A.A. (1985) points out that development is concerned not only with economical aspects. It involves other social, cultural and political aspects. Nobody denies the importance of these aspects in total development, but in practice, developing countries must place great emphasis on economical aspects. In most cases it is done by neglecting other aspects such as management and administrative development.

Training in the civil, public sector becomes very important due to the majority of Omanis working in this sector and the importance of the development of it. If the development is a planned, studied and directed operation, then the management is a tool to change ideas into facts. Therefore the positive and negative approaches will reflect on the development efforts. People always blame the failure of development efforts on the management and administrative structure. Nadir A.S. (1984) points out that I am not exaggerating if I say that the administration bears the total responsibility for this failure. While Regional Centre of Studies and Research (1982) points out what Mr. George Loqode (Director of Law College in France) has stated that the non existence of a qualified administrative structure - may destroy the total development capabilities in the country - and this is what is

mostly noticed in developing countries.

The development process in the Sultanate started with the promise made by H.M. Sultan Qaboos himself in saying " I promise, the first thing I have to do is to establish as quickly as possible a modern government ".

To achieve this goal, the government started to establish the structure for management and administrative development in Oman. The main organisations responsible for this development are as follows :

a) Civil Service Council:

The Council was established according to H.M. declaration No. 28/1975. The council is responsible for every aspect of Civil Service affairs. In respect to training the council has :

- i) To prepare an administrative development plan together with administrative reformation of the administrative organization in the country. The plan to be submitted to the cabinet for approval.
- ii) To approve the administrative training programme carried out by Ministry of Civil Service in cooperation with concerned bodies.

b) Ministry of Civil Service:

In May 1973, Diwan of Staff Affairs was established governed by of Diwan of Sultan Affairs. It was upgraded in 1980 by H.M. declaration No. 8/80 as an independent organisation, administratively, and financially governed by Civil Service Council. The main concepts of training involved in this

organisation as stated in decree 8/80 are :

- i) To prepare a training plan in management and administration to upgrade the level of attainment of civil service staff.
- ii) To distribute the university graduates and scholarship for studies to various government organisations according to their needs and students' specializations, taking into consideration the priorities which serve the aims of development plans.

In 1988 it has been upgraded to form Ministry of Civil Service.

a) Institute of Public Administration (I.P.A.):

The Institute was established according to H.M. decree No. 18/80 as an independent institute governed by the Ministry of Sultan Diwan Affairs. Its functions as laid down by the decree are:

- o- To prepare and adopt general and specific training programmes at all job levels.
- o- To carry out field, theoretical and scientific research in general administration and advise the government organizations in this respect.
- o- To hold conferences and seminars to discuss administrative problems and

suggest solutions to suit circumstances.

- o- To strengthen relations between the Sultanate and other Arabic and similar International organisations in the general administrative field. Also to participate in conferences and meetings held abroad to discuss administrative problems.
- o- To establish a specialized library in the field of administrative science to assist people in the field for further information.
- o- To issue a periodical magazine concerning the institute activities.

The Institute has started various courses, some pre-service, some being on-the-job training. The institute has played a big role in training programmes, but still more action is needed to investigate the on-the-job training requirements of the ministries and evaluate whether the courses which already exist meet the requirements of the ministry or not. The following (Table IV) shows the number of participants involved in various courses (The Administrative Magazine November 1985).

Most of the courses held in the institute are for short period. The fall of general courses and middle level courses in 1984-85 was due to a rise

in providing courses at a higher level.

The ministries in coordination with Ministry of Civil Service send employees abroad for training. Birk, S. (1983) points out that a trip abroad for a course is regarded as a "Joy ride", a perk and not a serious means of learning.

	General Courses	Middle level Courses	High level Courses	Total
1978	93	66	14	173
1979	168	102	46	316
1980	136	162	132	430
1981	172	106	20	298
1982	309	116	21	446
1983/84	541	431	40	1012
1984/85	357	338	107	802
Total:	1776	1321	380	3477

Table - IV - Distribution of Participants in IPA 1978-1985.

To have a better result of the outcome of training it is necessary to run more courses in Oman using international expertise and concentrate on counterpart training as on-the-job training. Each ministry should have a full-time professional training officer. Each non-Omani should be targeted for replacement by an individual Omani within a certain time. The coordination between various training organization (e.g. MOSAL, IPA, OIB), is important. The whole process of training should be framed by an Omani staff development scheme for Oman.

3.6 Student Population : Inputs and outputs of Education and Training System:

Since 1970, when H.M. Sultan Qaboos took over the throne the initiation of the expansion of educational systems started. Before 1970, only 909 students were available in the education system. The Omani people, like any other Arab people in general place a high value on education especially academic education where academic qualifications are obtainable. The appointment in the Civil Service which depends on academic qualification has probably assisted to this nature. Also, the employment of expatriates from South East Asia has added more to this dimension. The enrolment figures of Omani students in Education Programmes in Oman and abroad in 1987/88 as per the Ministry of Education's annual statistical year book are as follows (Table V):

The total student population amounts to 15% of the total population based on 1.5 million estimates. Table 12 shows the development of general education elements and the proportional changes from 1980/81 - 1984/85 according to regions. It is noticed that this increase is more significant for girls than boys. It lies between + 50% - 82% for boys in various regions compared to + 83% - 190% for girls. It is also noticed that the population increase in the capital region is less than in most of other regions. This indicates that education has still not been provided for the entire population in the regions.

Education in Oman is not compulsory, and inspite of a tremendous amount of financial resources that have been

used into school construction and resources, the demand has yet to be met. Razik (1983) points out, that although the Ministry through the Five Year Development Plan and its annual statistical reevaluation of conditions, have attempted to provide schools where they are needed and to upgrade the quality of schools built earlier in the past decade of development, it still receives special requests from communities through other government channels to build schools or improve conditions in a given area.

TABLE V : OMANI STUDENTS IN VARIOUS EDUCATIONAL PROGRAMMES 1987-88

Qaboos University	1,138
Primary	212,328
Preparatory	43,196
Secondary	13,305
Higher Education Abroad	2,242
Adult Education Centres	10,916
Government Literacy Centres	10,625
Vocational Training Institutes (MOSAL)	2,581
Technical, Commercial & Model Schools	750
Teacher Training Institutes	1,323
Private Schools	13,030
Oman Technical & Industrial College	620
Vocational Training Centres (Ministry of Post & Telegraph)	127
Oman Health Institute	179
Special Education (for Handicapped Abroad)	235
Special Education (for Handicapped Oman)	230
Mosque Schools	886
Oman Institute of Bankers	112
	<hr/>
	304,111
	=====

The country is in great need of students looking for a career. Figures for specialized education and training show that only around 2 % were enrolled in these areas in 1984-85. Careful attention should be given to this type of education and training to create a skilled cadre in a shorter period to run the economy of Oman.

3.6.1 Social Condition of the Population:

There can be ^{no} doubt that social conditions play a big role in the input and output of an educational system. In Oman, as a developing country trying to modernize itself is not easy to assume that these conditions do not exist and the Omani population is a completely homogeneous group. Razik (1983) points out that there is a diversity in the Omani population in many respects and these differences should be taken into consideration as the education and training system continues to develop. The main differences are :

- i) With so few schools before 1970, there continues to be large segment of the population that is functionally illiterate. This group is likely to include a sizeable population of young males with a strong desire to share in the country's new economic prosperity, but with few marketable skills.
- ii) With increased living conditions, improved nutrition and universal health care, mortality rates have dropped sharply resulting in demographic strata changes; attitudes and value differences between the older and younger population groups are likely to be marked as the older age groups will be relatively unskilled and illiterate.
- iii) The largest proportion of the population is rural, but economic pressures and educational opportunities will increasingly attract younger age groups to the urban areas and cause a general

drift in the population as a whole.

- iv) Cultural and religious principles requiring separate accommodations for boys and girls represent an area of controversy for many communities. The role of women in society, and their potential for making a productive contribution deserves considerable study.
- v) The presence of large sub-population of non-Omani guest workers and their dependents will increasingly become a pressure on the education and training system as these populations begin to stabilize as in other Gulf countries. Likewise, the presence of these populations will have an input of socio-cultural values and attitudes.
- vi) Language instruction represent a special issue because of the difference between local dialects and Arabic in the schools, Arabic as spoken by teachers from different countries and the importance of English as a necessary language for participation in the modern sector, as well as in respect to higher educational opportunities.
- vii) May be " the impact that communications and increased contact with the outside world will have on Omani values and attitudes towards modernization.

3.6.2 The Output of Education and Training System:

The World Bank in its study carried out for Oman "Assessment of the manpower implications of Second Five Year Development Plan " came up with some important find-

ings on the future manpower situation in Oman. Some of the key findings of the report can be summarized as follows:

- i) There has been a rapid expansion of the Omani Economy since 1970 with infrastructural developments of communication, health and social services. Economic sector development has been emphasized in petroleum development and mining. Long term development goals are to promote agriculture, fishing and manufacturing.
- ii) The total 1980 workforce was estimated to be 319,000 including Omanis and non-Omanis. In the modern sector the total workforce was 204 thousand of which 115 thousand was in the rural sector. Omanis represent 30% (or 61,000). Of this 61,000, 59% are in the private sector and 41% in the public sector.
- iii) Through the period of the Second Five Year Development Plan (1981-85) manpower requirements are expected to grow to 435,000 workers for 11 % per annum economic growth rate, or to 467,000 for 12.6% per annum economic growth rate, while the supply of Omani national workers is expected to grow only 3.3% per annum or from 160,000 to 188,000. The total short-fall therefore, will be some where between 247,000 to 279,000 workers. In the area of professional and high-level technical manpower, the work force demand increase in the period of the FYDP will be 3,800 while the indigeneous supply of

this level of manpower is expected to increase by only 100 per year. The expected shortfall of technically qualified professional manpower is expected to rise from 4,800 in 1980 to 8,100 in 1988.

Manpower requirements could be decreased by having a slower economic growth, increasing the potential of the Education and Training system, decreasing the rate of dropouts in the schooling system as far as could be, and looking carefully at the problem of under-employment.

3.8 Educational Resources:

The increase of social demand for education had led the country to the continuous extension of educational services. At the beginning of the early stages, consideration was given to provide schooling stages, for as many students as possible within the financial constraints. Social demand led to a rapid expansion in education. This has had an inevitably deleterious impact upon the quality of education. Birks (1983) points out that MOEY policy to improve the quality and effectiveness of education has not yet been clearly articulated. The link between educational quality and labour market effectiveness of school leavers, although increasingly understood, is little defined in practical terms.

The expansion is not simply limited to an increase in the number of educational personnel (teachers, administrator, trainers) and the construction of new buildings, but, due to the progress of science and technology, is accompanied

by the development of varying degrees of a whole range of equipment and materials whose aims is to increase educational effectiveness. UNESCO (1984) points out that even if the essence of teaching still lies in the direct relation between the teacher and the learner, the role of educational materials and equipment is growing more and more important in education.

3.8.1 Curriculum Development:

The Second Five Year Development Plan has been to improve the quality of education through a new emphasis on "development", rather than physical expansion alone. The MOEY started in the first FYDP the Omanization process of the school curriculum. Before the First FYDP MOEY utilized text books designed for Kuwait and Qatar schools. Razik (1984) points out that these books neither reflected the culture or other condition in Oman, nor were considered suited to the educational philosophy of education. Birks, S. (1983) points out that teachers use mainly imported curricula, which might be unsuitable for the local economy and conditions.

The educational philosophy of Oman indicates that the students should be given the opportunity to reach their fullest potential as individuals, and this goal required they acquire competences for problem solving, critical and scientific thinking and self directed learning. UNESCO (1984) points out that over the last decades, science and technology have made considerable progress in the search of new knowledge, the processing and dissemination of information and the determination of new types of

competence. In particular educational research has stressed the importance of manual dexterity and the linking of education to the life situation.

The new "Omanized curricula" were to embody these principles, as well as reflecting Omani culture and conditions. The curriculum development is coming to its end and is nearly complete. It is important that MOEY evaluate the curricula and assess whether the aims and goals of the Omanization effort have been achieved.

The problem of curricula for specialized education at secondary and post secondary level has to be looked at very carefully. The objectives of education in technical institutes and vocational institutes should be clearly spelled out to avoid any conflict between preparing students for careers and qualifying them for further studies. Both MOEY and MOSAL have started to get international experience in this field, but still a lot of work has to be carried out on this aspect.

The training could be conceived as a non-formalized learning process or as a formalized learning process. Nolker (1980) points out that formalized training concepts are oriented towards a particular country's natural, cultural and economic self image. For this type of vocational training, help from outside the country is difficult, it is only possible within narrow limits to transfer non-formalized training procedures from country to country.

It is important in Oman, to carefully study this case, although internationally training aid is successful in

the case of the training courses which are largely amenable to planning, discussion and even ^{or} standardisation, the adaptations of such courses would sacrifice the concepts oriented to the particular needs of the country.

3.8.2 Selection and Arrangements of Contents:

In the general education system, the students and teachers depend on text book in their learning process. Specialized and vocational education would differ in its contents and process. Nolker (1980) points out that all areas of vocational and life now have their corresponding sciences, which have taken on a regulatory function for further development. The learning of specialized disciplines carries with it the danger of accumulating a great amount of information and abstract facts which one might describe as "dead knowledge". Such knowledge is dead to the extent that it contributes little or nothing to the solution of practical vocational and technical problems.

Therefore, in the selection and arrangement of learning content, for technical and vocational education, it is necessary to take into account the following :

- i) Social Needs: work in the field of technical and vocational training will always be tied up with the demands of society as a whole. This means that the skills and abilities which the technical and vocational institutes aim to impart should be of use in the employment system.
- ii) Individual Needs: the students have their own expectation about their future work. In a summary

carried out, on students occupational preferences and their implication for education, vocational training planning, and manpower development in Oman, Razik (1985) concludes that it seems clear that greater effort should be devoted to the introduction of a comprehensive guidance and counselling system early in the students education. This would help to investigate the following factors :

- a) Students are attracted to stereotyped professions e.g. medicine.
- b) Students lack knowledge of various occupations and their opportunities.
- c) Manpower needs are often overlooked by students.

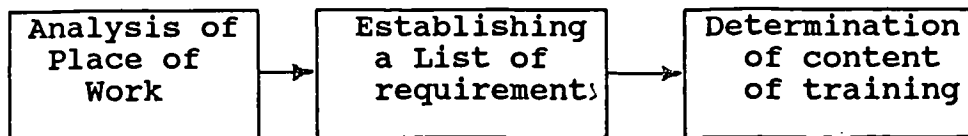
Nolker, H. (1980) points out that when one is establishing the content of technical vocational training one should ensure that the knowledge, skills and types of behaviour which one is imparting

- are in demand on the labour market
- are suited to long-term employment
- encourage cooperation
- confer the esteem of society
- enable individual initiative and self-determination

iii) Analysis of Vocation and place of work .

Job and vocation analysis are important in course design so as to acquire information about occupa-

tions and about the conditions under which takes place. Helmut Nolker (1980) suggests a three steps process as shown in Fig. V.



FIV V : Process of Vocation and Place of Work

He points out that an analysis always becomes difficult if one has to estimate how work requirements are going. New discoveries, technical inventions and economic developments can only be predicted to a limited extent. However, recognisable changes must be taken into consideration, since the students will have to be able to perform such jobs in the future as well.

iv) Didactic Organization with reference to subject and Vocation:

After the selection of contents, it is important to determine how the technical skills and abilities can be communicated in the classroom so that the students will become capable of carrying out these jobs. If the persons who are developing training plans are predominantly experts in technology rather than educators, they will tend to orient themselves towards the procedures which are normal in their specialized discipline.

Also an orientation towards aspect typical of the life associated with particular vocations is important. The need for Industrial visits and on-the-job training becomes a main feature of a vocational programme. Nolker Helmut

(1980) points out that this orientation is more advantageous than the ^organisation of content according to subject. The execution of projects, of concrete proposals typical of vocational work, reveals whether training plans have been organized in a fashion which enables the students to successfully accomplish important vocational and technical tasks.

Project design and on-the-job training will surely help the student to acquire the ability of solving problems independently, to be willing to make decisions and take initiative, and to be able to adjust flexibility to unforeseen factors. All these cannot be achieved simply by the method of learning according to construction.

It is time for MOEY and MOSAL to think of the necessity in having a team of instructional design staff for developing new teaching materials including text books, audio visual programmes and special lesson plans coordinated with teaching objectives. It is no harm, if the project is started through international technical assistance. But it should be realised, that Oman has to establish their own team, to work together with curriculum planners and subject matter specialiss^{es} from other departments. Technical education and training is an ongoing process in a developing country. The rapid change of technology will require revision, evaluation and design new materials. A permanent Omani team in this regard is vital.

3.8.3 Teaching Staff:

Teaching staff in an educational environment are a key element to the success of learning. Repeat responsibility lies on the teaching staff to implement the curriculum that reflects the educational goals of the Omanized curricula, especially in promoting levels of skills of students in problem solving, scientific thinking and self-directed learning.

Razik T.A. (1983) points out that in Oman in the actual classroom setting, however, the predominant mode of instruction is the traditional approach which results in the memorization and rote learning of text book material, but not the comprehension of unfamiliar material or ability to deal with new problems with creativity and initiative. Moreover, teacher inspection is "teacher-centered" i.e. it focusses on the teacher's ability to present course content as a lecturer, to maintain classroom discipline and keep proper records. The actual learning of individual students and the way the teachers facilitates this is not closely scrutinized.

The problem of teaching staffs in Oman, is that it is highly dominated by expatriate teachers. The 1987/88 figures shows that out of 13459 teachers only 2640 are Omanis - i.e. 95% of teachers are expatriates of varying skills and abilities. The current policy prohibits any extensive training of these teachers. The main refresher courses they receive, as Razik, T.A. (1983) points out, focus on an orientation to the new Omanized text books.

In technical education and vocational training, the same

methodology of teaching is used. Very little consideration is given to the upgrading of skill levels. Most of the expatriates are on a seconded basis, their contracts are for one year renewable depending on annual reports. In this regard, teachers and instructors try to please the inspectors rather than to carry on instructional method suitable for a learning environment.

It is necessary that Oman should work hard to develop Omani teaching staff as well as carrying out inservice training programmes for both Omanis and expatriates. Birks, S. (1983) points out that the major constraint to overcome this problem lies in getting a sufficient intake into expanded teacher training facilities - school teaching is of low prestige among Omanis, and only few possess a genuine sense of vocation. Moreover, reluctance to enter teacher training will be aggravated by the availability of university places with the opening of Sultan Qaboos University (SQU).

3.8.4 Educational Materials and Equipment:

Educational materials and equipment is a term used to cover on one hand the hardware (apparatus and/or equipment) used for educational purposes and, on the other hand, the software - programmes, books, material used in the teaching - learning process. In the previous sections, the importance of software has been discussed. The importance of hardware is as great as that of software. It becomes even more important in technical and vocational education and training. Schools and Institutes are fairly well equipped in the first stage after the

buildings are ready. Due to financial constraints, however, a lot of consideration is given to (low cost values), hence some of the equipment bought is not relevant to the needs of the syllabi. Moreover, changes in curricula lead to a need to change some equipment. It is necessary therefore, for government to look more closely at the buying of equipment from an operational point of view with regard to the mode of utilization.

UNESCO (1984) suggests a matrix showing criteria (with the corresponding fields of intervention) to be considered by education authorities when seeking to control the development of educational equipment and materials.

ANALYTICAL MATRIX

Criteria to be taken	Fields of Intervention
Type of Instructional materials and equipment.	Hardware, Software
Cost and Life-Span lowcost, expensive	Immediate consumption,
Capital Assets	Inventory renewal
Type of educational use	Individual, small group community
Source of Finance	Families, Associations, Schools, State....etc.
Mode of Production	Standard material; Specific material, local teacher or craft produced
Instructional concerned	Publishing, mechanics, electronics.
Economic aspects	Imports, national capacities.

3.9 Managment of Education and Training in Oman:

The effectiveness of the Educational Training System (ETS) is considerably affected by the management system under which it operates. Various authorities and organizations play there role directly or indirectly in the operation on the system. In this section, the discussion will be focussed on two major aspects.

- i) Policy-making, Management and Planning bodies.
- ii) Administration and operation.

3.9.1 Policy making Management and Planning Bodies:

The total education and training system (ETS) in Oman is not totally governed by one organization. As stated earlier, more than one ministry is responsible for Education and Training. The main organisations are :

MINISTRY OF EDUCATION AND YOUTH (MOEY) :

governs general educational, special technical, Islamic, commercial secondary schools and teacher training colleges.

MINISTRY OF SOCIAL AFFAIRS AND LABOUR (MOSAL) :

governs secondary technical education and training at Vocational Training Institutes and technician training at Industrial Technical College.

MINISTRY OF HEALTH (MOH) :

governs health education and training at Health Institute.

MINISTRY OF COMMUNICATION (MOC) :

runs a training centre in road maintenance and for automechanics.

MINISTRY OF TELEGRAPH, POST AND TELECOMMUNICATION (MOTPT)

runs a training centre in telecommunications.

MINISTRY OF SULTAN DIWAN AFFAIRS (MOSDA) :

governs the Institute of Public Administration.

MINISTRY OF JUSTICE AND AWQAF (MOJA)

runs education in mosques.

MINISTRY OF DEFENCE (MOD) :

runs few shools at primary and preparatory and other training centres.

ROYAL OMAN POLICE (ROP) :

runs few schools for general education and Royal Police Academy.

CENTRAL BANK OF OMAN (CBO) :

governs Institute of Oman Banking.

In the private sector Petroleum Development of Oman (PDO) Oman Oil Refinery (OOR) and Port Service Authorities (PSA) which are semi-government organisations run their own training centres. The amount of education and training carried out by most of these organizations are for specific requirement and cover a very small portion of population. The main two ministries concerned are MOEY and MOSAL. Both ministries are governed for their long range policies by a high level council. For short term planning and policy decisions, commissions within the ministries are formed. Table - 12 shows major government agencies concerned with the governing and administration of the education and training system of Oman.

It is noticed that the government supported Education and Training System (ETS) of the Sultanate is not an ad-

ministratively integrated system. The General Directorate of Vocational Training, in MOSAL administers vocational training institutes, OTIC and coordinates on-the-job training programs in the private sector and in some public sector areas. A Manpower Planning Unit has been established in MOSAL with the cooperation of the World Bank to study manpower requirements needs. The Ministry of Education administers the largest component of the education and training. The Institute of Public Administration (IPA) looks into the training needs of the administrative personnel in the ministries. A few other ministries such as MOH, MOD, ROP, MOC and MOTPT look in to their own specific training needs.

Razik(1983) points out that the success or failure of any organization depends upon the capabilities and personal characteristics of those who form the leadership core.

No doubt, the success of the present system is due to the key leadership roles played by various ministries since development started. Two main points ^ushould _^be looked at very carefully with the expansion of ETS and financial constraints.

- i) Integration is very important between various ^uorg_^nizations developing manpower in Oman. Therefore an executive committee needs to be established to follow-up the execution of policies and decisions adopted by the Council of Education and Training.
- ii) There is a need to evaluate the present management structure of both ministries and develop a specific management system for specialized education and

vocational training with some sort of decentralization. The objective is to operate a manpower development plan in Oman more effectively.

3.9.2 Administration and Operation:

It is also a characteristic of other Gulf Countries for the administration of education and training to be divided between more than one authority. In Oman the ETS is administratively and functionally divided into two major parts a general education programme with primarily an academic orientation administered by the MOE, and a technical - vocational education administered by the MOSAL.

Razik (1984) points out that the two components of the education and training system (ETS) should be unified administratively and two programmes should be more closely integrated.

The role of technical education and vocational training is different from the role of general education. The former is to prepare students for a career, while the latter graduates students for schooling. Unless and until, there is flexibility in the administration of technical and vocational education, it is difficult to pursue the objectives. Hence, it would be more realistic to see technical education and vocational education and training more closely linked under a separate organization, than to bring them together with general education. In a study carried out by the World Bank on alternative modes of Vocational Training World Bank (1986) it is

pointed out that as a simple rule of thumb, the less strong the links with a "traditional" mother institution, the more easily change is managed. For example, in Egypt, the program of the productivity and Vocational Training Department (PVTD), which enjoys considerable autonomy, yet has strong institutional support, has continually evolved in the last 20 years. In contrast, the Egyptian MOE program, closely monitored by the inspectorate of the ministry has evolved less quickly.

In the Gulf states, KUWAIT, SAUDI ARABIA and IRAQ have decentralized systems of technical education and training. In Oman and Bahrain, the responsibility of technical and vocational education is divided between two ministries MOEY and MOSAL.

The World Bank (1986) points out that several countries have decided to decentralize aspects of their training programs. Decentralization is seen by them as a means of meeting local need more adequately. Equally, decentralization permits the development of local needs more 'adequately'. In some cases, as a consequence of a highly centralized system, the capacity of vocational training centres and technical schools to respond to the local market is weakened.

Within a centralized system, teachers and directors tend to exhibit a loss of motivation and suffer an inability to identify with goals of the system. Moreover, there is little incentive to improve efficiency and curtail costs. And, occasionally, an inefficient use of resources was attributed to the inflexible application of a

centrally determined guideline.

The organization chart of both MOEY and MOSAL are shown as (Fig. VI and VII). There is no one model of organization structure that universally applies and as is well recognized, it very much depends on factors such as size, the technological base of the organization's activities, resources, cultural considerations, the characteristics of key leadership and the pace of change required.

In Oman, the administration system of ETS is too centralized and rigid and forms a bureaucratic structure. Razik (1984) points out that the advantage of the bureaucratic organization is that it does separate activities ^hwhich otherwise might be confused. Its disadvantage is that it is difficult to modify in small steps and tends to force creation of new units which may not easily fit into original designs. Moreover, major changes in bureaucratic organization also tend to isolate decision makers in terms of their territories and discourage team efforts. More flexible organization structures have been developed in the last 20-30 years and have been proven to be more effective than the traditional and more rigid bureaucratic structures.

In the interest of Oman, it is time to evaluate the management system of ETS and see what organizational evolution is required to increase its efficiency to achieve the goals and objectives of the system more rapidly and effectively.

FIG 7: MINISTRY OF EDUCATION & YOUTH AFFAIRS

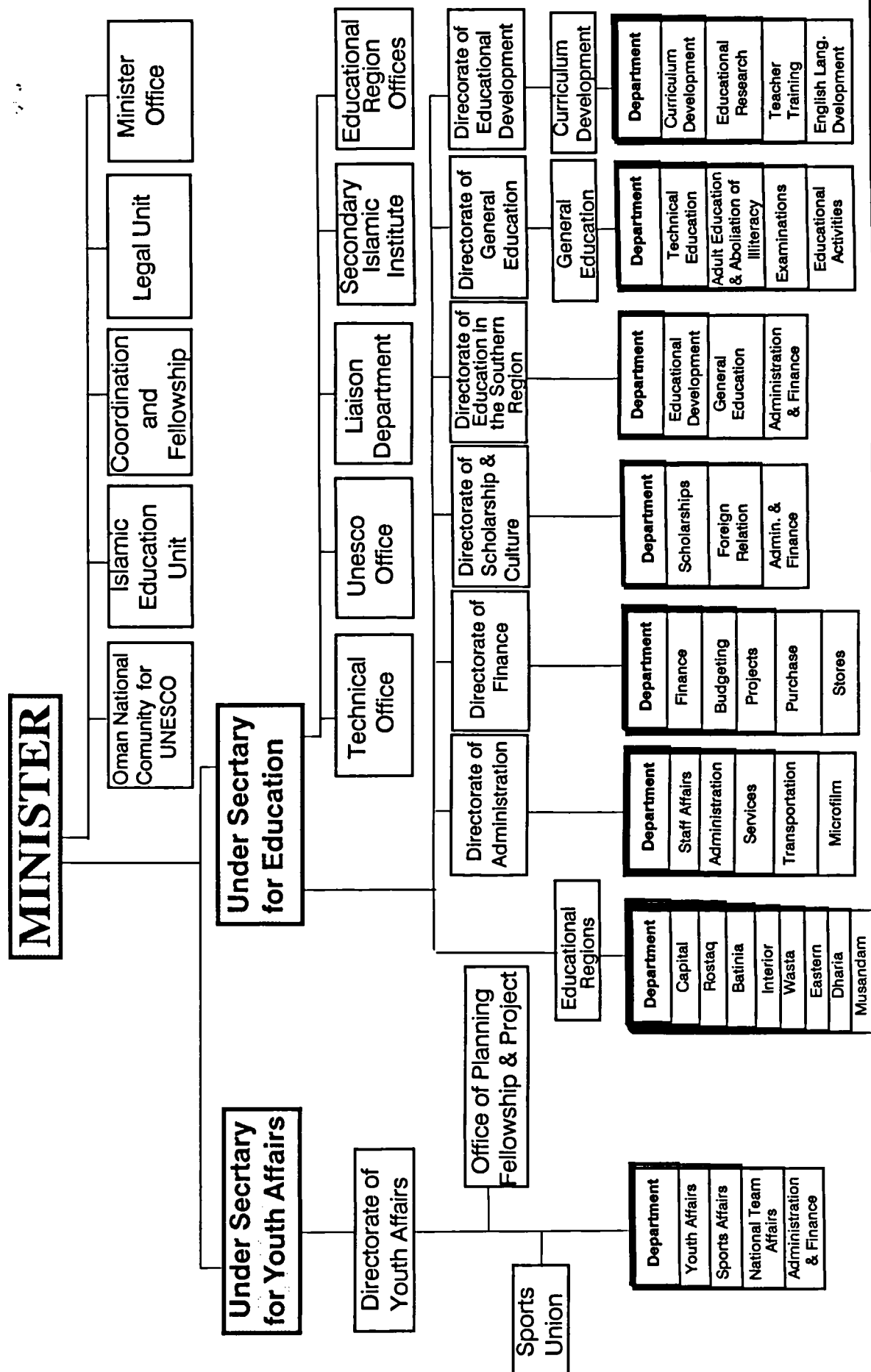
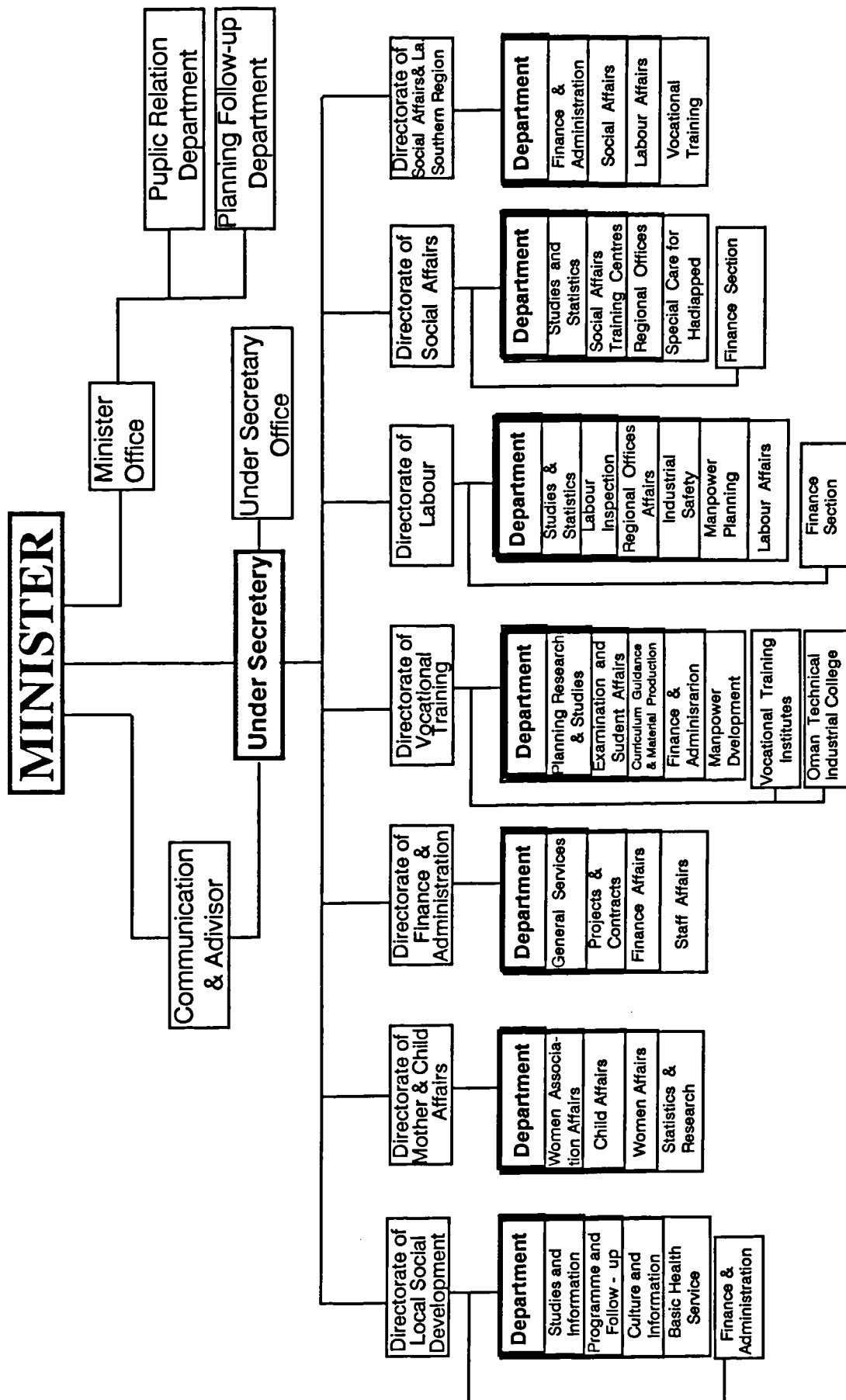


FIG 6: MINISTRY OF SOCIAL AFFAIRS & LABOUR



CHAPTER IV

COMPARATIVE ANALYSIS OF RELATED DEVELOPING COUNTRIES AND LITERATURE REVIEW

4.1.0 INTRODUCTION:

The objective of this chapter is to highlight the experience of some developing countries, specially those which have a similar culture, social and economic prospects. These countries have experienced different manpower planning development schemes. The success of any of these schemes may help in developing the manpower development model in Oman.

4.1.1 The comparative analysis of related developing countries is not a simple task. Some basis should be drawn up for the relation. Any development depends on the economic aspects of the country. Also social and cultural aspects play a big role when looking at social services like education and health. Therefore the relation will be to some Arab countries which have the same sources of economy and have similar culture. Furthermore, some comparison will be useful with some other Arab countries and developing countries where it is felt that comparative analysis is vital. It is also more helpful if data are taken from one source. These have a comparative advantage over data taken from different sources.

4.1.2 Abdulrahman I. Helmi (1979) points out in an article on past performance and future prospects of Arab development by Sadik M. that the Arab countries have been grouped in to three major groupings as follows :

A- The Oil Producing Countries include:

[1]	Bahrain	[2]	Oman	[3]	Saudi Arabia
[4]	Libya	[5]	Qatar	[6]	U.A.E.
[7]	Kuwait.				

B- The semi-oil producing countries include :

[1]	Algeria	[2]	Iraq
-----	---------	-----	------

C- The Non-Oil producing countries include :

a) The least developed (LDC) sub-group include:

(1)	Somalia	(2)	Yemen Arab Republic
(3)	Yemen PDR	(4)	Sudan
(5)	Mauritania		

b) The rest sub-group includes :

(1)	Egypt	(2)	Morocco	(3)	Jordan
(5)	Syrian Arab Republic			(6)	Lebanon

For a better related comparison, the oil producing countries will be considered excluding Libya for the following reasons :

- (1) Although Libya is an oil producing country, its culture is not similar to other oil producing countries. Libya is located in North Africa and western culture has had an influence on its life style . All other oil producing countries lie in the same region and have the same culture.
- (2) All oil producing countries in category A except Libya have formed a regional council called Gulf Corporation Council [GCC]. Therefore, there are strong ties between these countries and have the same agreed policies on political, economical, cultural and social aspects.

4.2.0 Population and Population Growth:

Population plays a major role in the development process.

It is both an instrument and a target of the development process. Human resources in general, and manpower in particular, determine the outcome of a country's development efforts.

4.2.1 The average population growth rate of all Arab countries as a whole was slightly in excess of and less than 3% in 1960s and 1970s. Abdul Rehman I.H. (1979) points out that growth rates for the semi-oil and the non-oil producing countries in the 1970s have been higher than, and equal to, their rates in the 1960s respectively. Viewed from the perspective of the degree of growth rate, the oil producing countries have experienced the highest growth rates in both periods followed by the semi-oil producing countries and with the non-oil producing countries trailing behind. The Arab countries have witnessed appreciable increases in the percentage of population living in urban areas.

4.2.2 The population situation in Oman, has been discussed in Appendix A. However, the situation in other GCC countries up to 1975 was nearly the same, where no accurate census were carried out except in Kuwait and Bahrain. Abdul Salam Salam A. (1975) points out that if we are able to achieve some results near to the fact about demographic studies in Kuwait and Bahrain. We regret, that we stand idle in this respect in other Gulf countries. The Gulf States with the exception of Oman started to have more accurate data about population figures after 1975, yet it indicates estimates which are not accepted by international organisations. The World Development Report 1984 has given some indication as to comparative resources of

these countries in 1979 as shown in (Table VI).

4.2.3 It will be noticed from the table that Oman is one of the countries with the lowest population density. The national density factor is a good guideline and important indication in manpower aspects. The high demand of the Gulf States (GCC) for extra manpower is due to the high economic growth rate in these countries, and lack of national population. Khayat (1982) points out that the Gulf States filled the gap of population by imported labour. Table (VII) shows the development of population density for Arab Gulf States. We deduce from the table the following points:

- i) In spite of great difference in the general density of population (National Population density) from one-country to another, all these countries suffer from lack of national population to cope with their economic growth. The figures of total density population created from extra imported manpower highlight this fact.
- ii) The density of national population increased at a rate lower than the density of total population. The former grew at a rate of (178%) between 1970-1980 compared to (210%) for the later one during the same period.
- iii) The period 1975-1980 showed a very high growth in total population density (Economic density) compared to national population. The growth in density of the first was at a rate of 134% compared to 112% for the second. This was due to the production of

TABLE VI : COMPARATIVE RESOURCES OF ARABIAN GULF STATES

COUNTRY	Population Millions	Area 1000 Km ²	Density	Dollars	GNP PER CAPITA Average Annual Growth		Life Expectancy at birth		(%) Urban Population
					1960-70	1970-82	1960	1982	1960/70 1970/82
*Bahrain	0.37	78	617	2,032	-	-	-	-	- 78
Iraq	14	435	32	6,840	3.2	3.5	47	57	43 70
Kuwait	2	18	111	19,840	9.9	6.3	58	69	72 91
Oman	1	300	3.3	6,090	2.6	4.3	38	51	4 20
*Qatar	0.21	11	19	4,710	-	-	-	-	- 69
Saudi Arabia	10	2150	4.7	16,000	3.5	4.8	42	54	30 69
U.A.E.	1	84	11.9	23,770	9.3	15.5	51	69	40 79

*Based on 1979 indication World Bank Development Report 1984

TABLE VII : DEVELOPMENT OF POPULATION DENSITY FOR ARAB GULF STATES
1970 - 1975 - 1980

COUNTRY	Total Population in (1000)			Density			National Popu- lation in (1000)			Density		
	1970	1975	1980	1970	1975	1980	1970	1975	1980	1970	1975	1980
Kuwait	738.6	995	1356	41.8	56.3	76.8	347.4	472	562.5	19.6	26.7	31.8
Bahrain	216	282	359	227.4	427.3	543.7	178	214	242.6	270	224	397.5
Qatar	111	180	260	27.7	45	65	45.8	65	85	11.4	16.2	21.2
Emirates	220	660	1043	2.8	8.6	13.5	101	197	263	1.3	3.2	3.4
Oman	600	811	900	2.8	3.8	4.2	558	651	630	2.6	3.6	2.9
T O T A L	1885.6	2928	3918	6	9.4	12.6	1230.2	1599	1783	3.2	5.1	5.7

oil which increased economic growth and thus led to extra foreign manpower.

4.2.4 The population gap in the Gulf States has caused higher rates of population growth. Khayat H. (1982) describes growth rates as follows :

- i) The average growth rate of population in the Arab Gulf states between period 1970-75 has increased more than the period 1905-1950.
- ii) The average increase due to migration in the Arab Gulf states has risen considerably from 0.42 in Bahrain to 11.12 in the Emirates. The average increase in Oman was around 6 per cent.
- iii) The only country in the Arab Gulf states which faced a reduction in manpower due to migration was Iraq at a rate of (0.1) per cent.

4.2.5 Many developing countries suffer from the phenomena of high population growth. The population growth rate in developed countries is far behind these figures. World Development Report (1984) points out that though a post-war baby boom combined with falling mortality in the industrial countries, the population growth rate never exceeded 1 per cent in Europe and seldom exceeded 1.5 per cent in North America. Fig.VIII shows past and projected world population.

4.2.6 At present, there is no danger to the Gulf States from high population growth, since the demand for human resources are high, and the countries can accommodate it. In the future, at a time, when the states have completed their infrastructure, this should be looked at carefully

as the population increases and the need for extra manpower reduces.

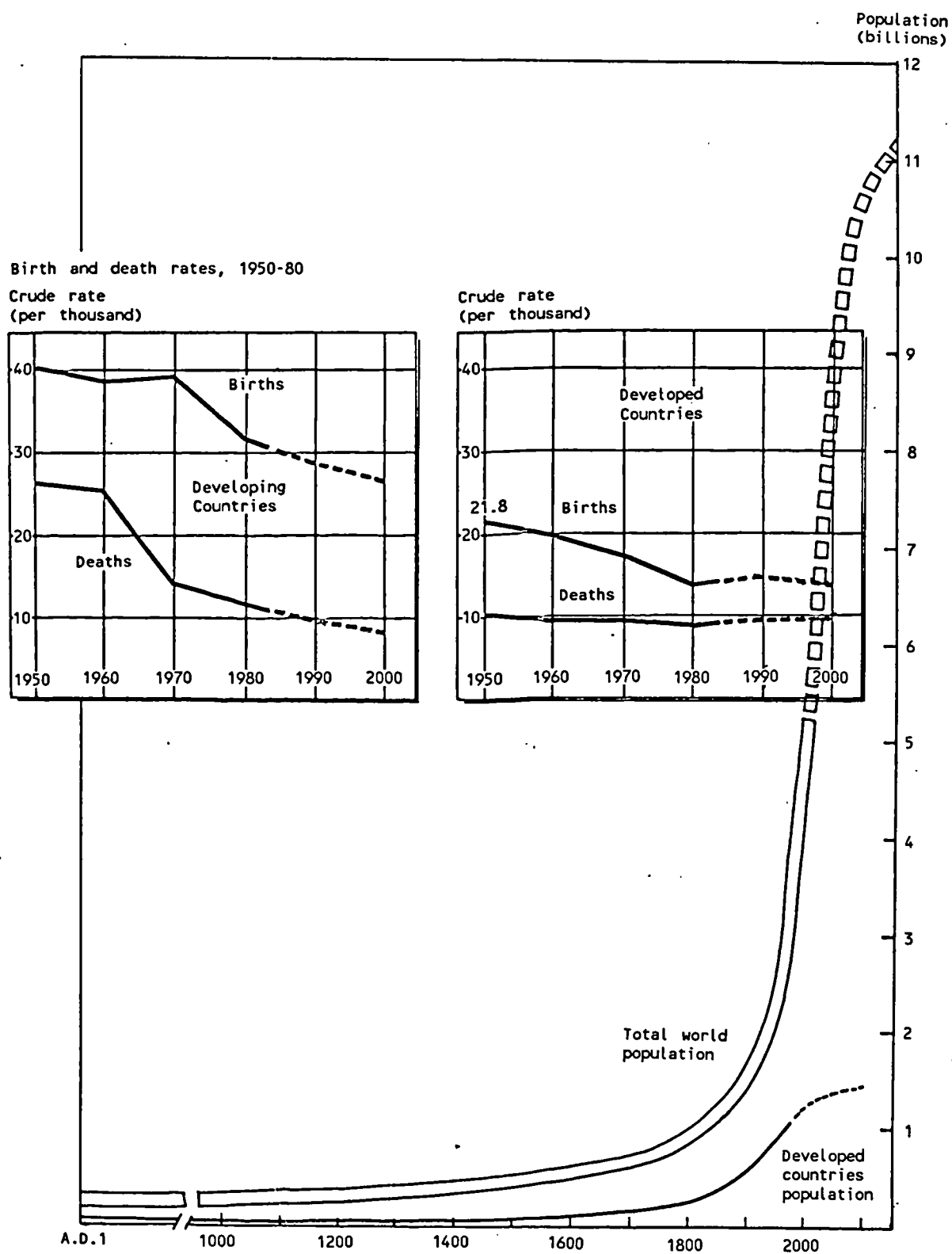
4.2.7 The gross national product per capita of the Gulf States is comparatively high compared to other developing countries. World Bank Development (1984) indicates that developing countries are divided into :

- i) Low-income economic, with Gross National Product (GNP) per person of less than \$ 410.
- ii) Middle income economies, with a 1982 GNP per person of \$ 410 or more.

Birks, S. (1980) distinguishes between capital-rich and capital-poor upon the basis of gross national product per capita (GNP). A Third Group is added between these two groups which have an intermediate GNP referred as 'Pseudo-Capital rich'. According to this distinction the true capital rich states enjoy per capita incomes in excess of \$ 4,000, the capital poor states are those which have per capita incomes of less than \$ 1,000, those which lie in between them are 'Pseudo-capital' rich. The GNP of major Arab states in 1982 as indicated in the World Development Report (1984) ranges between \$ 23,770 in United Arab Emirates to \$ 440 in Sudan. The details are listed below in Table VIII.

Oman has a GNP income of \$ 6090, while the GNP in other Gulf States as indicates in table VI is between \$ 2032 - \$ 23,770. It is a good indicator of the economy which depends largely on the oil price. The crisis of the reduction of oil prices in 1986 from \$ 22 to less than \$15 did affect the financial situation in these countries.

FIGURE VIII : PAST AND PROJECTED WORLD POPULATION
A.D. 1-2150



SOURCE : Durand 1977 UN 1966

State	GNP per Capita
United Arab Emirates	23,770
Kuwait	19,870
Saudi Arabia	16,000
Qatar	11,400*
Libya	8,510
Oman	6,090
Algeria	2,350
Bahrain	2,140*
Jordan	1,690
Syrian Arab Republic	1,689
Iraq	1,390*
Lebanon	1,258*
Tunisia	1,390
Morocco	870
Egypt Arab Republic	690
Yemen Arab Republic	500
Yemen PDR	470
Sudan	440
Mauritania	340
Somalia	290

Table - VIII Major Arab States - Gross National Product per capital in 1982.

* Figures were obtained from (Arab Institute of Planning Seminar on New Concept and Strategies in Development and its appropriateness to Arab World (page 183-1979)).

Figures refer to GNP in year 1976 except for Lebanon it refers to year 1974.

In an interview with Mr. Mohammed Moosa (the Under Secretary of Finance in Oman) on Monday 14th April, 1986 (in Al Watan Newspaper 1986) it was said that the reduction of oil prices, has created an imbalance of payment for Oman. The government in an attempt to seek a long-term stable economy has devalued the Oman local currency by 10% together with a solidification of the 3rd Five Year Development Plan. Kuwait decreased its financial residual

stock by 25%, also Saudi Arabia renewed its last year's budget for six months rather than approving a new budget for the new financial year.

- 4.2.8 It seems, that leaving the economy to depend heavily on oil income over the long run is not of advantage to the Gulf States, due to unstable prices. At the same time the production of the oil exporting countries is increasing because of new oil discoveries. Also, the need for oil is gradually decreasing in oil importing countries due to the use of other type of energy in their countries e.g. atomic energy.

4.3.0 Population Growth in Arab Gulf States:

As indicated earlier, Arab countries in general have a high population growth rate. In recent years due to the development of health and social services in these countries, the child death rate and infant mortality rate have decreased and also the life expectancy at birth has increased as shown in table-IX derived from World Bank Development (1984).

- 4.3.1 The increase life expectancy at birth and decrease in mortality and child death rate has increased the population growth rate . Moreover, as labour importing countries, the international migration to these countries added more population growth. The following Table - X shows the average population growth rate in Arab Gulf States.
- 4.3.2 To compare the distribution of population according to age group in the Arab Gulf States to other groups of countries, Baghdad University (1980) summarises the situation in table - XI.

Country	Life Expectancy at Birth (Years)				Infant Mortality rate (aged under 1)		Child death (aged 1-4)	
	Male		Female					
	1960	1982	1960	1982	1960	1982	1960	1982
Oman	38	51	39	54	193	123	52	21
Saudi Arabia	42	54	45	58	185	108	48	16
Kuwait	58	69	61	74	89	32	10	1
United Arab Emirates	51	69	54	73	135	50	26	3

Table - IX : Indication related to Life Expectancy.

Country	Average Increases in total population 1976	Average Population Growth		Average growth Due to Migration
		1905-1950	1970-1975	
Iraq	3.3	2.7	3.4	- 0.1
Kuwait	8.6	3.4	4.2	+ 4.4
Saudi Arabia	2.8	1.9	2.9	+ 0.1
U.A.E.	14.1	2.3	2.98	+ 11.12
Qatar	8.9	2.3	2.99	+ 6.0
Bahrain	3.4	2.3	2.98	+ 0.42
Oman	3.0	2.0	2.9	+ 6.3

Table - X : Average Population Growth Rates in Arab Gulf States

Source - Liaison Office 1985 Council of Ministers of Social Affairs and Labour for Arab Gulf States.

Region	Age Group Below 15 yrs.	Age Group 15 - 64	More Than 64
World	37.3	57.6	5.1
Developed Countries	28.1	67	8.9
Least Developed Countries	41.6	55.1	3.3
Arab World	44.5	52.5	3.0
Arab Gulf States	45.5	51.8	2.7

Table - XI : Distribution according to age group in the world.

4.3.3 It will be noticed that age groups below 15 years in Arab Gulf States is around 46%. This group needs extensive facilities for education and training. Also the percentage of the working group in Arab Gulf States is less than the working group in developed countries 52% and 67% respectively.

4.4 Manpower Situation:

The manpower situation in Arab countries is governed by economic and social factors such as population, labour force growth, rural-urban migration and international migration. Most of the Arab countries experience a high population growth. This results in a youthful population which involve high dependency ratios, including important needs for education and training. The following table-XII (deduced from World Bank Development Report 1984) shows the labour force characteristics of some Arab countries :

4.4.1 It will be noticed that the percentage working in agricul-

TABLE XII : LABOUR FORCE CHARACTERISTICS IN SOME ARAB COUNTRIES

COUNTRY	(%) of Population of working ages 15 - 64 Years		Percentage of Labour Force in								Average Annual Growth		
	1960	1982	Agriculture		Industry		Services		1960/70	1970/82	1980/2000		
Sudan	53	53	86	78	6	10	8	12	2.1	2.8	3		
Yemen Arab Republic	54	52	83	75	7	11	10	14	1.6	2	3.4		
Egypt Arab Republic	55	57	58	50	12	30	30	20	2.2	2.5	2.4		
Moroco	53	51	62	52	14	21	24	27	1.5	2.8	3.5		
Tunisia	52	56	56	35	18	32	26	33	0.7	3.1	3.1		
Jordan	52	51	44	20	26	20	30	60	2.8	2.5	4.4		
Iraq	51	51	53	42	18	26	29	32	2.9	3.1	3.9		
Oman	54	52	-	-	-	-	-	-	-	-	-		
Saudi Arabia	54	52	71	61	10	14	19	25	3.3	4.7	3.7		
Kuwait	63	52	1	2	34	34	65	64	7	4.8	3.7		

ture has decreased in almost all the Arab Countries. This is due to rural-urban migration. ILO (1983) points out that rural-urban migration in the Arab world, is linked with income and wage differences due to different manpower supply and demand relationships. Internal migration often leads to important problems of integration and employment in urban areas. It also aggravated in some cases the manpower shortages in rural areas (e.g. Yemen Arab Republic).

4.4.2 The difference in wage structures between rich oil producing countries (Gulf States) and other low and middle income economies countries resulted in an international migration. This international migration has created some problems to productivity sectors in some countries. However, I.L.O.(1983) points out that Arab States receiving migrants make substantial economic benefits in terms of availability of labour filling their manpower shortages. Migrants themselves receive substantial benefits through better employment and income opportunities, and improved wage and working conditions.

4.4.3 To have a better understanding of the characteristics of manpower in Oman which is an oil exporter and labour importing countries, it is worthwhile having a comparison of the Sultanate of Oman with other Arab States specially the Gulf States.

4.5 Manpower in Arab Gulf States:

All the Arab oil exporting states import labour. The demand growth for labour in these states is reflected in the rapid increase of international migrants. Birks, S. (1982) points out that in 1973, there were fewer than

800,000 migrant workers in the labour importing states. By 1975, the number of migrants had doubled to some 1.6 million. In 1980, while Khayat K. (1982) points out that the national labour force in the Arab Gulf States is around (24.1%) with (25.7%) for Arab labour force and (50.2%) for expatriates while the total national population is just around (45.5%) in 1980. Table - XIII shows the labour force situation in Arab Gulf States.

Country	Total Labour Force	National Labour <u>Force</u>		Arab Labour <u>Force</u>		Expatriate Labour <u>Force</u>	
		1000	%	1000	%	1000	%
Kuwait	478.9	109.2	22.3	239.1	49	129.6	28.6
Bahrain	132.3	46.8	35.4	19.6	14.8	65.9	49.8
Qatar	119.0	20.0	17	21.4	18	77.4	65
Emirates	550.9	77.1	14	98.1	17.8	375.8	68.2
Oman	253.2	116	45.7	9.2	3.7	128	50.6
*Saudi Arabia	2,213	1,190	53.8	821	3.7	202	9.2
*Iraq	3,315	3,467	95.6	370	4.13	24	0.27

Table -XIII: Labour Force Situation in Arab Gulf States.

*Source (Birks, S. 1982)

4.5.1 It will be noticed that the imported labour force forms the major share of the total labour force in all the Arab states, with the exception of Iraq, where non-Iraqis form only 4.4%. Birks, S. (1982) points out that this is a reflection of the large population figure in this country together with a large agriculture sector and the long tradition of education. In contrast, other Arab Gulf states are comparatively poor in their population figures and with a short tradition of education. It has been found that non-national workers dominate the modern sec-

tor in these countries by almost 64.67% in Bahrain, 77.6% in Kuwait, 83% in Qatar and 87% in Emirates, while Saudi Arabia, and Oman fall between these extremes, with non-nationals at 46% and 54.3% respectively.

4.5.2 Birks, S.(1982) points out, that it is important to note, that these two states (Saudi Arabia and Oman) have substantial rural sectors. The rural sector (which does not mean simply agricultural and fishing but includes a wide range of traditional rural occupations) accounts for about 33 percent of employment in Saudi Arabia and 60% in Oman. The characteristics of rural employment in these countries are as follows :

- i) The rural sector is largely traditional, non-modern sector employment.
- ii) It is dominated by nationals of these states.
- iii) Those who work in the rural sectors participate only to a very limited extent, usually part-time and informally (as taxi drivers-guards, etc.) in the modern sector.

4.6 Manpower Problems in the Arab States:

The employment problems in Arab countries are inter-related with their economic structures, population and labour force growth, rural-urban migration and international migration.

4.6.1 Many Arab countries are dominated by traditional agriculture patterns, with weak modernisation and insufficient development of the secondary and tertiary sectors of the economy, in particular industrialisation. ILO (1983) points out that one can observe in these countries the

concentration of workers in agriculture. At the same time, as some Arab countries have a big labour force sector, the Gulf states face a lack in their national manpower with high economic growth. The shortage of labour was made up by using expatriate labour.

4.6.2 Some of the main problem that Arab Countries face are as follows :

a) Growth of Population and of the Labour Force:

Most of the Arab countries in general, experience a high population growth rate amounting from 2.6 - 3.1 percent. The population growth rates in the Arab Gulf States could be found out from Table - VI. In a recent paper published by the Development Council in Oman in 1986, the population growth rate is estimated at 3.5 percent. They also imply high growth in the labour force.

Birks, S. (1980) points out that there is no reason for the capital rich states to attempt to limit the growth of their national population. they do not suffer financial constraints in providing educational and health facilities for an expanding population nor does an expanding population result in reduced per capita wealth; the oil exporters can plan and achieve growth which assures a rising per capita income notwithstanding rapid population growth. This was the case, in the past. The oil prices are not stable, the recent crisis in oil prices where it fell from \$ 22 to \$ 9 per barrel in 1986 has led these countries to be more careful

with manpower planning. Further more ILO (1983) points out that little attention in fact is given to the regionalization of development and employment policies. The issue is very critical and affects a lot of national employers. Rawi, M. (1985) points out that the age groups in the Gulf States differs from that in the developed countries. The age structures is shown in Table - XIV.

It will be noted that all the Gulf States have the following characteristics :

- Higher rates in the age group 0-14, which represents half of the total population. The non-nationals in this group are much less than nationals.
- Less rates in the age group (15-59) "44-yrs." compared to other developing countries. The rate in Arab Gulf States is almost 50 percent compared

State	<u>0 - 14 Age</u>		<u>15 - 59 Yrs.</u>		<u>60 and More</u>	
	Natio- nal	Non- National	Natio- nal	Non- National	Natio- nal	Non- National
Kuwait	50.1	37.1	46	62.2	3.9	0.7
Bahrain	48.4	24.5	46.4	72.7	5.2	2.8
Qatar	36.7	-		59.7		3.7
U.A.E.	41.3	-		64.6		3.4
Oman	41.3	-		55.7		3.1
Saudi Arabia	48.5	34.5	44.7	62.0	6.8	3.5
Iraq	48.9	-	44.7	-	7.1	-

Table - XIV : Population age group structure in Arab Gulf States.

to 63 percent in developing countries. The non-national rates in this group increases to 77.7 per-

cent in Bahrain and 62.2 percent in Kuwait and Saudi Arabia.

- Low rates in age group (60 - 65 yrs.)

To compare distribution of these three groups with other regions Baghdad University(1980 P.19) has outlined in the following table (XV).

Region	1st group	2nd group	3rd group
World wide	37.3	57.6	5.1
Advanced Countries	28.1	67	8.9
Undeveloped Countries	41.6	55.1	3.3
Arab Countries	44.5	52.5	3.0
Arab Gulf States	45.5	51.8	2.7

(Table XV) : Distribution of population age group in different regions.

2. Rural Urban Migration:

In general, Arab States show substantial rural-urban migration linked with income and wage differences due to the manpower supply and demand relationship. Most of the Gulf States are small in size with exception to Saudi-Arabia and Oman. World Bank (1982) points out in a study on training for rural development project, an estimated net of 5,000 people migrate annually to the urban areas of Oman in search of better jobs. The migration causes certain worries in the development of the rural sector and the rural areas. These are as are socially and economically affected by using expatriate labourers. ILO (1979) points out in a paper of manpower assessment in the Arab Region that rural to urban migration has been rapid, resulting in a growing volume of informal sector employ-

ment in urban areas. Birks, J.A. and Sinclair, C.A. (1980) have drawn the rate of the employment in the traditional sector of some selected Arab Countries as shown in table (XVI).

S T A T E	Employment in Traditional Sector percent of all Employment	Y E A R
Yeman Arab Republic	57.9	1975
Sudan	55.2	1973
Egypt	50.7	1976
Syria	50.3	1976
Oman	29.3	1976
Jordon	13.6	1975
Saudi-Arabia	32.5	1975
Libya	25.4	1975
Bahrain	6.6	1971
United ARAB Emirates	4.5	1975
Qatar	4.3	1970
Kuwait	1.6	1975

Table -XVI : Employment in the Traditional Sector in some Arab States

3. Unemployment and Under Employment:

The migration from the rural to urban sector has caused concern to the government which has resulted in some countries in unemployment and under employment. ILO (1983) points out that under employment in the public sector needs to be rendered where policies guarantee job of high school graduates in the Civil Service.

In the private sector, the employment of Asian cheap labour have led to low salaries being paid to nationals at some occupational levels. The low wages in the private sector at certain occupational level have led to under utilisation and low productivity of national manpower in this sector, and in some cases to unemployment where nationals refuse to work for that level of wages.

4. Skill Shortages:

The shortages lie at different levels ILO (1983) points out that skills shortages are more obvious in the Arab Gulf States.

One of the problems the Gulf States face is the rate at which the female labour force participate in total manpower force. Yasin Rawiya A.R. (1985) points out that it is noticed that there was a participation of female labour force in 1980 in Emirates, Qatar, Kuwait, and Saudi Arabia in the proportion of 0.3%, 1.8%, 2.9% and 2.9% respectively.

Al Rumaih Ghanim (1980) has summarised the percentage of Female labour force in the Gulf states in the following Table - XVII.

The participation of the female labour force can be looked on two sides - Quantitatively and Qualitatively.

The problem does not lie only on quantity side, but also on the quality side. It is noticed that most of the female labour force are engaged in education, secretaries, and nursing, etc.) Al Rumaih Ghanim (1980) points out that the percentage of the female labour force in social services was 80.2% in Emirates, 44.1% in Bahrain, 92.8% in Qatar, 92.1% in Kuwait, 30.1% in Saudi Arabia and 16.1 % in Iraq.

4.7.0 Affects of Expatriate Employment in Arab Gulf State:

4.7.1 The Gulf states in an attempt to fulfil the manpower requirements for its development project has benefited from the experience of expatriates. There is no doubt expatriates did help a lot in the development process and

STATE	Emirates	Bahrain	Oman	Qatar	Kuwait	Saudia
National Female labour force to total labour force.	0.02	3.07	2.14	0.62	2.46	1.69
Expatriate labour force to total labour force	3.02	2.32	3.85	3	9.26	0.05
National Female labour force to total national labour force.	1.06	4.87	3.03	3.66	8.52	2.01
National Female labour force to total female labour force.	4.81	56.88	35.76	17.06	2.89	77.14

Table - XVII : Percentage of female labour force in Arab Gulf States.

are still doing so, but a lot of negative affects have been realised in their employment especially the cheap labour from South East Asia. The major affects are:

i) Social Affects:

Any expatriate labourer, when he leaves his country to work abroad, carries with him his own culture and his social interactions. The extensive numbers of Asian workers working in the Gulf states have created their own social structures which has affected nationals considerably. The main features that have affected negatively their role in their country is the low income and living as

bachelors Abdul Mo'ty - Abdul Basit (1983) points out in an study carried out on the effects of the expatriate labour force on social harmony, and the information he gathered on crimes in the Gulf States show they are mostly caused by Asian labourers. These crimes are mainly in the drugs trade and robbery due to low incomes and other moral crimes because of their separation from their families. Also there are a large number of male expatriates compared to very few female expatriates. On the other side, the employers feel satisfied with employing them mainly because they are more obedient than others and easily controlled compared to other expatriates from other countries.

ii) Political Effects:

The political issue is one of concern to these states. Although there are different views on the matter. On one hand, researches feel that it has an implication on the political issues in the country. The Minister of Social Affairs and Labour in Qatar in an interview in the Bahrain Magazine "Sada Al-Isboo" (i.e. "Weekly Echo") published in Qatar on 1st June, 1982 denied that there were any political dangers in the employment of expatriates. He concluded that the expatriates are working in our countries at our own request, due to the necessities of development. The private sector had the right to utilise cheap labour to execute the projects. Al Rumaih M (1982 - p.16) points out

that in 1981 the government of the Emirates announced its desire to control the illegal expatriate residents from the Indian Sub-continent in the country. The Ministry of Foreign Affairs in India commented on this by saying that 250,000 Indians would be affected if the Emirates Government executed its plan to control the employment of expatriates.

Al Tamimy K.A. (1983) points out that migration does affect the population distribution in these countries, while their politicians assure us otherwise, and regardless of the causes are in it for the employment of expatriates.

iii) Cultural Affects:

The international migration of expatriates, especially from south East Asia has affected the culture and language of the people in the Gulf States. The Central of Arab Studies (1983) points out in a study on the effects of expatriate manpower in Arab Gulf states in its documents what Al-Said Khalifa Mater, member of the parliament in Emirates States. Said "There is no doubt that we cannot keep silent on the dangers caused by the employment of an Asian Labour force " our Language and customs are menaced or lost. The employment of expatriates causes a danger of controlling the sources of our livelihood.

Al-Aidaroosy Omar Abbas (1982) pointed out in an article on Manpower between universal and staged

planning issued in the daily magazine "Al-Itihad" (The Unity) on 10.6.1982 issued in the Emirates that an increase in the employment of expatriates should not in any way affect Arabization in the economic sectors. We are asked to keep all the aspects in our country to be Arabic. The Emirates magazine Al-Itihad issued on 4.6.1986 points that language scientists in the central market (the expression is used where a lot of expatriates exists in the market) are busy in preparing grammar for the new Arabic language used by expatriates. It states Al ARABORDIYA" [expression used for using broken Arabic language) believe in the freedom of an individual to speak and express without any consideration to the right sense of usage. However, the effect of expatriates on language and customs is very clear to the people in Gulf States. Al Najjar Baqir (1985) points out that the continuous increase of Asian workers has affected considerably the Arabic language in these states.

Asian languages have become more popular in use than Arabic language.

Ibrahim I. (1981 - p. 77) points out that the Gulf States will continue to depend heavily upon Arab and non-Arab expatriates. The governments in the Gulf have to face the fundamental social, psychological, moral and political problems resulting from having two 'distinct' communities within

their boundaries : one minority with titles and rights; and one 'productive' majority with the sole privilege of residence.

iv) Effects in Economy:

The effect of expatriates working in the Gulf is obviously seen by the nationals. Al Kawary A. Kh. (1982 - p. 7) points out on the situation in Qatar that in spite of the fact that nationals are very active, in trade and construction, the role of most of them in these business is not realistic, as the actual management and administration is governed by expatriates and decision making is carried out by expatriates.

In the most cases, the ownership of the organisations is expatriate with nationals members acting as sponsors to help the expatriates. Arab Labour Organisation (1982) quotes that one of the parliament members in Kuwait as pointing out that the number of expatriates arriving in the Gulf States in 1975 was three and a half million. To provide education, health, security and other social services the states had to create 284,000 new jobs. Also Al Kawary A-Kh. (1982 - p.11) points out that in Qatar the average monthly cost of an expatriate labourer was between (1000 - 1700 Rial Qatar) i.e. (Pd. Stg. 475 to 300). On the other side, of the the expatriate costs the state 400 Qatari' Rials (Pd. Stg. 700) monthly for providing services. The transfer of remittances in foreign currency is

another main problem the states have to face in their economy, specially if there is a fall in the price of oil.

4.8.0 Education and Training Input and Output:

4.8.1 The Arab world has faced a lot of changes, politically socially, and economically. The development of education and training has been quantitatively and qualitatively influenced by various factors. The major factors which have influenced the development of education are those relating to population growth, social, economic, and political life and those relating to pedagogical development and the philosophy of education.

I Social Factors:

The social factors that have influenced the development of education are those of a structural basis and a social cultural nature.

Structural Social Factors:

The main structural social factors influencing the development of education are :

i] The change in the Demographic Structure:

The demographic structure of Arab Society has been changed due to the high rate of population growth and the proportion of inhabitants under 20 years. The education in most Arab countries is compulsory upto 9th grade (15 years). Arabs feel that free education is a right for every one. Thus people who have a reasonable standard of living prefer their children to complete

their education.

Arab Labour Organisation (1982) points out that compulsory primary education has increased the percentage of many students in Arab states. It has reached 100% in some of Arab countries such as Jordan, Tunis, Kuwait and Iraq. It has also considerably increased in other states like Somalia from 9 % in 1960 to 44% in 1978. In Sudan the rate of increase in the same period was from 25% to 50% and in Saudi Arabia was from 12 % to 59%.

2] Factor of Migration and Emigration:

Most Arab countries have had a great migration from the country to the cities and problems of urbanisation have to be faced. Some Arab countries also face emigration problems of their educated people. UNESCO (1975 - p. 24) points out that a large number of educated and qualified individuals emigrate from certain Arab countries in order to work either in other Arab countries (the oil-producing ones in particular) or outside the Arab world.

The educational system is denuded of a large number of teachers, and the country as a whole loses highly qualified scientific and technical personnel.

3] Change of Social Class Structures:

The spread of education and the access of lower social class people to education have encouraged

families especially in the rural areas to send their children for further education. UNESCO (1975) points out that the change in class structure has caused an appreciable increase in the demand for education for rural children in general, as well as for those of other social classes who were deprived of it until now by their socio-economic situation. The great demand for education in the cities has given rise to a serious problem of developing vocational and technical education adapted to the needs of new industries.

4] Settling of Nomads:

Some Arab countries have a considerable number of nomads. UNESCO (1975) mentions that they sometimes constitute a third of the total population. Many Arab states have considered settling the nomads as a drastic remedy for their economic social and educational situation.

II Socio Cultural Factors:

Due to the awareness of the importance of education on social and economic development, the behaviour and attitudes of individual and social groups have changed and have influenced the education revolution. The main factors that seem to be important are :

1] Desire for more education for Social and Economic Development:

In the last two decades, education has spread among a lot of people in the Arab

world. The percentage of girls receiving education has increased. The girls have a good share of education amongst the students. The people in the rural areas influenced the decision of government in providing more schools in the rural areas ALO (1982) points out, the spread of education in some Arab countries is shown in the following Table - XVIII.

The development of receptivity to education was mainly due to the fact that gradually the conception of benefiting economically from their children in rural areas has been changed. The social value of education of the Arab world has been changed. Certificates and qualifications are considered as a moral obligation. The figures over 100 % is a fact that over aged children were enrolled to become qualified.

2] Receptivity to Technical and Vocational Training:

For historical reasons the Arab World has inherited negative attitudes towards certain types of work, in particular manual labour, agriculture and industrial work. Up to now, some social groups continue to refuse these jobs. But, during the last two decades, the importance of the economic returns of the professions and manual workers have been seen encouragement. This evoked great expansion in technical and vocational education.

TABLE XVIII : SPREAD OF EDUCATION IN SOME ARAB COUNTRIES (ILO 1982)

S T A T E	(%) in Primary School to Total Number of Children in Schooling Age						(%) of Enrolment in Secondary Level		(%) of Enrolment at Higher Education Level (20 - 24 Years)		(%) of Adults Literacy	
	TOTAL		MALE		FEMALE		1960	1978	1960	1977	1960	1976
	1960	1978	1960	1978	1960	1978						
Jordan	77	102	94	103	59	101	25	74	1	7	22	70
Tunis	66	100	88	116	43	83	12	30	1	5	16	62
Algeria	46	99	55	144	37	82	8	29	-	4	10	35
Saudi Arabia	12	59	22	74	2	44	2	26	-	7	3	-
Sudan	25	50	35	58	14	42	2	16	-	2	13	2
Syria	65	89	89	105	39	73	16	50	4	14	30	51
Somalia	9	44	13	57	5	32	1	4	-	1	2	60
Iraq	65	117	94	130	36	103	19	50	2	9	18	-
Kuwait	117	104	131	110	102	98	37	74	-	3	47	60
Lebanon	102	96	105	103	99	89	19	46	6	-	-	-
Libiya	59	123	92	128	24	119	9	67	1	7	-	50
Egypt	66	74	80	88	52	58	16	47	5	14	26	44
Morocco	47	72	67	90	27	54	5	20	1	4	14	28
Moritania	8	26	13	34	3	17	-	5	-	-	5	17
Yemen (AR)	8	29	14	50	-	7	-	4	-	-	3	13
Yemen (PDR)	13	72	20	92	5	51	5	28	-	2	-	27

3] Reduction of the Role
of Pressure Groups:

The expansion of Arab societies and their contact with modern civilisation, spread of culture itself, and social development has reduced the role of pressure groups such as religious figures and influential village notables. This encouraged the enrolment of more girls in various streams of education.

III. Pedagogical Movement, Survey and Research:

Arab countries have had made good progress in pedagogical movement, surveys and research in education especially after they opened themselves to world experience in education. Abdel Dayen A. (1975) points out that the study of pedagogy has become one of the qualifications required of primary and secondary school teachers. But still a lot a criticism in made of the quality of education. Abdul Mo'ty (1984) points out that our problems do not come in the quantity of subjects taught, but in the quality of subject the curriculum involves. He further claims that over expectation on the attainment of the student in the Arab world is still exaggerated which limits the subject matter that the student have to remember, despite the relevance to the actual usage in our life or in developing the knowledge of the individual to an extent which affects its thinking methodology to develop its environment and solve

the problems. On the examination and testing system, he states that the final secondary examination only measures the student's attainment in various subjects he has to learn. It does not measure the knowledge and skills and directions that we expect the students to have to obtain after leaving the secondary stage.

IV. Development of the Philosophy of Education:

A philosophy of education in the Arab world has been developed which has been fostered by the development of social and political philosophy and these countries. Abdel Dayen (1975) points out that the main characteristic of this pedagogical philosophy which has begun to dominate educational objectives and policy in recent years are the adherence to cultural unity within the framework of diversity, unification of the Arab heritage and that of humanity at large, affirmation of the importance of scientific spirit and method, basing of education on work and on the principle of the unity of manual and intellectual work, development of the spirit of invention and innovation, and furthering the principle of collective and co-operative work. It will be noticed, that the philosophy of education does not take too much consideration of the economic development of the countries. These characteristics have influenced the content of the subject matter Al-Dayem. A (1982) points out that it is not exaggerating to say that the present

educational system in most Arab states is still operating to a great extent in isolation of manpower needs both quantitatively and qualitatively and in most cases it is increasing manpower problems. It is producing educated unemployed people at the same times, or producing specialists that the labour market does not need.

4.8.2 Educational System:

The educational system in most Arab countries is similar. Most Arab countries adopt in their general education at present the system which has been established and induced in the pact of Arab cultural unity signed by Arab states on 25th March 1975 which involves :

- Primary Stage : Duration of six years.
- Preparatory Stage : Duration of three years.
- Secondary Stage : Duration of three years.

4.8.3 Detailed educational statistics for some Arab Countries may be referred in Appendix - C. It is found that all Arab countries with the exception of Kuwait and Morocco have 6 years primary schooling. All the countries have three years at preparatory level with the exception of Algeria which has four years. The duration of the secondary stage is three years in all the Arab countries. In Morocco, the primary stage is five years while the preparatory and secondary stage have a duration of seven years. In Kuwait, the system follow 4-4-4 years for the three stage respectively (Fig. IX).

It will be noticed that technical education starts after twelve years of education exception in Algeria, where it

Schooling
Year

Student's Age

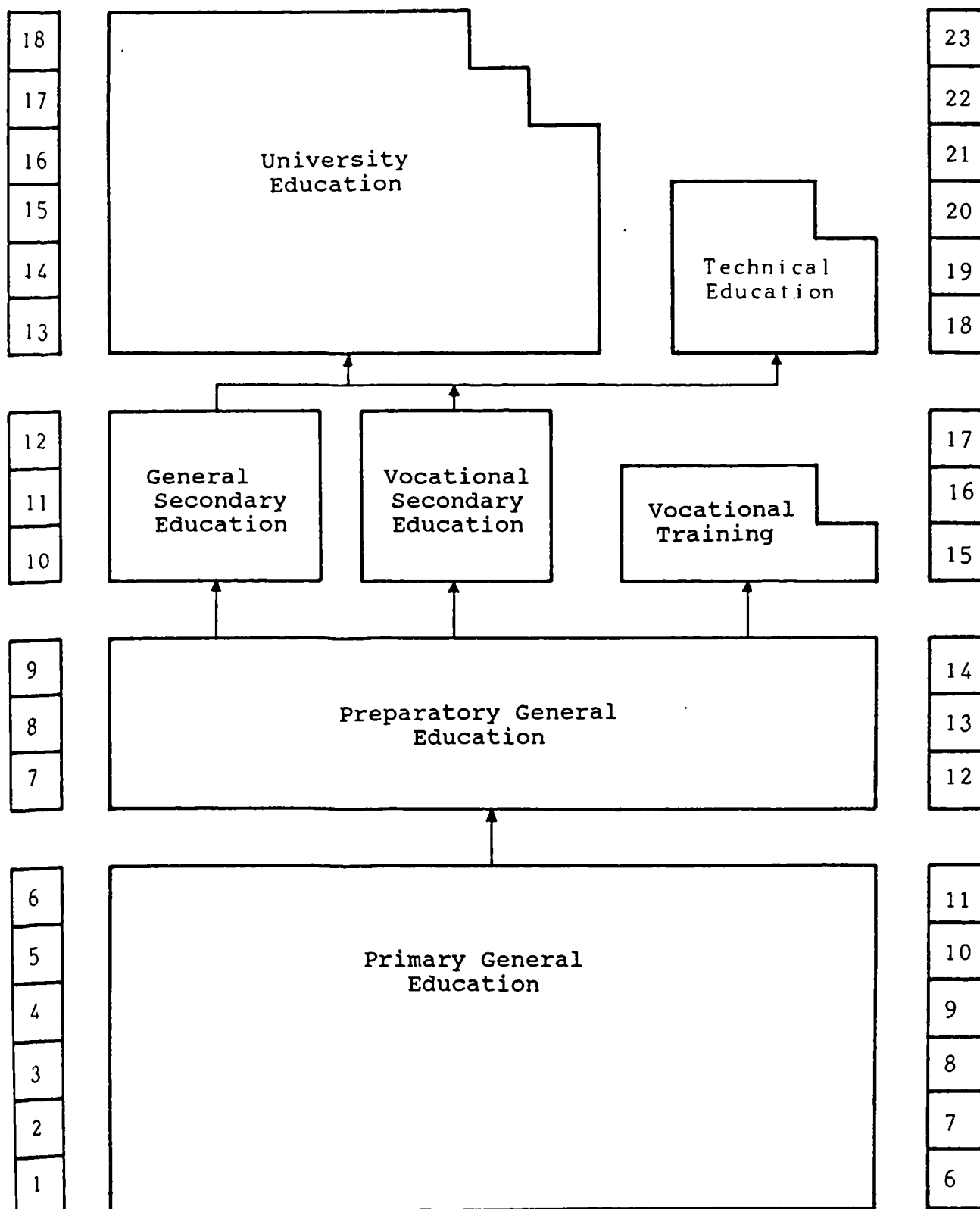


Figure - IX : United Educational Ladder in Arab Countries.

TABLE XIX : DEVELOPMENT IN GENERAL EDUCATION IN THE ARAB WORLD 1960 - 1980.

STAGE	1960		1965		1970		1975		1980	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)	Number	(%)
PRIMARY	7,194.5	83.1	10,241.1	79.7	12,629.7	75.9	16,673.0	71.7	20,818.8	67.1
SECONDARY	1,297.2	15.0	2,312.2	18.0	3,071.5	21.4	5,715.6	24.6	8,694.3	25.4
POST SECONDARY	163.9	1.9	297.6	2.3	445.5	2.7	87.1	3.7	1,383.6	4.5
TOTAL	8,655.6	100	12,850.7	100	16,850.1	100	23,257.8	100	30,596.7	100

starts after 13 years.

4.8.4 Abdul Wahab H.M.S.(1985) points out that the Ministers of education in Arab states have agreed in a conference held at Morocco in 1970 to have compulsory education by the year 1980. Most of the Arab countries could not reach the aim. There is also a difference in the duration of compulsory education. It is five years in Morocco while it is 12 years in Kuwait. The development in general education in the Arab world as pointed out by Al-Dayem A. (1982) is shown in table - XIX.

The main conclusion from Appendix - C on the Arab system could be summarised as follows :

- i) General education has been developed during the last three decades. The number of students has been doubled in the primary education, and higher education while it has tripled at the secondary level.
- ii) The enrolment of the students in various stages has been developed. Saghiroon A.Z. (1982 - p.179) points out that the average rate of increase during the past years in general education in Arab countries was 48.5 % between 1960-1965, 29.5 % between 1965- 1970, 39.8 % between 1970-1975 and 31.5 % between 1975-1980.
- iii) In terms of quality, there has been some progress in general education and some schools in Arab countries have introduced practical work in their curricula.
- iv) There was also progress in teacher-student ratios at most educational levels.

- v) Educational expenditure has been increased in relation to the total GDP.
- vi) There was also improvement in syllabi and text books (contents) used by the students.

4.8.5 Educational Problems in Arab States:

In general, the educational system in Arab countries has been developed, but still the system is facing some problems which have affected the manpower planning schemes in Arab countries. These problems could be summarised

- 1) The developing Arab countries have inherited traditional educational systems where objectives were mainly to train clerks for government jobs. The educational system is mostly open to all students depending on student's wish in completing the studies, where social pressure have played a big role in the education. Saghiroon A.Z. (1982) points out that education in most of the Arab countries (Primary, Secondary and higher) has become a goal in itself, but not as preparation for life; it has not been related to the need and problems of individuals in Arab countries.
- 2) The educational policies adopted in the Arab World are set far away from social and economic policies. Arab Bureau of Education for the Gulf States (1983 - p.64) points out that the secondary schools in the Arab world are mostly considered as schools preparing for University. It is not in their objectives to prepare student to start a career. It could be stated that the contents in the secondary

school are affect heavily by the university requirements. Saighroon A.(1982) points out that the educational policies are determined by two main factors:

- a) The continuous factor, that is the continuing of the inherited educational policies with partial adjustments which are not adequate for the needs of social and economic development.
- b) Social demands for further education and the response towards it despite the actual country's needs.

The response to social demand can easily be seen in some Arab countries in the unemployment of educated and technical people, where the educational system produces a lot of specialists away from the country requirements.

- 3. As stated earlier the Ministers of Education of Arab states agreed to have compulsory education by the year 1980 in the conference held in Morocco in 1970. The fact is that the educational plans have not yet brought about the compulsory education even for children in the age group 6-11 years. Although four countries have enrolled 90 % of this age group in schools, the enrolment in other countries is around 58 percent.
- 4. The curricula contents are very old fashioned. They depend a lot on memory and instruction, rather than knowledge and skill. The Arab Bureau of

Education for the Gulf states (1983) points out that our problem in education does not lie in the quantity of the subjects in the curriculum, it mostly lies in the quality of the content which has no practical or technological applications to our practical life.

Dayun A.A. (1982 - p.262) points out that in the education industry we do care a lot about inputs and some times with outputs from the quantity side only. We rarely look what is happening in that industry, that is with production, tools, and programmes. The question is not basically to ask how many students are enrolled in and graduate out of the educational system, but to ask what type is the output of the educational system to join the labour market. The question is what type of people we are producing? What knowledge do we provide them with? What skills do we develop and in what directions do we normally and ideology do we create ?..... and in what moral and ideological direction do we point them?

5. The Arab states face a big problem of failures and dropouts in their educational system which resists around fifty percent of the enrolment at the end of secondary stage. This phenomena does cause increase the cost of the student which rise to double the actual cost.
6. Very little consideration is taken in the design of curricula of the need to serve the environment

where people live and study. Its role is very limited in social development. Saghiroon A.Z. (1982) points out that educational systems which do not relate to a balanced development of rural and urban areas have created internal migration from rural areas to urban areas with wasted and high costs in education. In addition to this in the absence of suitable curricula at the secondary level, education has failed to fulfill development requirements.

7. Technical and vocational education faces major problems by extending the opportunities in general education. UNESCO (1982 - p.6) points out that the technical vocational education in the Arab region is relatively limited. The enrolment in technical education is between 13% to 12% from the total. The rate of female participation in technical education is very low. Also it is noticed that enrolment in commercial and administrative studies has overcome their enrolment in industrial or agricultural studies. It is also worthwhile noting that agricultural education is not the priority in any of the Arab countries.
8. University education did expand considerably in quantity, but yet it is not more satisfactory than other types of of education in quality. Moorsy M.A.A. (1985) points outs that the necessity lies in university for the change of the curricula its continuous development. The university also faces a

large education wastage. Essawy A.R. (1984) points out that in higher institutes (above secondary level), the graduation rate was between 55.5% - 32.5%, more in agriculture institutes and less in technical institutes. The educational wastage accordingly was 67.5% - 44.2%. It means that fifty percent of the those enrolled in the colleges fail or dropout during their studies. Also one of the studies undertaken of universities shows that the rate of educational wastage was as shown in table-XX. The Arab universities have failed in their research work related to development in the Arab countries. Moorsy M.A. (1985) points out that most universities in Gulf countries were established mostly in the same period. The logical consequences of this is a lack of co-ordination in their research work and their ending up doing the same research work.

College	Rate of Wastage %
Law	92
Engineering	78
Art	73
Business	73
Medicine	72
Science	71
Animal medicine	69
Agriculture	65
Pharmacy	58
Economy & Political Science.	57

Table - XX : Rate of Wastage in Arab Universities.

9. Illiteracy in the Arab world is one of the obstacles. Studies show that the illiteracy rates in Arab countries in 1975 were between 12 percent to 54 percent for males and 11 percent to 92 percent for females. Saghiroon A.Z. (1982) points out that in 1978 the literacy rate in age group (15-45 years) was between 24.9 % to 77.6 % percent at an average 47 %. The rate of decrease annually was 2.4 %, therefore the estimated rate in 1980 was around 28.8 million people between age group (15-45 years). The following (Table- XX1) shows the average rate of illiteracy in various regions in the world:

Region	Male %	Female %	Total %	Total Illiterate people in 1000s
Arab world	27.7	51.5	42.2	28,800
World	23	34.7	28.9	626,524
Africa	48	72.8	60.6	155,763
Latin America	24.8	31.3	28.1	44,280
North America	0.5	0.5	0.5	948
Europe	1.8	4.3	3.1	11,594
West Europe	0.5	0.5	0.5	611
East Europe	1.2	3.2	2.2	1,845
South Asia	39.2	63.2	51	402,157
West Asia	7	9.7	8.3	1,015
USSR	0.5	0.5	0.5	1,015
Developed countries	1.2	2.3	1.8	15,944
Developing countries	37.2	48.3	47.7	604,014

Table XXI : Rate of Illiteracy in Various Regions in the
the World (1980)

10. The vocational training and technical education in the Arab world has faced obstacles in its development programme. The development varies from one country to another, but most of the Arab countries face the following problems.
- i] No clear distinction exists between "technical education" programs and vocational training programs in terms of aims, scope, number and institutional links.
 - ii] The main objective of these programs is to provide the labour market with skilled and technical level workers. Unfortunately most of these institutes lack institutionalised links with employers. Hence most of the programs sets and skills gained by the trainee fail to fit labour requirements.
 - iii] Hardly any trade testing systems exist in the Arab world for their graduates. In the public sector, employment takes place according to qualifications obtained rather than skills gained. World Bank (1986) points out that introduction of improved trade testing systems for graduate trainees would enhance the quality of almost all systems.
 - iv] Some Arab countries have lost their instructors due to migration to other countries. The quality of instruction impacts strongly upon the quality of graduates.
 - v] Technical education is costly compared to general education. Due to these financial constraints, the technical and vocational education system has been

affected. World Bank (1986) points out that cost cutting measures are likely to effect adversely the quality of vocational and technical education. If the economies are made, as they often are, under pressure of time, and with insufficient warning for careful planning.

- vi] In the Gulf states, it is noticed that the external efficiency of systems - defined as the degree to which graduates trainees find employment in training related occupations - varies. In Oman graduates from vocational training system rarely find their way to work in the private sector due to cheap expatriate labour, and other social conditions.

4.9.0 Manpower Planning:

4.9.1 Manpower planning is one of the important features of any organisation. On a national basis, the government concentrates on trying to have a good balance of supply and demand. The importance of manpower planning in any organisation has been increased in recent years mainly because of :

- The continuous change in the philosophy of the management which plans for the long and mid term, rather than leaving the changes of the organisation to be affected by the tides of circumstance.
- The rate of speed at which technological changes in the organisation affects dynamically the various sectors of production and services.
- The competition which the organisation has to face,

whether internally or externally.

- The pressures that organisations face from governments and trade unions which should be considered in the strategy of manpower planning.

4.9.2 In this context, various definitions have been quoted by various people for planning and manpower planning some of which are :-

- i] "Planning is the conscious choice of patterns of influence on decision makers with the span of time in the future and of influencing them toward particular goals" Haynes, W. Warren (1969).
- ii] "Manpower planning may be defined as a strategy for the acquisition, utilisation, improvement and preservation of an organisation's human resources. Department of Employment and Productivity" HMSO UK (1968).
- iii] "Manpower planning is generally considered as the process of determining present and future manpower requirements, and developing education and training programmes to meet these needs" Ministry of social Affairs and Labour - Oman (1982).
- iv] "Planning is a mental process and it follows that the quality of the plan rests on the mental capacities of the planner and the adequacy of the information needed for planning" Intelligence, experience, perception, judgement, and conception are tools for planning. Keith A.L. and Gubellini E.C. (1967).

4.9.3 Ahmed K.H. (1985) points out that there are two different

views between specialists on the definition of manpower planning. "Some specialists and experts look to manpower planning from a requirement aspect. That is, they look to manpower as one of traditional productive factors which include labour, capital, land, organisation.....etc. According to this view, manpower planning could be defined as the process of determining manpower required to realise a certain rate of economic development through a limited period.

The other view is that "Manpower planning is considered to maintain methods, and policies necessary to realise full employment. In this aspect, the concentration lies on the supply of manpower.

4.9.4 Lester White R.A. (1966) looks at manpower planning as the process to the preparation and employment of human resources for productive purposes. He confirms that in a free society manpower planning aims to enlarge job opportunities and improve training and employment decisions, through the power of information personal choice and calculated adjustment to rapidly changing demand.

4.9.5 Manpower planning is defined in various ways, it may be concerned with the occupational mobility of manpower or geographical mobility or it may be concerned with organisation of national manpower versus expatriate employment. It also could be defined through the aspect of educational and training planning.

4.9.6 In my view, and specifically for Oman, Manpower planning could be defined as :

"the process by which it could be assured that the

right number of people with the right kind of qualifications and experience are employed at the right place and at right time, in realising a certain rate of economic development and considering the priorities of Omanization for social and economic reasons.

4.9.7 Whatever definitions of manpower planning are set, it is important to realise that manpower planning is not a simple task to be implied, it works with market forces. The main feature on which manpower planning lies as pointed out by Mansoor (1975) scientific thinking, thoughtful decisions, goal action and goal setting. These elements needs to have policies to be set out, programs and procedures to achieve the goals.

The manpower planning should therefore have intelligence, experience, judgement, perception and conception.

4.9.8 Manpower planning is a relatively new activity in developing countries. Developing countries concentrated in the past on economic development disregarding the importance of manpower planning.

4.10.0 Manpower Planning Techniques and Model:

4.10.1 The choice of techniques in planning differs in various countries. The main factors that effects the choice of these techniques can be summarised as :

- The ever expanding labour force is a problem of foremost concern to most of the developing countries of Asia. Those countries are described by ILO (1984) as 'Capital Scarce and Labour Abundant'. The policy instrument of the government is the

mobilisation of resources and the organisation of
investment for employment and income generation.

4.10.2 Technical know-how for industrialisation developed in the advanced economies and currently available for adoption in the developing countries, is predominantly capital intensive in nature and therefore not ideally suited to the resource endowments of these countries. The Gulf states are capital intensive and labour is scarce, therefore technical know-how may be more adaptable in these countries.

4.10.3 Using different techniques requires information and data available within different parameters. The choice of the techniques and methods used clearly depends on the reliable information available in the various parameters used in projection models.

The use of technology in productive sectors will also affect the model that should be used for projection.

4.11.1 Techniques used for Manpower Planning:

There is no doubt that skill composition of the trained manpower is ultimately linked with the pattern of educational investment. ILO (1984) points out that there are broadly two generally accepted alternative approaches.

- a- Forecasting of manpower requirements and supply.
- b- The cost benefit or rate of return analyses.

The third approach is based on 'International Comparison' of manpower requirements. It is of limited use because of the extreme divergences in individual countries.

4.11.2 In applying the first approach, it is necessary to know the present skill composition of the labour force and be

able to predict with reasonable accuracy how the skill coefficients are likely to change in the medium and long term. Also, in embedding manpower requirements into educational planning, one would have to link the level of skills to specific educational requirements.

The key weakness of this technique as pointed out by ILO (1984) is the implied rigidity of the labour requirements and the neglect of any substitution possibilities on the demand side in response to relative costs.

4.11.3 The second technique is generally used in education which provides a different approach to manpower planning. The rate of return approach to education as pointed out by Bloug M. (1967 - p.262-287) assumes that the strength of enrolment in a course would depend partly on what people would earn after completing the course. ILO (1984) points out that in this approach, priorities in investment in physical capital, one should expand educational facilities in the direction in which the rate of return are highest.

4.11.4 It is necessary to distinguish between the 'social' rate of return as society must measure the cost and 'private' rate of return as measured by an individual for items of cost to him. Although social rate of return is the basic element used in the process, the private rate of return can help the planner to anticipate future pressure which may affect the policies based on social rate.

4.11.5 Several problems lie in the implementation of cost benefit approach to manpower planning. The major ones are :-

- 1- Due to the limited availability of data, many arbitrary assumptions have to be made to quantifying

costs and benefits.

- 2- The simple calculations of the rates of return only indicate the direction of future profitability of investment, without providing quantitative estimates of the desirable expansion in different direction.

Anyhow, the two techniques of manpower planning as pointed out by ILO (1984) can be complementary or as an alternative to each other. The choice of a technique depends on the aim of the study, the available data and resources and tolerable confidence limits of prediction.

- 4.11.6 In a broad sense the projection approach is found to be more applicable to short and medium term analysis especially when the economy is working within the framework of a development plan which has sector specific development targets which can in the case of certain sectors (e.g. Health and Education) be directly translated into specific demand for various categories. Also, the demand of a professional and technical manpower in the public sector where specific educational qualifications are necessary as prerequisites for certain jobs could be matched by the supply side.

- 4.11.7 On the other hand the rate of return analysis has some advantage for setting priorities in general education and lower level technical skills. The rate of return analysis is useful in setting investment priorities among different level of general education or between alternative methods of skill formation, taking into account socio-political considerations in making investment decisions.

4.12.0 Manpower Planning Models:

4.12.1 Manpower planning models are tools usually used to project the manpower supply and demand side and forecast for the future requirement. It is a point of departure of the techniques of manpower forecasting and of converting the forecasts into operational plans.

4.12.2 Several planning models have been used by different countries. Since education is compulsory up to certain level of education, and since the formation of skills and knowledge is usually compared by educational level, the concentration of manpower forecasting in most countries, and especially the developed ones, has been on the estimation of qualified manpower needs.

4.12.3 The application of any manpower model depends highly on the objectives set, the relevant data available for various variables and the kinds of sectors involved in manpower forecasting. Youdi R.V. and Ginchdiff K. (1985) points out that a sharp distinction between these sectors involved should be drawn :

- a- The Professional Economist, perhaps the "academic" who seeks rigour and theoretical backing in manpower planning.
- b- The Practitioner who must provide a relevant data base to the decision making process and describe the implications of the policy options.
- c- The Policy Maker, who actually decides on the allocation of funds, rates of expansion of the various parts of the educational system, selective admission measures.

Since various models are used in manpower planning which are fully described by ILO, UNESCO and other manpower planning specialists we shall concentrate on the main models used by various countries.

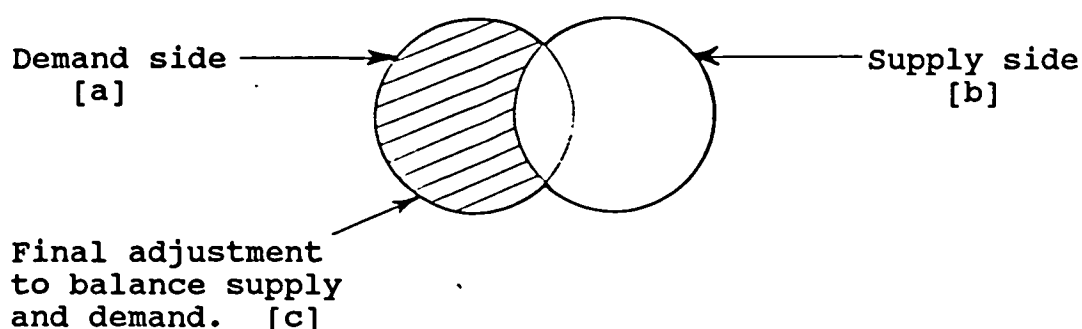
1- Manpower Requirements Model M. R. M:

The M.R. Models the dominant model used in manpower planning. The model used in the OECD's Mediterranean Regional Project MRP. Youdi R.V. and Ginchdiff K. (1985) points out in that it is estimated that 90 percent of manpower planning models around the world follow this core.

The three major steps in manpower forecasting are :

- a) Projecting the demand for educational manpower.
- b) Projecting the supply of educated manpower.
- c) Balancing supply and demand.

The three basic steps in manpower planning are shown below:



The following parameters are used in using the M.R.Model.

p = Population	L = Labour force
X = Output	i = Economic Sector
j = Occupational	k = Educational level.

a) The Demand Side:

The demand side involves estimate in the required number of workers by educational level in the largest year of the plan. This is carried out by:

- 1] Estimating the future level of output (X) or the economic growth rate between base and the target year.
- 2] Estimating the structural transformation of the economy or the distribution of GNP by economic sector (X_i/X) between base and in the target year.
- 3] Estimating labour productivity by the economic sector for the target year, or its inverse (L_i/X_i) and its change between base and the target year.
- 4] Estimating the occupational structure of the labour force within economic sector (L_{ij}/L_i) for the target year. In estimating the occupational structure various models could be used.
- 5] Estimating the educational structure of the labour force in the given occupations within economic sectors (L_{ijk}/L_{ij}) for the target year. The demand function symbolically amounts to:

$$L_{ijk} = F (X, X_i/X, L_i/X_i, L_{ij}/L_i, L_{ijk}/L_{ij})$$

i) International Models:

Observe the occupational structure in a country at a more advanced level of development and hypothesis

that it is the same in the country where the forecast is made. For Example Puerto Rico utilising the coefficients of USA, Italy, using those of France.

ii) Model Form Comparison:

The same methodology is used but by using stipulations of the occupational structure in the most modern or efficient firms. Mostly used in socialist countries.

iii) Staff Norms:

By using certain desired ratios of engineer-to-technicians, - doctors to - nurses, teachers - to students and so on. Mostly used in socialist countries.

iv) Time Series Extrapolation:

To predict the occupational structure as a simple function of time following past trends. This method has been used in French planning.

$$\frac{L_{ij}}{L_i} = f(t)$$

v) Sector Labour - Productivity Functions:

The occupational structure within the economic sector relates either to overall labour productivity in the economy or to labour productivity in the sector.

$$\frac{L_{ij}}{L_j} = f \frac{X}{L} \text{ or } f \frac{(X)}{L_i}$$

b) The Supply Side:

The projections in the supply side, apart from the policy adjustments involve three basic steps.

- 1- Population projections by school age group according to any standard demographic model or, at the crudest, they are simple time extrapolations.
- 2- Assessing the number of graduates by educational level according to the standard social demand model. see Store 1965)
- 3- Finding the labour force participants by simply applying sex-age educational level specific labour force participation rates to the graduates generated in the previous step.

c) Balancing Supply and Demand:

In this we match supply and demand side and involve any adjustment if necessary to equate supply to demand either by revising the key assumptions in the supply and demand side or by using other parameters than those assumed originally to reconcile a great deal of the discrepancy between future demand and supply. If reconsideration is not realistic, policy action will be required to adjust the demand and supply side.

II. The Timbergen Model:

The model examines the path of enrolment from base year to the target year of plan with special attention to the required number of teachers throughout

the period of the plan. It neglects primary education enrolments, it by-passes occupational forecasts and goes straight to educational requirements. The relationship between educated manpower and output are expressed in an absolute (rather than proportionate) way, which creates problems in international comparisons of countries of different sizes.

III) The Input Output Model:

It deals with gross production (rather than value added) and exploits the inter industry goods flow in the economy. This is a technique that is used extensively in socialist countries. The methodology starts from a skill flow table where the columns represent sectors using skilled manpower while the rows shows various skills. Two alternative methods of making projections for the demand for skilled manpower are used:

Model [1] The model is based on the assumption that the i - th type of skills needed to produce a unit of the j - th sector's output is constant.

$$\text{i.e.} \quad \frac{H_{ij}}{X_j} = q_{ij}$$

is assumed to be constant where H_{ij} = i - th type of skilled labour used in the J -th sector of production & X_j = j -th sector output.

Model [2] The model we used on the assumption that the i -th type of skill per unit of employment is sector j

is constant.

i.e.
$$\frac{H_{ij}}{E_j} = h_{ij}$$

Where E_j = j-th sector employment. The second model is more convenient to use because employment in various sectors would be known already, besides the 'skill coefficients' (h_{ij}) can be estimated from the existing skill composition of employees.

IV) The Rate of Return Model:

The model does not stipulate exact requirements of educated labours. It gives a signal towards the expansion or contraction of the output of given types of schools taking into account the cost of producing a given number of graduates.

It also recommends cautious expansion of enrolments in schools or faculties associated with rising salaries of high labour-market absorption rates.

Russell G. Davis (1975) points out that "Results of rate of return analysis can be used to show the relative benefits of having invested in more or less education, but they can tell little about the kind and amount of education required. Hence - rate of return is not a substitute for manpower planning, but it can be used to supplement manpower planning".

The rate of return approach thus depends on the computation of the social benefits measured by the increase in GNP produced by the investment. For education and training investment, the marginal

return to labour should rise as a result of training and this would be reflected in the wage rates for skilled, semi-skilled and unskilled labour. While the private rate of return would arise from the financial and social benefits to individuals arising from training and education.

V. Linear Programming Model:

This is a mathematical technique used in order to provide synthesis of selected features of rate of return and crude manpower forecasting.

VI. Social Demand Models:

Social demand models are concerned with the provision of certain numbers of educated manpower. MSO (1983) points out that such models are more applicable to the lower levels of education and to advanced countries as they can afford to satisfy social demand without worrying about manpower shortages.

VII. Labour Absorption Model:

This model is more concerned to feed the economy with manpower that can be absorbed easily. It cuts across the efficiency and social demand oriented model. The short coming of this method is that it puts too much emphasis on the current employment status of young graduates which obstructs them from their life time contribution to economic life.

VIII) Models used for Manpower Requirements in the Service Sectors:

Various models can be used for making projections

of the demand for skilled personnel in the service sector. ILO Artep (1984) points out that those projections in the service sector such as education, health, utilities administration and professional services can be predicted with a reasonable degree of accuracy in the basis of critical assumptions regarding the rate of growth of income and other parameter, which are often policy variables. The fact that in most developing countries, the public sector happens to be the principal employer of most of the occupational groups in the service sector makes it all more easy to arrive at realistic projections of total manpower requirements in the service sector.

For example the models used in education and health are:

a) Model for Demand for Teachers:

$$MI = m_i (S_{it} - S_{io})$$

where MI = incremental number of teachers at level i

S_i = Student enrolment at level i of educational institutions.

m_i = teacher/student ration at level i

t = terminal year of the plan period.

o = base year of the plan period.

b) Model for Demand for Health Personnel:
(Medical Graduates)

$$\frac{(1 + e_{ig})^t}{(1 + q)^t} \frac{[N_p]}{[N_o]} = (1 + e_{ig})^t \left(\frac{N_p}{N_o} \right) (1 + q)^{-t}$$

where e_i = income elasticity of demand
for medical graduates
service.

g = annual rate of growth of
income per capita.

N_p = population in the terminal
year of the plan

N_o = population in the base year
of the plan

q = productivity increase per
medical graduate

t = number of years in the
plan period.

IX. Compound Model:

The World Bank in its attempt to help various countries has developed a compound model which is a computer programme designed to calculate the labour market consequences in a country that result from the interaction of economic, education and policy factors. The programme has been designed in four interactive sub-programmes (or sub models). These are:

- * The labour force model

- * The manpower requirement model
- * The education circulation model
- * The manpower policy model in figure - X.

The labour force model (LFM) simply looks at the supply of labour (which gives the national work- force at the beginning of any year) while the education simulation model (ESM) generates estimates through the manpower policy model (MPM). The number of national workers' who

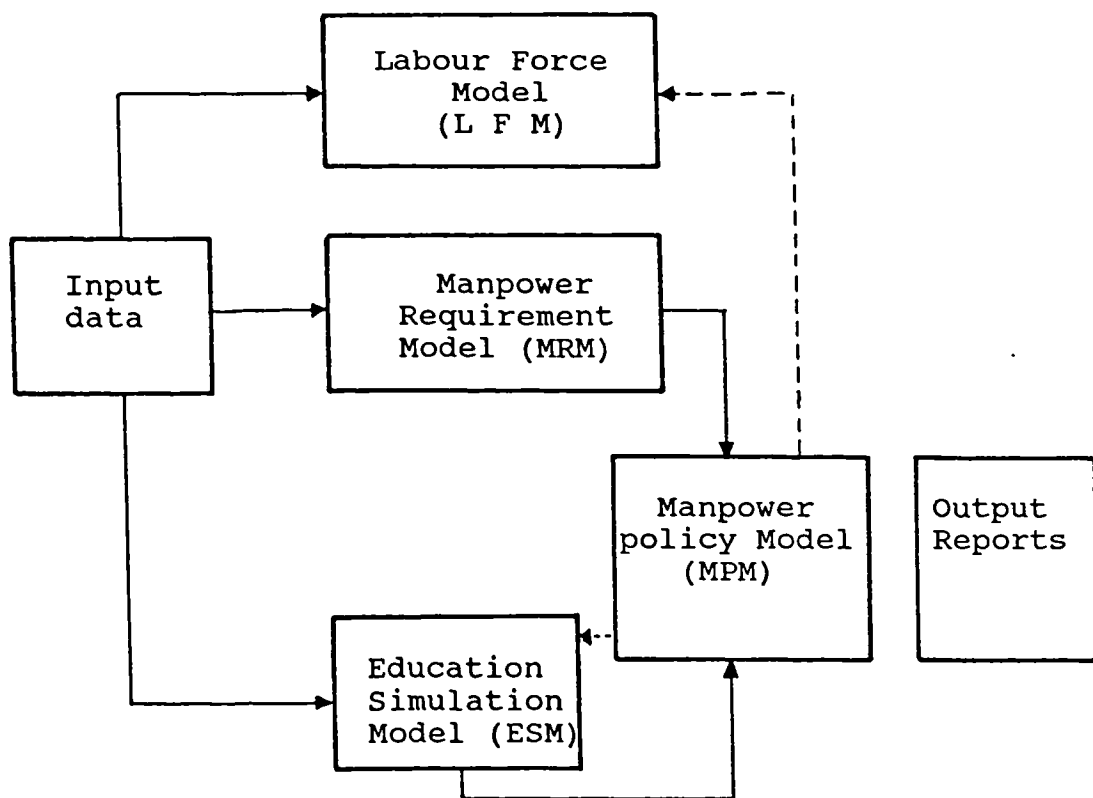


Figure - X : Linkages of the Sub models.

are likely to enter the work force each projection. The skeleton of the compound model is shown in (Figure - XI). The purpose of the model is essentially to compare projected demand for, and supply of, labour under various assumptions of educational and economic expansion. The details required to create the model to get the required Outputs can be seen in Appendix D as explained by

Birks S. (1983) in a paper on updated labour market projections for the Sultanate of Oman using the compound model.

X. Manpower and Educational Model (MEM):

The World Bank recently have developed a new tool for manpower analysis called Manpower Education Model (MEM) (Appendix E).

The objective of the model is to analyse manpower in both labour surplus, as well as, labour deficit economies. The MEM consists of three sub models :

- Manpower Requirement Model (MEM)
- Education Simulation Model (ESM)
- and Manpower Allocation Model (MAM)

The model is a computer programme, the important features of which is that is designed to accomplish in the context of a national economy :

- i) Projections of manpower demand to meet specific sectoral output targets.
- ii) Forecasts of flow through an education and training system to enable simulation of potential manpower supplies.
- iii) Comparisons of projected manpower demand and supply to facilitate examination of potential surplus or shortages of manpower.
- iv) Illustrations of the impact, in labour exporting or labour importing states, of different patterns of labour migration.

The advantage of the model is that these three sub-models can begin calculations in different years. This feature,

The flowchart illustrates the manpower requirement model, organized into three main blocks: LABOR FORCE BLOCK, MANPOWER REQUIREMENT BLOCK, and MANPOWER POLICY BLOCK.

LABOR FORCE BLOCK:

- Inputs: Edited INPUT, Existing Expatriate manpower in the country in base year, Existing National manpower stock in base year, National labour force at the beginning of the year.
- Processes:
 - Existing Expatriate manpower in the country in base year → Expatriate labour force at the beginning of the year → Attrition or withdrawal of work permits calculation → Expatriate manpower available by nationality/sector/occupation.
 - Existing National manpower stock in base year → National labour force at the beginning of the year → Attrition calculation → Promotion matrix for National manpower movements → National manpower available by sector/occupation.
- Outputs: 1. Available unutilized Nationals, 2. Estimate unemployment of unutilized Nationals.

MANPOWER REQUIREMENT BLOCK:

- Inputs: INPUT EDITING PROGRAM, Edited INPUT.
- Processes:
 - INPUT EDITING PROGRAM → Edited INPUT → Expected sectoral outputs → Converted by productivity by sector → Estimated total employment by sector → Manpower requirements by sector/occupation → Net manpower requirements by sector/occupation.
 - Inputs: Petroleum & Government Sectors → Estimated total employment by sector.
- Outputs: Net manpower requirements by sector/occupation.

MANPOWER POLICY BLOCK:

- Inputs: Edited INPUT, Priority Matrix.
- Processes:
 - Edited INPUT → Compare net manpower requirements against supplies from ESM in accordance with the priority matrix. Call ESM to readjust PRODS if necessary.
 - Priority Matrix → Compare net manpower requirements against supplies from ESM in accordance with the priority matrix. Call ESM to readjust PRODS if necessary.
 - Compare net manpower requirements against supplies from ESM in accordance with the priority matrix. Call ESM to readjust PRODS if necessary → 1. Compare net manpower requirements against those already in the country, 2. backward calculation to estimate achievable sector outputs → Estimate net importation/exportation of Expatriates under a linear programming model → Cumulative estimates of Expatriate/sector/occupation.
- Outputs: Cumulative estimates of Expatriate/sector/occupation.

Inter-block Connections:

- LABOR FORCE BLOCK → MANPOWER POLICY BLOCK: Update National manpower at the end of the year, Update Expatriate manpower in the country at the end of the year.
- MANPOWER REQUIREMENT BLOCK → MANPOWER POLICY BLOCK: Net manpower requirements by sector/occupation.
- MANPOWER POLICY BLOCK → LABOR FORCE BLOCK: Update National manpower at the end of the year, Update Expatriate manpower in the country at the end of the year.

combined with the data lower ride facility, allows compilation of base year data using partial information for several different years. The model is so designed that it could be used on an IBM XT, and IBM at or a 100 % IBM compatible personal computer PC. The features of various sub-model are shown in (Appendix E) as given in World

Bank paper 5753N (35-39).

4.13.0 Manpower Planning in Arab World:

4.13.1 Manpower planning in Arab World is not so old. Egypt is considered the pioneer in the Arab World in carrying out manpower planning.

4.13.2 The first study as pointed out by Mamdooh Saleh (1985) was carried out in 1962. A joint effort was made by the Ministry of Education and the Institute of National Planning to forecast the educational and training needs for the first five year plan. (1960-65) and to try to estimate the needs up to 1975. Several approaches and extrapolation of past tendencies and the production and productivity method. Table- (XXII) indicates the forecast demand by the 1962 study for 1974-75 estimation compared to real actual data of 1976 census.

4.13.3 The reasons of over estimating the sectoral side as pointed out by Mamdooh Saleh (1985) are :

- i) Estimate of the agricultural labour force are fairly accurate (only about 2 percent difference), but for other sectors the deviations are much greater, ranging from 16 to 45 percent.

SECTOR	Estimation of the 1962 Study	1976 Census	Deviations	
			Number	Per- Centage
Agriculture	4,554,820	4,464,339 +	90,481 +	2.2
Mining	92,850	22,867 +	69,983 +	75.4
Petroleum	39,330	10,206 +	29,124 +	74.5
Manufacturing	2,036,680	1,349,072 +	687,608 +	33.7
Electricity, Water	53,020	61,621 -	8,601 -	16.2
Construction	170,960	420,300 -	249,340 -	145.8
Transport, Comm.	385,240	477,091 -	92,251 -	23.9
Trade & Finance	1,203,800	832,496 -	371,304 +	30.9
Services	2,538,320	1,946,084 +	592,236 +	23.3
Unspecified	--	166,980		
TOTAL:-	11,075,020	9,751,056 +	1,323,964 +	12.0

Table - XXII : Deviation of forecast demand to real actual data for 1976 in Egypt.

- ii) For mining and petroleum, the study over estimated the expected number of workers for two reasons, one political (Sinai and the Red Sea shores, which contain the majority of the oil fields of Egypt, were still under Israeli occupation), and the other technological (oil in Egypt is exploited by foreign companies utilising capital-intensive technologies and, frequently, highly trained foreign workers).
- iii) Manufacturing employment was also over estimated. This can be attributed mainly to a lack of investment in this sector, owing to the successive wars.

4.13.6 Despite this various authorities have carried out manpower planning studies for different aims. The studies always showed discrepancies between forecasts and actual changes in the labour force structure. The cases as pointed out Mamdooh Saleh (1985) can be summarised as :

I. The Guaranteed Employment Scheme:

The government started a guaranteed employment scheme in 1963 for graduates who were unable to find work. It soon took the form of a temporary law and in 1973 it was made permanent. Until 1980 the law covered all university graduates, except engineering and medical faculties, but in 1980 engineering joined the scheme because of surplus graduates from the technical institutes.

It is widely believed that the majority of applicants contribute a real surplus in the labour market, but since these graduates are automatically provided with funds for financing the appointments, requests are exaggerated as graduates are supplied at a zero price. In addition, demand is inflated as it is initiated by high echelon civil servants, who see the expansion of their agencies in terms of personnel advancement and promotion possibilities for themselves. In any case, it is well known that whether there is a demand or not, the graduates will be appointed anyhow.

II. External Migration:

In recent years Egypt has experienced a tremendous increase in external migration. The migration has been of two types.

- 1] Permanent: This took place at a moderate pace in 1962-1965 (about 1,500 per year). It reached its peak of 5,600 in 1969 and declined by 1978. The total figure of per-

manent migrants between 1962 and 1976 was 24,000. It involves the most scarce resources that the country possess in terms of occupational or educational composition.

- 2] Temporary Migration: About 44,000 per year temporarily migrated between 1965 and 1972. It increased to 150,000 in 1973. The total number of temporary Egyptian migrants in 1980 varied between 1.5 million and 3 million (ie. about 15 to 30 percent of the stock of the labour force).

III. Education and Training System:

The education and training systems in Egypt have developed largely to satisfy social rather than economic demands. Although the education system has made substantial quantitative progress it has also been subjected to much criticism. It is still incapable of absorbing all children at the age of six years.

Although the rate of illiteracy has decreased, the absolute numbers are increasing. It is also estimated that 40 percent of production workers are illiterate. The drop-out from general education is also high. Furthermore 80 % of the production workers did not have access to any vocational education or training and the notion of 'skilled worker' is completely different from that of the developed countries, reflecting only seniority due to length of practice.

Another factor influencing the demand of education and the pattern of manpower supply is the wage structure. "Certificate Pricing" as utilised by the government and the public sectors, and which has consequently influenced wages in the private sector, has stimulated the demand for higher education.

4.14.0 Manpower Planning in Bahrain:

4.14.1 In 1973, a study was carried out on projections of Manpower - Demand and Supply for the period 1971-1986 by the Bahraini government assisted by the Ford Foundation. The aim of the exercise was to identify the manpower problems of the country and to suggest appropriate policies and programs to overcome the current and political manpower problems.

4.14.2 Socknet, J. (1979) points out that due to the lack of central planning machinery and economic data, the author was forced to resort to his own assumptions of economic and social developments prospects to produce estimates to 1986 of new jobs.

4.14.3 Two different methods were used for projections. One method involved projection of the population and labour force estimates. The second method involved projection of intake, enrolment and output of the country's education system.

4.14.4 The results of the study were suggestions on policies and programs to be adopted. The main policy suggestions in the study were :

- 1] Manpower planning should be continuously carried

out in the context of a central planning agency of the government.

- 2] Education should be geared to manpower requirements.
- 3] Responsibility for training should be transferred from the Ministry of Education to a Training Authority.
- 4] Bahrainization provided. Employment of non-Bahrainis should be permitted only to the extent that qualified Bahrainis are not available.

4.15.0 Labour Markets in Other Arab States:

4.15.1 In general, the countries and people of the Arab region distributed over some 20 countries share a common religion, culture and language which link the labour markets of these countries.

4.15.2 Wide disparities exist between the countries in terms of population, income and educational attainment, size and skill level of the work force.

4.15.3 The following observations can be noted between these countries as pointed by ILO (1979).

- 1] Very few Arab countries which are oil producers which are categorised as capital rich states. The Gulf states are part of that category together with Libya and Algeria.
- 2] The other states are categorised as poor capital states.
- 3] It is noted that poor capital states have the largest indigenous population, while the capital rich states have small populations.

- 4] The distribution of oil wealth and population size has produced a very uneven range of income per capita in the region.
- 5] Due to the oil price rises of 1973 the capital rich states had a potential for economic development particularly the industrial development, the aim of which was to maximise oil revenue in the long run.
- 6] Due to the scarcity of manpower in the capital rich states, and the ambitious plans of development, these states have to import expatriate labour to achieve their goal.
- 7] On the other hand, the poor capital states faced a big migration of their indigenous manpower to the capital rich states which affected their planning programmes.
- 8] Although education development took place in the Arab region, most of it was carried for social reasons. It did not take into consideration, the manpower requirement for the labour market.
- 9] The rate of participation of the female did have an affect on the whole process of manpower planning in these states.

4.15.4 Most of the problems that face the Arab countries in manpower planning are common for each category. The capital rich states share common problems. Bahrain is an example of that category. The capital poor states also share most of the problems. Egypt is an example of that.

4.16.0 Manpower Planning in Oman:

4.16.1 Development in Oman started in the 1970s. There are no in-

dications that any manpower studies were produced before 1970. The first study was done by the Directorate of Vocational Training in the Ministry of Social Affairs and Labour required for the implementation of the First Five Year Development Plan. (1976-80). The second study, produced during 1978-79 in an attempt at providing a comprehensive manpower plan. These pioneer studies were generally of limited value, as they were based on unreliable data and doubtful assumptions.

4.16.2 The Education Planning Department of the Ministry of Education assisted by UNESCO experts have issued a number of studies relating to the future of education development in Oman. One of the main studies relating to manpower planning was "Diversification of Education to meet Manpower Requirements in the Sultanate of Oman (April 1978).

4.16.3 The Technical Committee of the Ministerial Council on Education and Training has produced a number of studies relating to manpower and education problems in the Sultanate. These studies highlighted the range of policies to be adopted.

4.16.4 A study of "Manpower and Employment" in Oman was carried out in 1979 as part of the work of a World Bank Economic Mission. The study attempted to :

- a) Project the size of total population using the number of six-year olds enrolled in schools.
- b) Match demand and supply of labour using simple computer based models to project manpower requirements and the flow of graduates from the education / training system.

4.16.5 ILO as part of its migration of Employment Project published a paper on Oman. It contributed to the study of the phenomenon of out migration from the Sultanate utilising the results of an extensive socio-economic survey of northern Oman.

4.16.6 On 1st November, 1980, a mission from the World Bank visited Oman in response to a request from the Government of Oman. The aims of the visit was to :

- a) Review existing institutional arrangements and related activities for planning and policy making in the manpower development area in the Sultanate.
- b) Recommend the functions, structure, programme, activities and staff of a manpower planning unit to be established within the Ministry of Social Affairs and Labour.

4.16.7 The conclusion drawn by the team as pointed by the World Bank (1981) were :

- 1] There is an evident concern with the human resources problem in the country as reflected in the substantial but largely disparate efforts in data gathering and analysis, preparation of studies relating to manpower and education, and in setting objectives and making policies designed to guide the development of the human resources of the Sultanate.
- 2] Despite the important lack of reliable demographic data, the available data seems to provide an adequate data base for meaningful manpower planning something the envisaged MPU should capitalise upon,

particularly during its formative years.

- 3] In the two ministries closely associated with human resource development (MOSAL and MOE) in addition to the Development Council, there is a keen awareness of the importance of setting objectives and making policies for human resources development base on sound information and professional judgement. This should facilitate future co-operation and co-ordination with the MPU.
- 4] The Education and Vocational Training council as the leading manpower policy-making body could be the vehicle through which the work of the MPU makes its effect on national development.
- 5] The World Bank suggested possible studies for a proposed Manpower Planning Unit (Appendix - F).

4.16.8 It also recommended the necessity of establishing a manpower planning unit (MPU) within the Directorate of Vocational Training with the following responsibilities :

- 1] Measure current employment by occupation, industry, nationality, and employee characteristics.
- 2] Forecast manpower requirements by occupations, industry and skill.
- 3] Measure the current and potential output of the skill development system.
- 4] Forecast manpower supplies.
- 5] Prepare plans and design programs for meeting manpower requirements consistent with national objectives, for adoption by the appropriate policy-making bodies.

- 6] Interact with other agencies and the private sector in gathering relevant data, obtaining inputs to the planning process, and gaining agreement to proposed plans and programmes.
- 7] Evaluate the progress of programmes to assure the accomplishment of plans.

Therefore, capabilities will be required in:

- 1) Survey research
- 2) Statistical analysis
- 3) Projection techniques
- 5) Automatic data processing
- 6) Industrial and Government personnel practices
- 7) Policy formulation
- 8) Report preparation and public
- 9) International inter agency and public relations.

4.16.9 The Manpower Planning Unit, and later the Manpower Planning Department issued various sectoral manpower planning reports. These report, despite the lack of data did help in giving certain indications to manpower planning and development problems. They also helped the government in deciding some major policies in education and manpower development schemes.

4.16.10 In November 1981, the World Bank carried out a study on the assessment of the manpower implication of the Second Five Year Development plan to help the government in planning education and manpower development schemes. This was the first complete study ever done in manpower planning.

4.16.11 The World Bank used the manpower development model (MDM)

called the compound model. The results showed scarcities in national manpower to cope with the 2nd Five Year Development Plan. The development should rely on using expatriate manpower, the report raised various issues regarding the educational and training system and labour market development and administration. Some of these issues will be raised in the following chapter.

CHAPTER V

PROBLEM IDENTIFICATION

AND

MANPOWER DEVELOPMENT MODELS

5.0 The Sultanate of Oman with a population of 2 million and a total area of 300,000 square kilometres has experienced a rapid social and economic development since the 1970s.

This rapid development in the modern sectors has been carried out mainly by non-national workers. The reliance on non-Omani workers is the inevitable result of the following factors :

- 1) The rapid economic growth with a consequent massive demand for workers for main development projects.
- 2) Omanis, in the 1970s were ill-equipped to work in a modern economy because of the traditional nature of Omani life. The population was mainly engaged in rural activities.
- 3) The Lack of educational facilities at that time, and the length of time required to train Omanis able to take over jobs from the expatriates.

5.1.0 In 1989, Oman completed its 19th year of development. The numbers of Omanis graduating from various educational establishments has risen while the economic growth rate has slowed down due to the fall in the oil price internationally. This has obviously affected the economic growth of Oman. Despite the development that Oman has experienced in the last two decades, these problems have

created issues in manpower planning, the labour market, education and training, manpower development in rural areas, and the employment of women in modern sectors.

5.2.0 The Role of Education and Training:

The education and training system in Oman has therefore a particular responsibility within the modern development process. The choice of a model to be adopted will depend on the view point of the planner. Davis R.G. (1966) points out that three general kinds of models could be discussed but these by no means exhaust the possibilities.

- 1- Departure from a set of political, cultural or social goals which state that some specified portion of the population has a right to some specified amount of education and training.
- 2- Departure from estimates of the resources (human and fiscal) available for assignment to education and training so that returns are maximised.
- 3- Departure from a set of human resource requirements or targets in the work force. The objective is to equal or exceed the targets with allocation minimised.

The responsibility of the education and training system is, therefore, to produce well educated and trained national manpower deliberately to :

- a) Fulfil the labour market requirements in providing qualified manpower.
- b) Omanize the present labour stock of non-Omanis in the country.
- c) Tackle the rural development requirement.

- d) Encourage more participation by women in the labour market.
- e) To achieve the minimum universal education required by society in general.

5.2.1 It is unrealistic to suggest that all non-nationals working in Oman can be replaced by qualified Omanis. It is simply impossible to produce well educated and trained nationals to fulfill the manpower requirements of the labour market as well as to Omanize the present stock of non-nationals. However, it is feasible that the education and training system should educate and train Omani manpower to minimise the reliance on non-Omani workers. It should produce as many qualified and educated Omanis as possible with qualifications and skills which meet the labour market requirements.

5.2.2 It is certain that any attempt to rationally develop education and training does require a good manpower development model. The key factor that affect the Omanization process and that ultimately affect the role of education and training system are:

- i) Economic Growth: The impact of economic growth on the need of manpower requirements has been discussed earlier in chapter 2. A key question is whether the economic growth patterns can be made dependent upon acceptable levels of Omanization. Davis R. (1966) points out that the result of the applica-

tions of economic theory and method have been rationales and schemes for educational planning which rest on two fundamental data bases: (1) the resources, primarily fiscal, which the country can mobilize to support the accomplishment of education and training goals. (2) The country's needs in general education and especially trained human resources.

To produce more educated and trained manpower within the limited population simply means provision of more educational and training resources. However this can normally not be done, because more often than not, fiscal restrictions make this impossible. If economic planners work without consideration for manpower implications, then surely one must ask "How can manpower planning be successfully implemented in Oman? "Furthermore, policy makers should consider some general issues that will shape the Omanization policy for the employment sector:

- * To what extent can manpower requirements be met by Omani nationals in the long and short term ?
- * How can manpower planning assist in Omanizing the employment sector ?
- * To what extent is manpower planning con-

tributing to economic development ?

5.2.3 The policy makers are aware at least of the problems that have been caused by the employment of expatriates. It is important to seek direction from policy makers to define the requirements of Omanization in terms of quality and quantity.

In order that the education and training system can be shaped to achieve the objectives of manpower planning, it is important to clarify the following issues that face the labour market:

- ** what should be the acceptable proportion of Omanis and non-Omanis in the labour market at the various sectoral and occupational level ?
- ** How might sectoral and occupational priorities for Omanization might be developed?
- ** What is the acceptable level of Omanization in the public sector?
- ** How can the motivation level of Omanis in the work force be raised so they become more productive and effective.
- ** Is the wage structure suitable, specially in relation to public and private sector differentials and skills distribution.

The World Bank (1982) points out in a study on the minimum wage in Oman that the current minimum wage programme within the private sector is ineffective. It does not protect the workers and it

does not have any impact on any employer's hiring or retention decisions.

ii) Human Capital: Oman is an oil producer. It is recognised as a wealthy country as per international measures based on G.N.P. But it is fair to say that Oman has not yet completed developing its infrastructure. Just as important as physical infrastructure is human capital - the acquired and useful abilities of the inhabitants. Human capital, like physical capital to productive capacity: the skills, qualifications and resources of the labour force may be even more important than physical capital, though human capital is not recognised in national accounts. In Oman, partly because of the pace of economic change, there is a shortage of the skills and quantities which ensures continuous economic development. The other side of economic development is human development, education and training of the labour force. No sustained economic development is possible without simultaneous human development. Traditionally development concentrates on so called "hardware" investment- including infrastructure investment which provides the facilities of a modern state. Same attention has to be given to the need to develop "software"

development tools, that is job skills to sustain a momentum provided by oil resources and capital investment.

- iii) Financial Constraints: The burden on the treasury will be high. But it is the people who form the dynamic agents in economic development. In moving towards a more diversified economy, an educated and trained labour force is the key. The direct cost of students at different levels are shown in Table XXIII.

The cost of educating a student in the university is higher than the cost of educating student at a lower level of education. There are some measures that could be adopted to reduce the present cost which will be discussed in the last chapter, but substantive expenditures are necessarily involved. The cost of fees in a modern private school (Sultan Private School which is considered in Oman as an excellent school providing good educational services to student and is subsidised by the Government) per year were 1300 Rials Omani and 2500/- Rial Omani for residents and non-residents respectively.

It is expected that the cost per student in the future will increase with an increase in the quality of education and inflation. Therefore policy makers should look at the general issues that may help in reducing the cost especially at these questions:-

- * What is the minimum overall level of free educational provision that planners should aim for.

Type of Establishment	Cost of Students / Year Rial Omani	
	Non-Resident	Resident
Primary	253	-
Preparatory	496	-
Secondary	542	1022
Secondary Technical	1080	1609
Secondary Agriculture	2900	2900
Secondary Commercial	667	1117
Teacher Training College	2727	2731
Secondary Islamic	1082	2170
Vocational Training Institute	1896	2170
Technical College Post Secondary	2925	3187

Table - XXIII : Direct Cost of Educating and Training an Omani Student per year.

Source :- Development Council 1987.

- * To what extent should secondary education (general or technical stream) be diversified ?
- * To what extent should further (post secondary education be provided) ?
- iv) Effectiveness of Information System: The success of any manpower development plan depends to a great extent on the information available. The information required on the supply side is student enrolment, vocational guidance schemes, factor

rates, student costs drop-outs rates, teacher student rates etc., The demand side requires information on manpower requirements for various sectors and at various levels of occupation in the industry, incentive offered to employees, technology used in industry, development schemes of various industries, national economic growth expected in various sectors, labour force mobility, (sectoral occupational and geographical), rural-urban migration trends, data for analysis of productivity and attendance rates ...etc.,

- 5.2.4 The planning of manpower development nationally is affected by government policies towards some social and economic aspects of the female work force in the modern market and in the context of rural urban migration.

5.2.5 Female Labour Force:

The manpower requirement in the modern sector is expected to increase in the future. The past record of the female work force in Oman shows they were mainly engaged in rural activity. At present, the records show the tendency of breakthroughs into new occupational fields by women.

The general tendency is towards a wage earning economy in which the family depends on the wage earner. The wage earner is normally a man who is both head of the family and source of its income. (Diaeth A R 1975).

In Oman, women started to share an earning role with their husbands due to the high cost of living. However, they still tend to work in certain specific occupations such as teaching, health and administration. Their opportunities to work in technical occupations specially in engineering are still limited. Any changes in terms of women taking up a wider range of jobs, can only come slowly as society's attitudes to the role of women in the work force are deeply routed in the traditional culture.

The tendency of small numbers of women to work in certain occupations, while the majority remain outside the labour market leads to a fundamental issue, the planner has to consider whether full enrolment of girls in all sectors of education and training^{is} a real aim? If so, what is an acceptable role for women to assume in the work force?

5.2.6 Adult Education in Rural Areas:

Although Oman is economically considered a modern country, it is still a rural country in terms of the population in these areas. Manpower development in rural areas is a complex issue. The present human resource development programmes which encourage more rural-urban migration (Diaeth A R 1975) point out that the rapid economic growth of the advanced nations was achieved through industrialisation, and in the eyes of developing nations, this form of modernisation represented

progress. In contrast, rural communities were stagnant and agricultural improvement did not run ahead of population growth, except in a few instances where conditions were transformed by irrigation or better crop or animal husbandry and marketing.

The main problems for rural development in Oman is migration from rural areas. World Bank (1982) studies have shown a total of 5000 workers per year migrating from rural to urban areas. Almost all of them are male youths. The causes of this phenomenon are both economic and non-economic. The economic incentive as seen by GTZ (1984) is the search for a higher income. The higher incomes are available almost exclusively in the towns, cities and abroad. On the other hand the wage demands of rural Omani workers are rising faster than their productivity. Here we have a vicious circle. Although the wage level in the rural areas is low, it is nevertheless high in comparison with the level of wages abroad, particularly of some Asian countries. Therefore, expatriates from Asian countries fill this gap, replacing the Omanis who leave the rural areas.

Moreover, rural products find it increasingly difficult to cope with competition either with goods imported from countries with low wages or with modern products manufactured in Oman.

The lack of qualified personnel and the capital required for the use of modern technology hinder an increase in productivity.

The non-economic causes for rural migration lie in the relative unattractiveness of village life in terms of educational opportunities, amenities and quality of life. The problem of rural development can be seen from Figure (XII). To solve the problem, various aspects of the problem should be dealt with. This is shown in Figure (XIII). The manpower development schemes geared to rural sector activities may, to a certain extent, assist in decreasing the rural-urban migration. Improving the qualifications of rural workers will not in itself necessarily stop the trend towards moving into the towns and cities, but may even reinforce it if the more highly qualified workers cannot gainfully use their skills and knowledge anywhere but in urban area.

5.2.7 The various problems that Oman faces in its manpower planning and development include various issues concerning education, training and rural manpower development. These are :

A- Educational Issues:

- i- Is the manpower requirement method a strong enough basis to use, for the planning of the manpower development model and the educational system needed to achieve it ?

Fig - XII : PROBLEM TREE

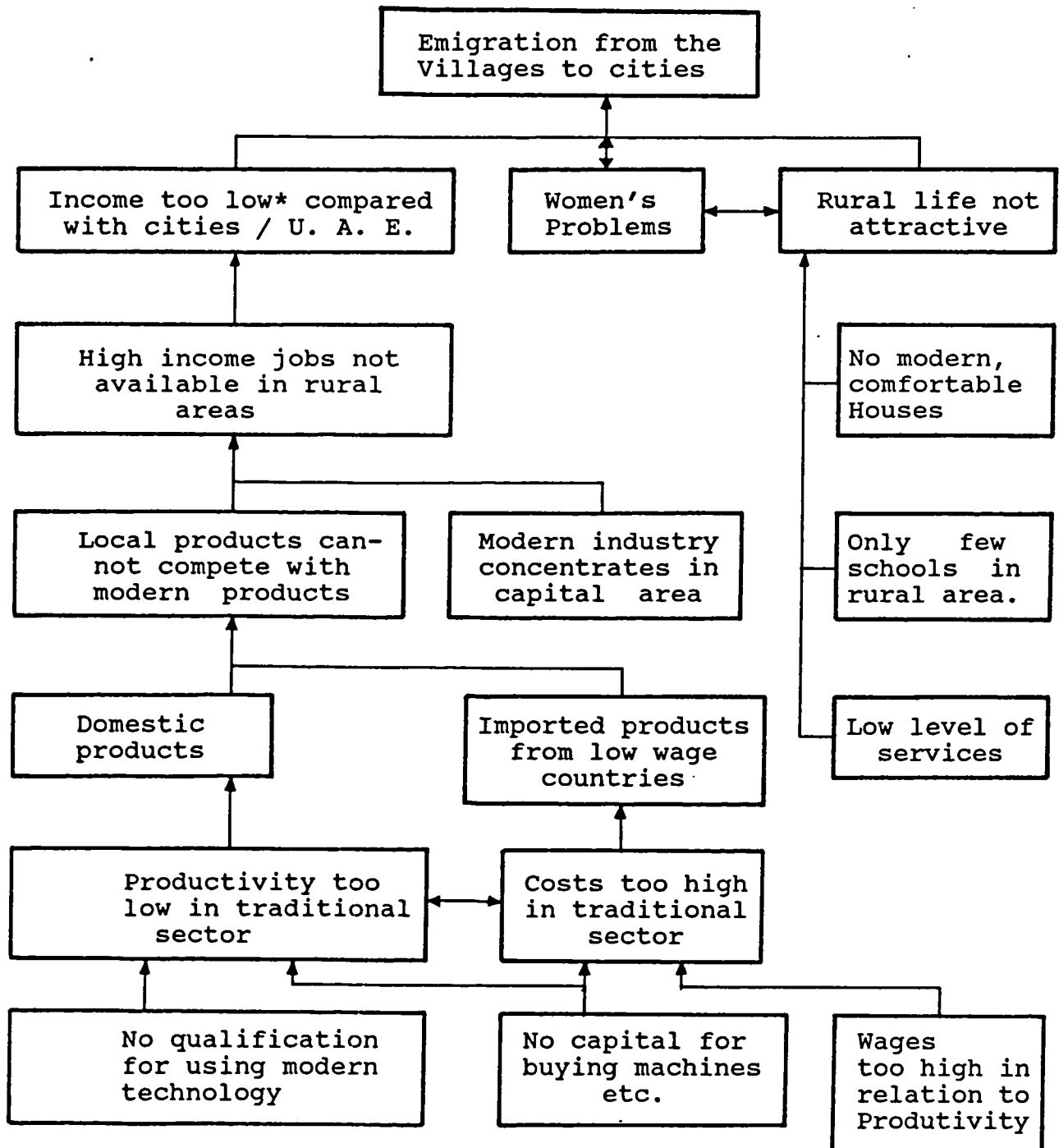
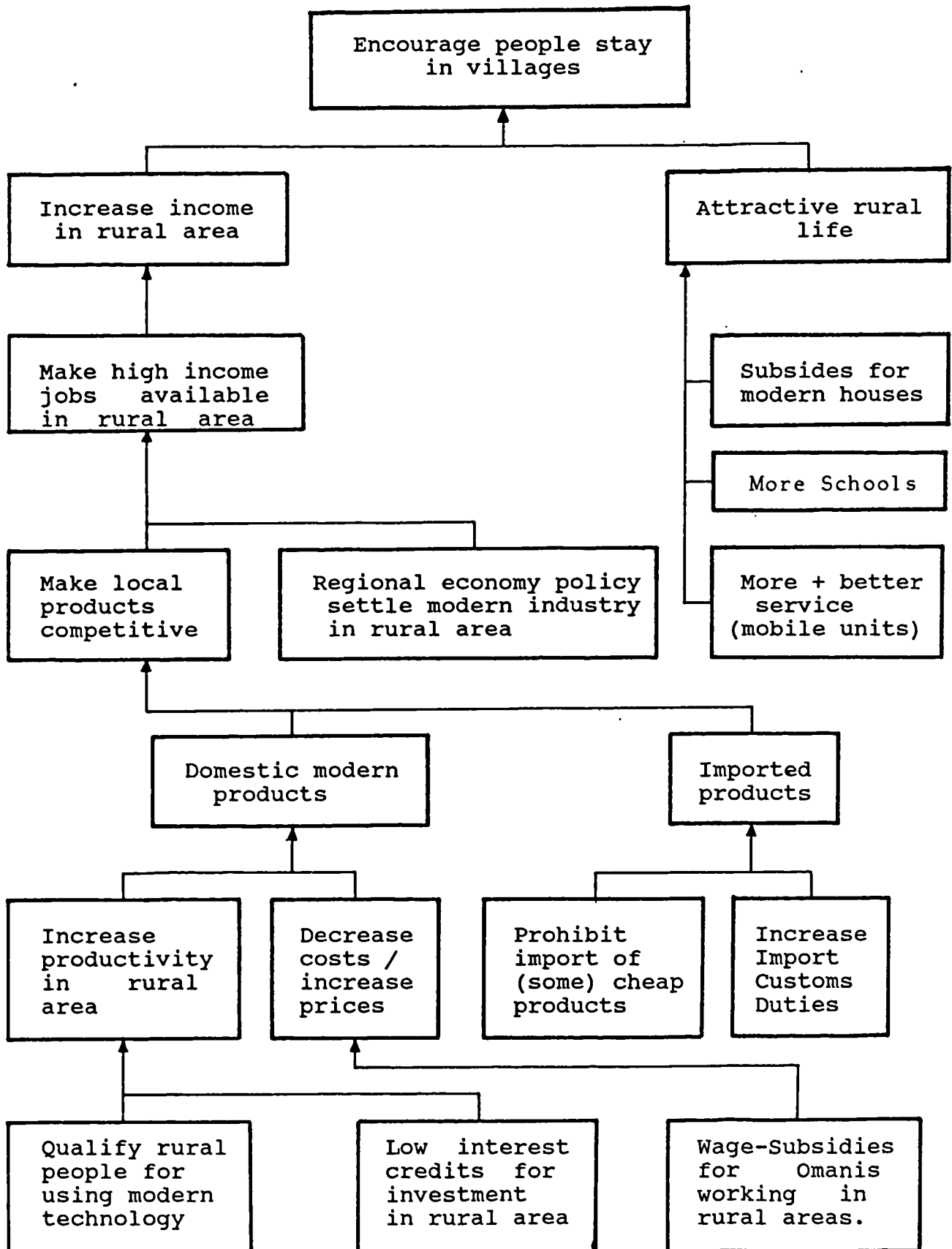


Fig - XIII - PROBLEM SOLUTION TREE



- ii) What are the sectoral preferences of Omani workers ?
 - a- in the work force
 - b- about to enter the work force.
- iii) What are the private sector employers' attitudes towards employment of nationals and non-nationals ?
- iv) Does the present system provide the skills required for the Omani labour market ?
- v) What is the best blend of general, technical, vocational, agricultural and commercial education in terms employment possibilities?
- vi) Is sufficient emphasis placed upon adult education and adult literacy provision ?
- vii) How can the internal efficiency of the educational system be improved ?
- viii) How high a priority should be allocated to the Omanization of teaching and training staff ?
- ix) To what extent should English Language teaching feature in the Sultanate's schools and training institutes and at what level and of what type ?
- x) Is co-ordination between bodies providing education and training sufficient at a policy level and at an executive level?.

B. Training Issues:

- i) How can training best be delivered to women and for which occupations ?

- ii) Should pre-service and in-service training be favoured ?
- iii) How can employers be encouraged to expand the scope and quality of training for Omanis?
- iv) Should trade and skill standards be established to evaluate training ?
- v) How should training be paid for - by the individuals, the future employers or the public purse or Ministries responsible for the various sectors of the economy?
- vi) Is the present training levy rebate scheme effective ?
- vii) How high a priority should be given to the Omanization of the training system ?
- viii) To what extent should English / and or Arabic language improvement feature in training ?
- ix) Should non-Omanis working in Oman be trained ?

C. Training for Rural Development:

- i) How can training be carried out for rural and regional activities ?
- ii) Do the present rural training programmes serve to increase rural workers employability ?
- iii) How can the specific training needs of specific rural groups be taken into account? i.e. girls and women, illiterate young

people, the disabled and nomads.

5.3 Models and Systems:

Many attempts have been used to produce different systems and models and there has been a remarkable growth of interest in this area. It is important to differentiate between system and models.

5.3.1. What is a System ?

One definition as pointed out by Hall and Foger (1956) is a set of objects together with relationships between the objects and their attributes e.g. In our every day life we speak of a 'hot water system', in which the set of objects (store, pipes, cylinders, etc.) are related in circulating various inputs of energy in the form of heat. In education various education systems have been adopted to suit the educational needs of the societies where (students, teachers, educational materials, school buildings, etc.) all are related in producing qualified manpower for the country.

Peter Hagget (1968) points out that systems are arbitrarily demarcated sections of the real world which have some common functional connections. Von Bertalanffy (1950) distinguishes two separate frameworks: the closed system and the open system.

5.3.2. What is a Model ?

UNESCO (1954) points out that a model is a conceptualisation representing a real-life situation, a procedure or an ideal technique. It is a reproduction of a real thing on an arbitrary chosen scale.

Peter Haggett (1968) points out that the term model has at least three different usages. As a noun, model implies a representation; as an adjective, model implies an ideal, as a verb a model means to demonstrate.

Models convey not the whole truth, but a useful and comprehensible part of it. [Society for Experimental Biology (1960)].

The model can be realised in a variety of ways - it can take the form of an equation, graphic analogue, a device or a narrative sequence. Ackoff Etal (1962) have suggested a simple model in which each stage represents a higher degree of abstraction than the last. Iconic models represent properties at a different scale, analogue models represent one property by another, symbolic models represent proper properties by symbols.

Chorley (1964) has created a model of models (Fig. XIV). The model consists of a flow diagram in which a series of steps (A1 to A6) are linked by transformations (T1 to T6). Each step contains some aspect of the real world model, (technical, simplified, and analogue) observation and conclusions. Each transformation connects these steps by some method (idealisation, simplification, mathematical argument, observation, experimentation, etc.) which advances or checks on the reaming process.

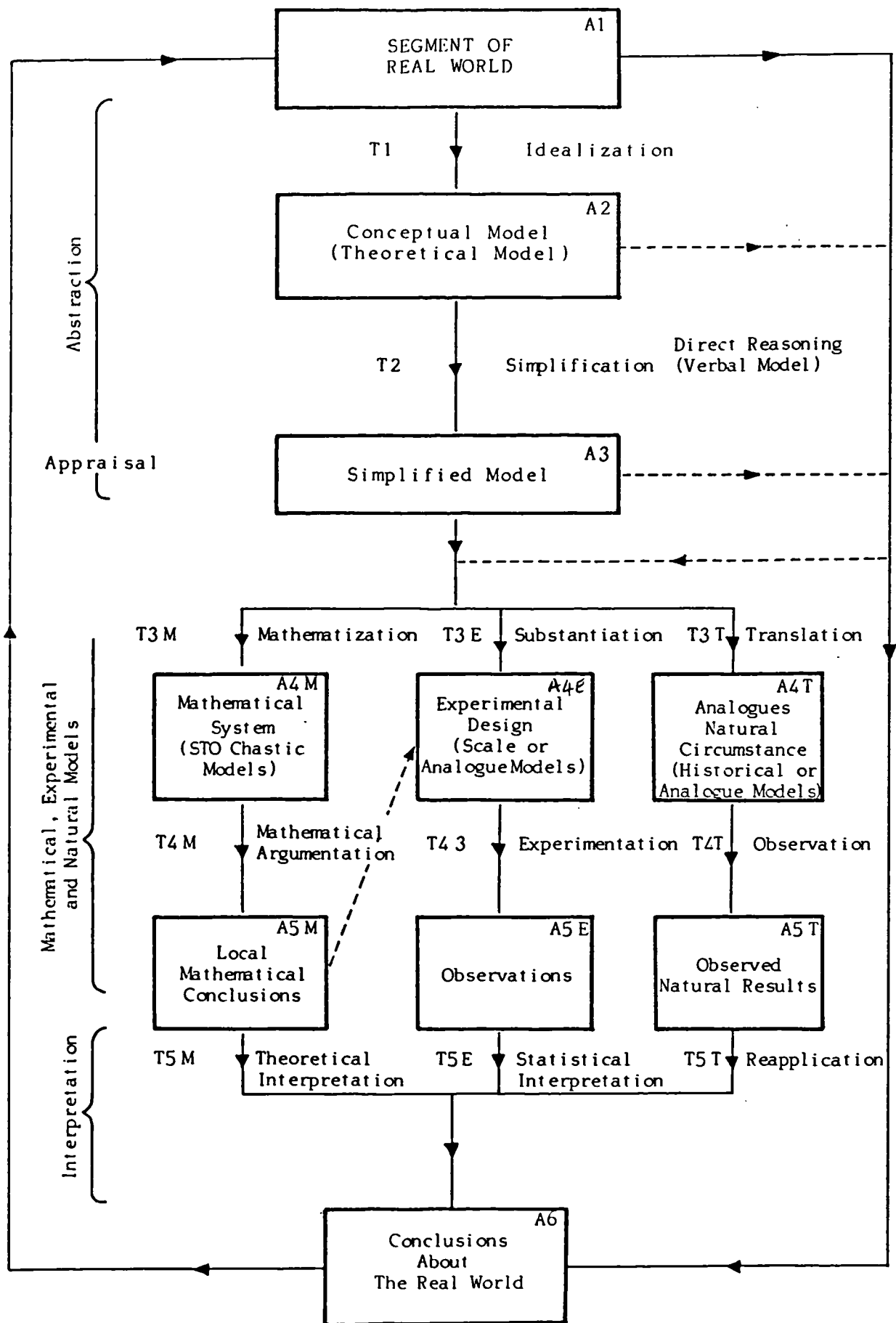


FIGURE XIV : MODEL FOR MODELS

SOURCE : CHORLEY 1964 p.129

5.3.3. Manpower Development Models:

Manpower development consists of various aspects from the stock and flow of manpower to the output of the qualified manpower, including the development aspects of manpower related to education and training.

5.3.4. Grath Magum and James Morlock (1979) point out that a stock and flows model is a conceptual tool for analysing population for planning purposes. It is an abstraction of reality. It attempts to organise observations and simplify highly complex systems, to facilitate analysis and suggests causes and effects in employment problems. The model is shown in (Fig. XV).

5.3.5. Educationalists have developed a series of models which help in the evaluation approach of the various aspects of education. These models are mastery learning models, structural models, curriculum evaluation models and others. Green (1975 - p. 48) presents a model which incorporates three or four common evaluation types (see Fig. (XVI).

Green (1975) in his model incorporates common evaluation types. Diagnostic evaluation is viewed to determine learners' individual levels of competence. This evaluation is often based upon the summative type of best instrument. According to this model, learners at the entry level show varying levels of competence. On the other hand, formative evaluations in this model provide interim

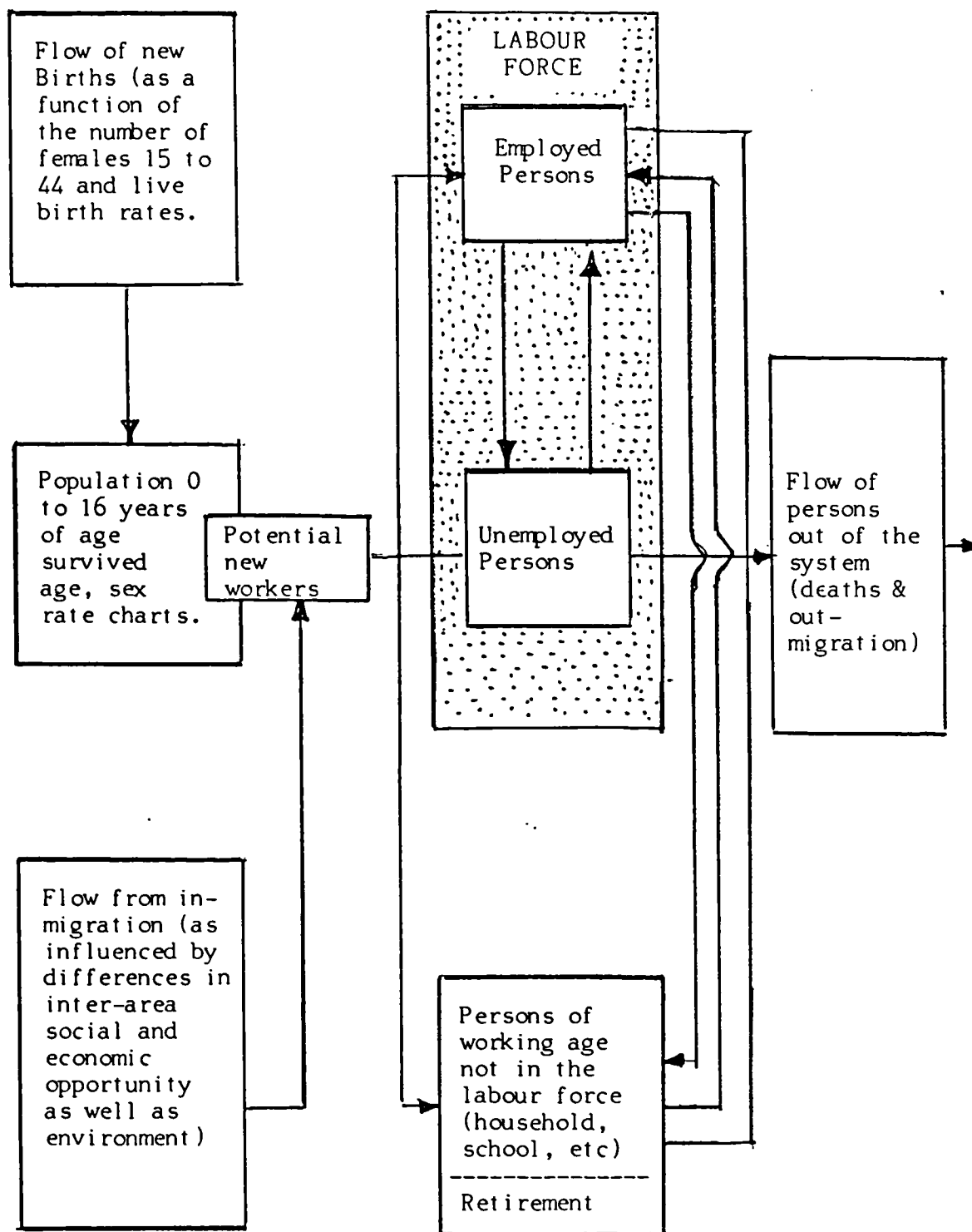


FIGURE XV : MODEL OF STOCK AND FLOWS

SOURCE : GERTH MAGUM p. 156

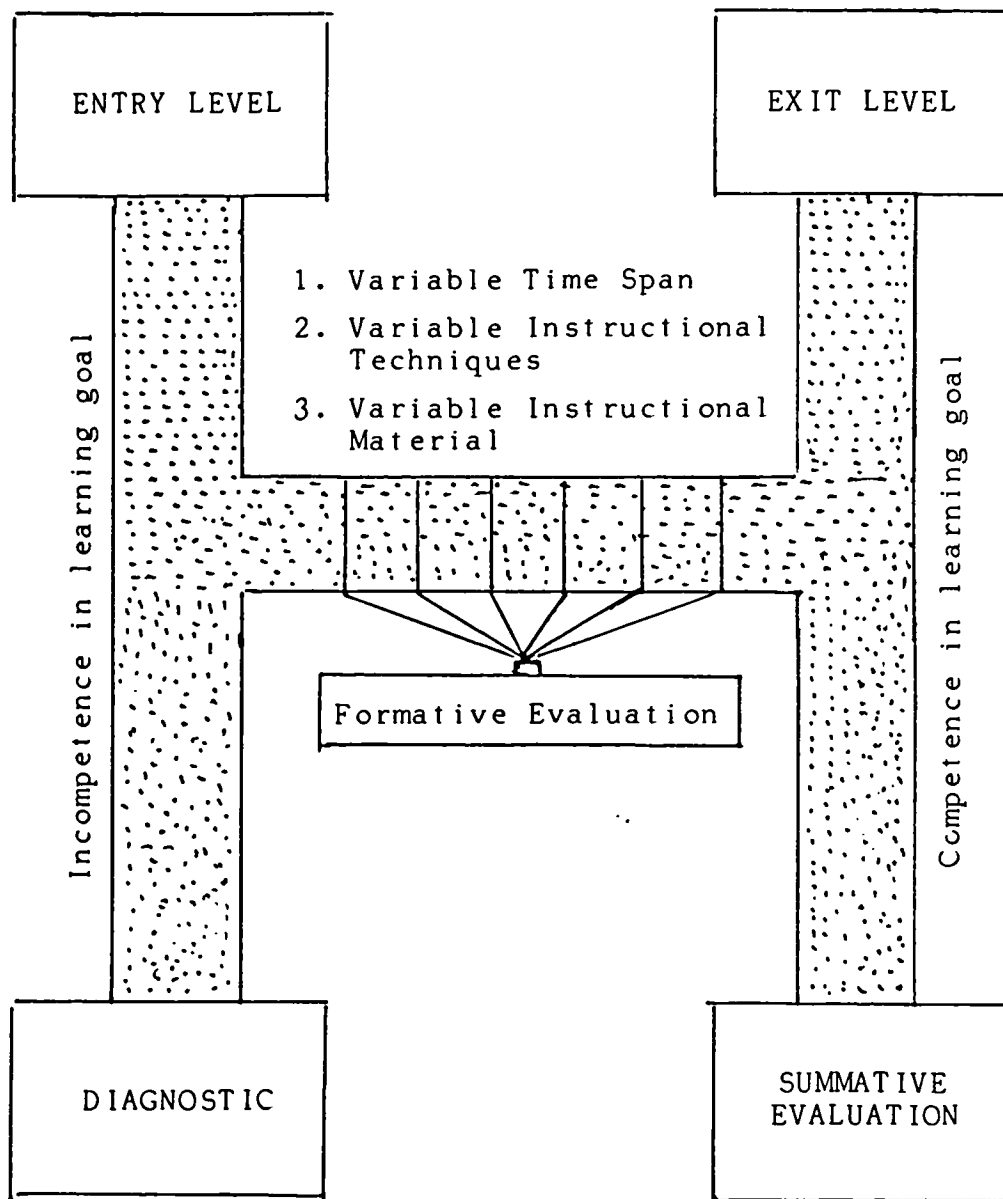


FIGURE XVI : MASTERY LEARNING EVALUATION MODEL

SOURCE : GREEN TEACHER MADE TEST 1975 (p. 48)

assessments of learner progress with specific diagnoses of learner strengths and weakness. It provides a symbolic feedback to both learner and the teacher.

5.3.6. Brown (1978 - p. 127) developed a model of achieving service accountability in Education. A total evaluation model was designed by Worthen (1973). Worthen and Sanderds, in discussing this systematic context evaluation model state that :

"decision - makers should make structuring decisions regarding the means necessary to bring out home-static change without any intervening formal evaluation support mechanism other than context evaluation, and that these structuring decisions would lead directly to installation of change in the programme and subsequent adjustment to the context evaluation mechanism, to provide for routinely monitoring the new feature in the system, by the systematic context evaluation."

5.3.7 Several models of manpower planning have been explained in Chapter IV. V Fulton O and Gordon A (1982 - p. 38) have described a formal model(see Fig. XVII) which consists of ten steps in converting manpower forecasting into operational education plans. These steps can be summarised as :

1- Predicting the level and pattern of economic

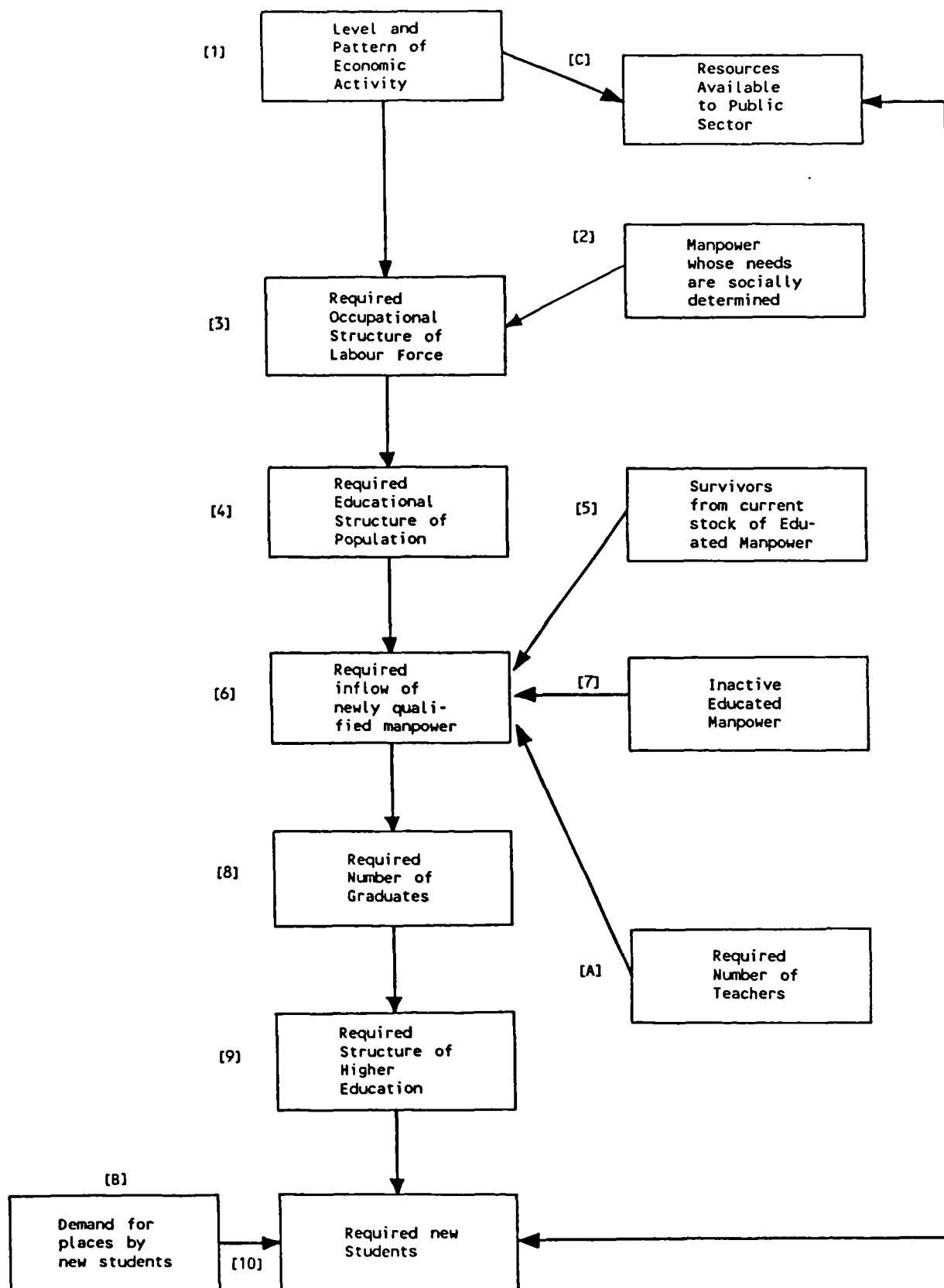


FIGURE XVII : SCHEMATIC EXAMPLE OF MANPOWER FORECASTING EXERCISE

SOURCE : FOULTON, O., 1982, p.38

activity at some future date.

- 2- To exercise manpower planning which consists of setting targets for those occupations for which this is considered appropriate.
- 3- To derive from the general economic forecasts estimates of the numbers of people who will be required in each occupational categories in order to provide the projected output.
- 4- To convert the occupational needs into the requirements of the various categories of educated manpower.
- 5- To make an estimate of the number of people from the existing stock of educated people who are likely to die or withdraw from the labour force between the base year and the target year.
- 6- To compare the survivors from the existing stock with the required numbers.

CHAPTER VI

METHODOLOGY AND RESEARCH DESIGN

6.00 The major objective of the research is to identify problems associated with manpower development in Oman. It will also highlight the problems associated with employment in the labour market. The results of the research will assist in designing a simple integrative manpower development model. This model should favourably assist in various aspects of manpower development schemes towards achieving a reasonable manpower planning exercise for the Omani labour market.

6.0.1 The Education Research Centre at the College of Education of King Saud University in Saudi Arabia was asked by the Gulf Co-Operation Council (GCC) to carry out a study on manpower development in the Arab Gulf States. The candidate, on the recommendation of the Education Research Centre, was asked by the Gulf Co-Operation Council to participate as a main researcher for Oman.

6.0.2 This chapter is devoted to explain the research approach, design and methodology. A survey approach was used to obtain data regarding the evaluation of manpower development. It had the following procedures :

- 1- Design of sampling procedures and administration of the survey instrument.
- 2- Data collection.
- 3- The pilot testing of the instruments.

- 4- Identification of the methodology in terms of statistical procedures to be employed in the analysis of the data gathered with the survey instrument.

6.1 Objectives of the Survey:

- 1- To study the present national manpower in ^{the} main industries, which includes oil, electricity and water distillation, and in the private sector.
- 2- To study the present pattern of the teaching / vocational education institutions.
- 3- Evaluating the efficiency of the technical/ vocational institutions, and the factors affecting their present state regarding their capacity, training level, training duration, conditions of enrolment and any perceived weakness, together with the percentage of drop-outs and their reasons.
- 4- Evaluating the nature and efficiency of the training programmes, their means of application and how they fulfil their aims and conform to technological change.
- 5- Evaluating the efficiency of the teaching and training staff.
- 6- Studying and evaluating the efficiency of training programmes in the development of manpower in the main industries and the private sector.
- 7- Studying the efficiency of methods to induce nationals to work in the technical/vocational fields.
- 8- To set up a plan of Omanization to replace the expatriate manpower at various level.

6.2 Designing of Questionnaires:

In order to achieve the objectives set for the study, a set of fourteen questionnaires was designed to cover the various population groups. For each targeted group one questionnaire was designed. Questions set to achieve various objectives were used in designing these questionnaires. Almost all of the questionnaires were in Arabic.

6.3 Target Groups:

To answer all the above questions, three sources of information have been used. The first was the statistics and previous studies carried out on manpower development topics in the country. The second was the interviews with the relevant parties. The third was the survey of target groups of people in the country.

A total of fourteen different groups of various populations, from general and technical education, public and private sectors, educationalists, inspectors, principals, employers, students and parents were selected to investigate their views on manpower development aspects.

6.4 Pilot Test and Sample Procedures:

A pilot survey was carried out to evaluate the questionnaires. It was found that most of the population groups were very small. They were, therefore, considered as the targeted population. The only three major groups which were considered as sample groups were of categories (5, 13, 14). These were :

- 5- Students enrolled in technical/vocational education.

13- Students attending ninth grade in general education.

14- Parents of students in general education.

A sample of 20-30 people of the above categories (5, 13, 14) was selected to form a sample group for each of the above population groups for the pilot test. Almost all of the targeted groups for other categories were involved in filling out the questionnaires.

6.4.1 Validity Test:

The validity test was established by submitting five copies of each questionnaire to a committee of five specialists at the University of King Saud. The specialists were asked to comment on the questions with respect to the list of variables required to be measured through the application of the questionnaires. They were also asked to check whether they fulfilled the objectives set for the survey. The comments received from the specialists were studied and questionnaires were amended accordingly.

6.4.2 Reliability Test:

The reliability test was carried out by the procedure of testing and retesting. The questionnaires were filled in by small sample groups. The responses were checked and the same group was asked to fill in the questionnaires again after three weeks. The responses were rechecked and the correlation factor between the first test score and the retest score was measured for each question

in the questionnaire. The questions for which the correlation factor was found to be unacceptable were cancelled or amended.

The reliability test was carried out only on sample groups of population in categories :

- 5- Students enrolled in technical and vocational education.
- 13- Students at ninth grade at public schools.
- 14- Parents of the students in category 13.

The reason for restricting the pilot test to these groups was simply that they were large in number. The rest of the groups involved were small in numbers. Almost all individuals of the targeted population of other categories were actually involved in the pilot test for categories 5, 13 and 14. It was, therefore, unnecessary to have a reliability test for the questionnaire concerning these groups.

6.5 Results of Pilot Tests:

The pilot instruments were administered and subsequently, those surveyed were asked to comment on the clarity of the questionnaire and the facility with which it could be completed. The major concern regarding the pilot instruments centred upon the difficulty in filling out the questionnaire for expatriates, since the instrument was in Arabic.

The findings of the pilot test showed that the following four questionnaires were irrelevant.

- 1- Questionnaires for people responsible for technical/ vocational education. This is because a very low number of people actually exists in that group. Also there is not enough distinction between this category and the category of administrators in technical/vocational education. Therefore, the two groups of population were considered as one, and the questionnaire for category (1) was cancelled.
- 2- Questionnaires to cover the population responsible for administration and employment. It was found, that there does not exist any difference between this group and the group of employers in the industries. (category 8). Therefore, the two groups were combined for the purposes of the survey.
- 3- Questionnaire that covered the directors of labour offices. This questionnaire was cancelled because such directors have a very weak role in training and employment.
- 4- Questionnaire to cover the population responsible for curriculum in general education. This questionnaire was cancelled because it was found that this category had no role regarding technical/ vocational education.

6.6 Modification of the Questionnaires:

In the light of the results obtained from the pilot test, the questionnaires were amended and were reduced to ten questionnaires only as follows :

- 1- Preparatory Student Population.

- 2- Students' Parents Population.
- 3- Administration in Technical Vocational Establishment.
- 4- Teachers and Instructors in Technical Vocational Establishments
- 5- Inspectors of Technical and Vocational Education.
- 6- Graduates of Technical and Vocational Establishments.
- 7- Employers in Private Industry.
- 8- Directors in the Government.
- 9- Students in Technical Vocational Education.
- 10- Administrators in General Preparatory Education.

6.7 Data-Collection Instruments:

The ten questionnaires were distributed to various groups of population, as indicated in 6.7 above which covered:

1- Human Aspect:

The study covered the population of preparatory stage students, parents administrators, instructors and lecturers, inspectors, vocational training graduates private sector employers, directors in the government sector, students of vocational training centres and schools headmasters.

2- Geographical Aspect:

The study covered all educational regions in Oman. The selection of the population was carried out randomly according to sector, geographical location, sex distribution and population distribution in the capital and rural areas.

6.8 Methodology on the Application of the Questionnaire and the Choice of Samples:

The questionnaires of the study were applied on individual and group bases. The group base was applied where there was a big population, for example, in the case of students groups in general and technical education. The methodology adopted was for the researcher to sit with the group of students. The questionnaire was read clearly and instructions for filling in the questionnaires were given. The researcher remained with them until the questionnaires were filled in.

The individual method was applied with the survey population whose employment or personal circumstances meant that they did not form part of a group. In distributing questionnaires it was important to include individuals who were at a good level of literacy and able to read and understand the questionnaire when explained. A future date was fixed to collect the questionnaire.

6.8.1 The choice of population to answer the questionnaire was carried out in two ways :

- 1- Where the population group was small, the questionnaire was distributed to the entire group.
- 2- Where the population group aimed at was more than the number of questionnaires, the distribution of questionnaires was made to each group according to the sector, geographical region, sex and distribution of population in towns and villages.

- 6.8.2 The researcher interviewed almost all the participants when filling the questionnaires except the categories of students and their parents, to whom the questionnaire was explained by the designated teachers in schools. These teachers interviewed the students filling the questionnaires. The questionnaires for the parents were given to the students who were asked to have their parents complete them. The detailed questions of the questionnaires are shown in Appendix - G.
- 6.8.3 The population size and sample size of participants in the present study for the Sultanate of Oman are as shown in Table - XXIV.
- 6.8.4 It will be noticed that the percentage of the respondents from the total sample size was about 78% which is a good percentage although the response level differs from one group to another. Note also that the response for each group was more than 72 % except with two groups (i) Private sector establishment employers and (ii) Directors in Government Industry.
- 6.8.5 The response for the two groups respectively was 41.46% and 22%. It seems that the reasons behind this were :
- a- Negative co-operation from the respondents. Some of the directors refused to respond. They felt it was beyond their responsibility. They were afraid of being questioned by their superiors and of divulging

Table - XXIV : Population size and Sample size of participants.

Category	Sample Size	Respondents No.	Percentage %
1. Preparatory stage School students.	80	73	91.25
2. Guardians Preparatory stage students.	80	73	91.25
3. Technical/ Vocational Education Administrators	18	13	72.23
4. Technical/ Vocational Education Teachers & Instructors.	100	81	81
5. Technical/ Vocational Education Inspectors and Supervisors.	32	26	81.25
6. Technical/ Vocational Education Graduates.	82	63	76.83
7. Private Sector Establishment Employers.	41	17	41.46
8. Directors in Government Employment Sector.	41	9	22
9. Technical/ Vocational Education Students.	78	76	97.4
10. Intermediate School Administrators.	30	23	76.7
TOTAL :	582	454	78

secrets of the organisations. The managers who were of foreign nationality were afraid of losing their jobs.

- b- The nature of central management of the administration in these industries, where decisions are mainly taken by the owners of the organisations rather than the employers.

If we neglect the response from these two groups, then the average response of the rest of the groups will be 85.6% which is a very good response. If these two groups are taken into consideration then the percentage of response will fall to 78% which is also a good response and satisfactory enough to achieve the objectives of the survey.

6.9 Statistical Approaches:

The analysis in the study was based on the following principles:

- 1- Frequencies and the frequency ratio of the answers.
- 2- Chi Square Test (and its degree of importance) to calculate the differences in the distribution of frequencies according to the classification changes of the appropriate questions.
- 3- Correlation Factor to calculate the degree of correlation between some variables.

6.10 Other Field Information:

The researcher also depended in this study on two further sources :

6.10.1 Field Research:

The researcher visited various vocational and technical establishments to familiarise himself with the group population. This also made it possible to gather first-hand knowledge of the working conditions and the problems faced in the institutions.

6.10.2 Follow-up Interviews

The researcher also interviewed part of the population on a free basis and a semi-structured basis. The objective was to ensure the validity of the results obtained from the study.

6.11 Future Manpower Requirements:

To estimate, the future manpower requirements, the manpower requirement model (MRM) developed by the World Bank was used. The projections are based on sectoral production targets as projected for the economy. The occupational requirements are then expressed in terms of educational qualifications as shown in (Appendix - H).

6.11.1 The growth of the economy was based on the growth rate figures obtained from the Development Council for the Third Development Plan (1986-1990). To get projections beyond 1990, the economic growth rate of 1990 was used as a constant for further years upto 2005. The growth rates obtained for the period (1986-1990) are as follows:

(-16.56%) for 1986, (1.38%) for 1987, (-0.65%) in 1988, (- 0.58%) for 1989, and (2.6%) for 1990. The same growth rate (2.6%) was used for further years upto the year 2005. The growth rate figures

show that there was a 16.5% decline in the economic growth rate in 1986 compared to what it was in 1985. There was a slight economic recovery in 1987. Then it decrease again in 1988 and 1989. In 1990 the economic growth rate is expected to increase by 2.6%.

6.11.2 Manpower figures for the base used (1985) were obtained from the Diwan of Affairs for the Public Sector and from the Directorate of Labour for the Private Sector.

6.11.3 The labour productivity rate in the base year for each sector was calculated simply by the following equation :

$$\text{Productivity } (P_{si}) = \frac{\text{Out put } (O_i)}{\text{Employment}^1 (E_i)}$$

6.11.4 The manpower requirement in the oil, and gas sector has not been calculated in the same way. The international market governs the prices of oil. Besides there is a very weak correlation between the quantity of oil produced (millions of barrels) to the manpower required. The estimates of manpower requirement for this sector have been obtained from the Directorate of Labour which showed a decrease of 10 % in the employment from the base year 1985 in that sector. The reason being that the government has decreased its production in recent years. Further more, it is expected that upgrading the skills of manpower in that sector will increase their productivity and decrease employment. The

figures obtained are shown in Table - XXV.

The other manpower requirement estimates obtained for other economic sectors are shown in Appendix (H).

Table -XXV : Employment in Oil and Gas Sector.

Economic Activity	1985 Base Year	1986	1987	1988	1989	1990
Oil and Gas	6,020	5,900	5,780	5,660	5,540	5,420

6.12 Student Enrolments Estimates:

6.12.1 Student enrolment estimates in general education were obtained from the Ministry of Education and Youth Affairs. The estimates of student population and graduates from various stages (Primary - Preparatory and Secondary) are based on the following assumptions:

- i- The present policies on enrolling students in various stages will remain as it is at present without any change ie. no students will be accepted in primary schools below the age of 6 years. All the students have the right to complete their studies up to Preparatory stage. The intake at Secondary level is limited to those who have obtained a 60% pass or above in their final examination at the Preparatory Stage.
- ii- The number of students enrolled in first

year of primary education will grow at a rate of 5% annually during the period 1986/87 - 1990/91 and at a rate of 4% onwards thereafter.

- iii- All the students successfully completing primary education will be accepted in the preparatory stage.
- iv- Only 65% of those students who successfully complete the preparatory stage will be enrolled in the secondary stage.
- v- The drop out rates for previous years have been used to estimate the estimated future student population. Tables - 13, 14 and 15 show the figures for the predicted student population in the various stages of the education system.
- vi- The present policy of expanding general secondary education will continue. There will be no expansion in secondary technical education governed by the Ministry of Education and Youth Affairs.

6.12.2 The student enrolments in vocational training institute (at secondary level) during the period 1987/88 up to 1999/2000 have been obtained from the Ministry of Social Affairs and Labour. The estimates are based on the following assumptions :

- The utilisation of the total capacity of the enrolment of the present Vocational Training Institutes.

- The utilisation of the capacity of enrolments in the new Vocational Training Institutes that are planned to be built in the Third Five Year Plan (see Table - 16).

6.12.3 The student enrolment at the Institute of Health was considered as 110 students annually which is the present capacity. The Ministry of Health has no plans at present to expand its capacity.

6.12.4 The enrolment figures in other institutes beyond the secondary level have been obtained from the managing authorities concerned. These include :-

- ** Sultan Qaboos University where the enrolment figures are kept constant at 600 students annually.

- ** Scholarship abroad estimates were obtained from the Ministry of Education. The intention is not to exceed one hundred new students annually, including those who wish to study at their own cost or are sponsored by their organisation.

- ** The Ministry of Social Affairs and Labour estimates that it will accept 135 general secondary graduates annually as students at the Oman Technical Industrial College (OTIC). Also, 90 extra places will be reserved for Vocational Training Institute graduates.

- ** The Ministry of Education estimates that the enrolment at the Intermediate College of

Teachers will increase from 760 students in 1987/88 to a maximum number of 1160 students in 1993/94. It is then expected to drop to 1220 students.

****** The Telecommunication Training Centre in is expected to train 70 trainees annually.

****** The enrolment capacity of the Institute of Bankers will remain at 100 students annually.

CHAPTER VII

FINDINGS AND RESULTS

7.0.0 Analysis and Findings:

To develop a new manpower development model, it is necessary to analyse the information and statistics available on subjects that are relevant to the development process. It is also of great importance to consider the main issues referred to in the previous chapter to end up with with an effective integrative manpower development model.

7.1.0 National Population and Manpower:

One of the problems that Oman faces is the lack of accurate figures of its population and national manpower. The whole range of various estimates has been discussed (See Chapter I). The Development Council is the official source in Oman responsible for publishing the figures accepted by the government. The recent figures obtained from the Council are shown in Table - XXVI.

7.1.1. The estimates are based on a sample survey carried out by the Development Council in 1985 in the major towns. The average annual increase of population was estimated at 3.5 %. This estimate is considered to be a high rate. It is expected that future years may show a decrease in population growth of around around 3%.

7.1.2 The sampling survey carried out by the Development Council showed :

i- That the national manpower (ie. 20-60 years)

age represent 38.7% of the total population.

- ii) The survey sampling showed that only 20.5% of the total population are employed economically including Police and Defence. This represent 53% of the total national population at age (20-60 years) i.e. it represents 53% of the national manpower.

Description	1985	Estimate in (1000)			
		1990	1995	2000	2005
1- Total Estimated Population.	1150	1365	1622	1926	228
2- Total National Manpower Available	445	528	628	745	885
(Male)	(222)	(264)	(314)	(372)	(442)
(Female)	(223)	(264)	(314)	(373)	(443)
3. Total National Manpower Economically Active	236	280	323	395	469
(Male)	(220)	(261)	(301)	(368)	(438)
(Female)	(16)	(19)	(22)	(27)	(31)
4. Manpower Requirement	546	494	559	641	739
5. Deficit or Surplus in National Manpower (item 4-2)	-101	+34	+69	+104	+146
6. Deficit or Surplus in Active National Manpower (item 4-3)	-310	-214	-236	-246	-270

Table - XXVI : Comparison of total National Manpower Supply and total Manpower Demand.

Source : Development Council - Oman 1987.

- iii) The survey also showed that female participation rate in 1985 was only 6.7% of the

total active manpower (see Table - XXVI). The estimates show that no increase in female participation is anticipated. These estimates are based on present trends of female participation. If Oman enjoyed rising living standards and modernisation then, a growth in female participation should be anticipated and trends of female participation are likely to change.

- iv) The age group on distribution of national population estimated from the survey is shown in Table - XXVII.

Table - XXVII : Percentage of Omani National Population According to Age Group.

Age Group	Total %	Male %	Female %
Below one year	4.75	4.7	4.7
1 - 4	15.2	15.1	15.3
5 - 9	16.2	16.5	15.9
10 - 14	11.85	12.4	11.3
15 - 19	8.8	8.3	9.3
20 - 24	7.95	7.0	7.9
25 - 29	7.05	6.7	7.4
30 - 34	5.9	5.9	5.9
35 - 39	5.25	5.4	5.1
40 - 44	4.55	4.8	4.3
45 - 49	3.5	3.5	3.5
50 - 54	3.15	3.3	3.0
55 - 59	1.75	1.8	1.7
60 - 64	2.15	2.2	2.1
65 - 69	0.85	0.8	0.9
70 - 74	0.8	0.8	0.9
75 - 80	0.3	0.3	0.3
80 - 84	0.35	0.3	0.4
Above 85	0.15	0.2	0.1
TOTAL:-	100	100	100

Source : Development Council.

The manpower requirements for the future depends mainly on economic growth. Due to the decrease in the economic growth between (1986-1990), it is expected that the total manpower requirement will decrease from 546,000 in 1985 to 494,000 in 1990. If all the Omani labour force population between the age of (20-60 years) will which amount to 528,000 in 1990, were employed, there would be a surplus of 34,000 in 1990. Unfortunately, this is not likely to be the case. The population group between (20-60) is not expected to be fully employed for social reasons (especially lack of employment for females) disability, and lack of geographical mobility. The estimates show that probably 93% of the females will not be economically active. It means that in 1990 the total Omani active labour force will be around 280,000 people with a shortfall of 214,000 to be recruited from abroad. In further years the expected manpower requirements will increase as shown on Table -XXVI. Unless, and until, the participation of the female manpower is increased or the economic growth is decreased, Oman will face a further deficit in their manpower requirement. This will necessitate a recruitment plan for expatriate workers. Other indicators of Oman's position in World Development can be seen in the following Table - XXVIII.

7.2.0 Sectoral Distribution of Employment:

The 1985 figures in (Table-XXIX) show that the Construction sector claimed a large share of total employment (30%) Agriculture and Fishing claimed another (25%). The other two sectors which had a reasonable share were Trade

and Hotel (16%) and Government service (12.4%).

Other sectors had a relatively insignificant share. The Omani work force was mostly engaged in the Agriculture and Fishing sectors (51%), Civil service (17%) and Transport and Communication (10%). While the expatriate work force was mainly engaged in Construction (49%) Trade and Hotel (23%) and Civil Service (9%).

The future manpower requirement in relation to the various economic sectors is expressed in Table-XXX. It is obvious that, due to the decrease in the economic growth during the period (1986-1990), the overall manpower requirement will be reduced. During the period (1986-1990) the overall manpower requirement will be reduced. All other economic sectors are expected to have a reduction in their manpower requirement during that period, except fishing and personal and community services. In further years, ie. from (1996-2005) an increase in the economic growth is expected. As a result, the manpower requirements will increase. From analysing the manpower requirement within the next 20 years, it has become apparent that by the year 2005 the overall manpower requirement will increase from 551.8 thousand in 1985 to 732.2 thousand. That increase in the agriculture sector will be (11.6%) fishing (41.7%), Mining and Quarrying (91.7%), Manufacturing (105.5%), Construction (16.1%), Trade (5.16%), Hotel and Restaurant (45%), Transport and Communications (95%), Finance, Banking and Business (13.3 %), Personal and Community Service (164.73%) and Government Services by (11%).

Table - XXVIII : Indicators of Omani position in World Development.

	Comparative Indicators, 1984			
	Low Income Economies	Middle Income Economies	Industrial Market Economies	Oman
Per Capital Income (US \$)	260	1,250	11,430	6,490
Manufacturing Share of GDP (%)	15	22	25	3
Per Capita Energy Consumption (Kg. of oil equivalent)	288	743	4,877	2,405
Urban Population (%)	23	49	77	27
Life Expectancy at Birth (Years)	60	61	76	53
Crude Birth Rate (per thousand)	29	33	14	45
Crude Death Rate (per per thousand)	11	10	9	14
Infant Mortality (per thousand)	72	72	9	110
Child Mortality, 1-4 years. (per thousand)	9	8	Nil	17
School Enrolment Ratio (% age group, 1983):				
Primary	91	105	102	83
Secondary	31	47	85	28

Source: World Bank Report, 1986.

Table - XXIX : Labour Force Employment by Economic Sectors 1985.

Economic Sector	OMANI		NON-OMANI		TOTAL	
	Nos. in 1000	%	Nos. in 1000	%	Nos. in 1000	%
Agriculture, Livestock and rural crafts	110	45.9	1.5	4.8	125	22.6
Fishing	12	5	-	-	12	2.2
Oil and Gas	3.2	1.3	2.8	0.9	6	1.1
Mining and Quarrying	0.5	0.2	0.7	0.2	1.2	0.2
Manufacturing	2	0.8	7	2.3	9	1.6
Construction	12.5	5.2	152.4	48.8	164.9	29.9
Trade	14.8	6.2	62.6	20.1	77.4	14
Hotel and Restaurants	1	0.4	8.8	2.8	9.8	1.8
Transport and Communication	24.1	10.1	2.9	0.9	27	4.9
Finance, Banking and Business	2	0.8	5.1	1.6	7.1	1.3
Personal & Comm. Services	17.1	7.2	26.8	8.6	43.9	8
Government Services	40.5	16.9	28	9	68.5	12.4
TOTAL :-	239.7	100	312.1	100	551.8	100

Table -XXX : Future Manpower Requirement by Economic Sector 1990-2005

Economic Sector	Base Year 1985	Manpower Requirements in 1000s			
		1990	1995	2000	2005
Agriculture, Live-stock & Rural Crafts	125	132.4	139.12	146.1	153.5
Fishing	12	15.5	16.99	18.7	20.6
Oil and Gas	6	5.4	**	**	**
Mining and Quarrying	1.2	1.7	1.87	2.1	2.3
Manufacturing	9	10.42	12.6	15.3	18.5
Construction	164.9	99.3	123.57	153.8	191.5
Trade	77.4	56.3	63.66	72	81.4
Hotel and Restaurants	9.8	11.4	12.24	13.2	14.2
Transport and Communication	27	39.2	43.28	47.7	52.6
Finance, Banking	7.1	7.3	7.65	8	8.5
Personal & Comm. Services	43.1	59.12	73.63	91.6	114.1
Government Services	68.5	60.88	65.56	70.6	76
TOTAL:-	551.8	498.88	560.19	639.2	732.2

** Unpredictable.

MPR does not depend on its products.

The percentage shown may not be particularly useful statistic in terms of manpower requirements for various economic sectors. For example, manpower in manufacturing is expected to increase by 105.5% compared to an increase of only 16.1% in construction. However, the estimated absolute number of workers required for manufacturing sector will be only 6,300 workers compared to 26,500 workers for construction sector.

The increase in the percentage just shows where the concentration of the economic growth will be. This means that sectors developing at a high rate do have a priority in development by the government. The main priority lies in Personal and Community Services, Manufacturing and Hotel and Restaurant. The Oil and Gas sector is the backbone of the economy, and therefore, it has the main priority in terms of Omanization.

7.3.0 Occupational Distribution of Employment:

The actual size of the labour force is not the only problem that Oman faces in manpower terms; another is its quality. This issue of quality is critical in developing the national labour force. According to the 1985 figures, Table-XXXI 91% of the total unskilled jobs were performed by Omanis. Omanis accounted for 33% of semi-skilled jobs. At the skilled level, Omanis' share was 31.6% for office work and 15% for technical work. At the technician level, Omanis had a good share at higher the level of 57.14%, but at the lower level it was only 18.5%. The percentage of Omanis at the non-science technician level was 40%. Their share at professional level was a poor

Table -XXXI : Distribution of Workers according to Occupational Level in 1985.

Code No.	Occupational Level	Stock of Workers in 1000s			Share of Omanis %
		Omani	Non-Omani	Total	
A-1	Professional Technical	0.6	8.6	9.2	6.52
A-2	Other Professional	4.8	8.3	13.1	13.64
B-1	High level Technician	1.2	0.9	2.1	57.14
B-2	Other Science Technician	2.2	9.7	11.9	18.49
B-3	Non-Science Technician	4.9	7.3	12.2	40.16
C-1	Skilled Office	4.3	15.1	19.4	22.17
C-2	Skilled Manual	4.4	24.8	29.2	15.7
D-1	Semi-skilled office	8.5	18.4	26.9	31.6
D-2	Semi-Skilled Manual	5.2	77.7	82.9	6.27
E	Other Semi-Skilled	97.7	128.3	226.0	43.23
F	Unskilled	102.7	10.2	112.9	90.97
TOTAL :-		236.5	309.3	548.8	43.33

6.5% for technical professional jobs and 13.6 for non technical professional jobs.

It is clear that the non-Omani work force is mostly employed at a semi-skilled level (D-2 and E). Their total number is 206 thousand which represents 66.6% of the

total non-Omani work force.

The occupational levels of the future manpower requirements up to 2005 are shown in Table - XXXII. It is noticeable that in the future the main opportunities for employment will be available at levels which require long vocational training for primary and preparatory graduates.

7.4.0 Supply of National Manpower:

Although the total Oman labour force is expected to increase from 236 thousand workers to 469 thousand in 2005, this increase will in no way will eliminate the reliance on non-Omani manpower. There are three reasons for this :

- i) The total manpower requirement in 2005 is expected to reach 739,000 workers.
- ii) Even if the government could encourage female participation and reduce the economic growth, the labour market will still have to rely (for some jobs) on non-Omanis for the experience they have.
- iii) Some jobs in Oman are not socially accepted by Omanis. In the case of females, a wider range of occupations are not acceptable for them.

7.4.1 The quality of the supply of manpower depends on the quality of vocational and training received by the individuals. The Ministry of Education has planned to increase the enrolment rates for children aged 6 years. It is expected that the enrolment rate will increase annually during the period 1986-1990) by 5%. The rate will decrease to

4% beyond that period.

TABLE - XXXII : Estimates of Manpower requirement according to Occupational and Education Level (1990 - 2005).

Code	Number 1985	Total No. of Workers Required in 1000s				
		Base Year 1990**	1995	2000	2005	
A(1)	Professional Technical (Science University Graduates).	9	7	8	10	11
A(2)	Other Professionals (Non-Science University)	13	11	14	14	16
Sub-Total :-		22	18	20	24	27
B(1	Science	14	12	13	15	16
,2)	Technicians.					
B(3)	Non-Science Technician Level. (Commercial and Teacher College).	12	11	12	13	14
Sub-Total :-		26	23	25	28	30
C(1	Skilled Level					
,2)	(Secondary Graduates)	49	37	43	50	58
D(1	Semi-skilled					
,2)	level (Preparatory Level)	110	89	105	126	150
E	Other Semi-Skilled (Primary level).	220	207	234	267	311
F	Unskilled (Agriculture/ Fishing Training only).	113	120	132	146	163
TOTAL:-		546	494	559	641	739

** (The decrease in manpower requirement (1955-1990) is due to the decrease in economic growth during that period. It is expected to increase after 1990. The estimates do not include defence and police requirements).

7.4.2 The annual growth in population is between 3% - 3.5%. The increase rate of the enrolment in education is expected to be more than the population growth rate. This will lead to an increase in the average enrolment of students in various educational stages. The new policy of enrolment will increase the number of students of the age group (16-19) from 20.4% in 1986 to 28.7% in the year 2005. Since the total percentage of the age group (16-19 years) in Oman is 38% of the total population, 28.7% enrolment represents 75.5% of the total population in that group. The rest, 24.5%, is expected to join the Vocational Training Institutes to drop-out entirely from the education system for social reasons.

7.4.3 The Working Population can be divided according to the following categories :-

- A- University Graduates.
- B- College graduates (Post secondary) and drop-outs from the university.
- C- Secondary School leavers and drop-outs from the post-secondary (College).
- D- Preparatory School leavers and drop-outs from Secondary stage.
- E- Primary school leavers and drop-outs from the preparatory stage.
- F- Any individual who did not join the schooling system and drop-outs from primary education.

7.4.4 No real estimates are available for the drop-out rates in Oman. The estimates from the World Bank on students completing the cycle and discontinuing further education through the period 1985-1995 can be seen in Tables - XXXIII and XXXIV. Given the rates of dropouts prevailing in 1985, and with no likely further improvement in those rates during period 1986-1990, over 24,000 Omani students are expected to drop-out from primary education. These drop-outs will some day be able to aspire to only the unskilled occupations. At the preparatory stage, over 17,000 students are expected to drop-out. These students may some day opt for some skilled (E) occupations. At secondary level, over 4000 students are expected to drop-out. After further training these students may be a source of manpower for jobs at a skilled level. At post secondary and university level over 2000 students are expected to dropout. These drop-outs could be a source at technician level. Unless progression rates through the ETS improve further, much the same trend is likely to continue during the 1991-95 period with numbers becoming even larger. About 34,000 Omani children are expected to drop-out from primary education, over 31,000 from intermediate level and 8,000 from secondary level. University drop-outs are expected to number over 3,500 students.

Table-XXXIII School leaver summary by course level and year for 1986 - 1990.

Course Level		1986	1987	1988	1989	1990	SUM 86-90
ELEMENTARY							
Graduate	male	862	729	985	1167	1299	5042
	female	319	374	482	595	708	2478
	Total	1180	1102	1467	1762	2007	7518
Dropout	male	2157	2207	2490	2705	2863	12422
	female	1885	2168	2487	2784	3045	12369
	Total	4042	4375	4977	5489	5009	24792
INTERMEDIATE							
Graduate	male	782	900	629	663	633	3607
	female	359	483	544	650	766	2802
	Total	1142	1383	1173	1313	1399	6410
Dropout	male	1812	1981	1993	2220	2507	10513
	female	919	1100	1296	1628	2018	6961
	Total	2731	3082	3289	3848	4525	17475
SECONDARY							
Graduate	male	687	795	1357	1425	1545	5809
	female	257	301	416	417	544	1935
	Total	944	1046	1773	1842	2089	7744
Dropout	male	387	401	478	520	576	2362
	female	226	261	320	389	461	1657
	Total	613	662	798	908	1037	4018
POST SECONDARY							
Graduate	male	159	336	415	468	483	1861
	female	105	223	267	344	422	1361
	Total	264	559	682	812	904	3221
Dropout	male	48	55	66	71	77	317
	female	17	24	30	38	44	153
	Total	65	79	96	109	122	471
UNIVERSITY ARTS							
Graduate	male	248	290	278	275	332	1423
	female	52	64	62	61	145	384
	Total	301	354	340	336	477	1808
Dropout	male	104	116	131	135	151	637
	female	19	40	61	80	98	298
	Total	124	156	191	215	249	935
UNIVERSITY SCIENCE							
Graduate	male	123	153	147	137	163	723
	female	29	35	33	24	30	151
	Total	152	188	180	161	194	875
Dropout	male	69	106	122	132	152	581
	female	26	36	41	54	63	220
	Total	96	142	163	186	215	802

NOTE : Graduate means completing the cycle and discontinuing further education.

Table-XXXIV : School leaver summary by Course Level
and year for 1991 - 1995.

Course Level		1991	1992	1993	1994	1995	SUM 91-95
ELEMENTARY							
Graduate	male	1368	1385	1410	1455	1514	7132
	female	776	822	864	908	953	4323
	Total	2144	2207	2274	2363	2467	11455
Dropout	male	2973	3050	3143	3256	3379	15801
	female	3242	3409	3572	3738	3907	17868
	Total	6214	6459	6715	6994	7286	33668
INTERMEDIATE							
Graduate	male	726	861	985	1071	1115	4758
	female	969	1203	1445	1618	1736	6971
	Total	1695	2064	2430	2690	2851	11730
Dropout	male	2883	3213	3433	3575	3684	16788
	female	2435	2851	2975	3153	3320	14634
	Total	5318	5964	6409	6728	7003	31422
SECONDARY							
Graduate	male	1708	1911	1887	2107	2479	10092
	female	623	741	874	1097	1364	4699
	Total	2330	2651	2761	3204	3842	14788
Dropout	male	616	647	722	836	949	3770
	female	543	658	816	1003	1183	4203
	Total	1159	1305	1538	1839	2132	7973
POST SECONDARY							
Graduate	male	535	591	655	718	740	3239
	female	493	622	727	861	1029	3732
	Total		1029	1214	1382	1769	6973
Dropout	male	83	92	104	111	120	510
	female	55	66	78	92	113	404
	Total	138	158	182	203	233	914
UNIVERSITY ARTS							
Graduate	male	391	388	428	472	523	2202
	female	227	280	316	406	474	1703
	Total	618	668	744	878	996	3904
Dropout	male	165	180	220	210	288	983
	female	126	149	177	211	257	920
	Total	291	329	377	420	486	1903
UNIVERSITY SCIENCE							
Graduate	male	234	276	294	328	362	1494
	female	38	47	66	81	100	332
	Total	272	323	360	409	461	1825
Dropout	male	170	189	210	218	238	1025
	female	821	96	115	136	169	598
	Total	252	285	325	354	406	1622

NOTE : Graduate means completing the cycle and
discontinuing further education.

7.4.5 The reasons for these high wastage rates are mainly that education in Oman is not compulsory and also because students drop-out for social reasons. Also, females drop-out is high due to marriage at a young age or the necessity to help the family at home.

Due to the fact that not enough places are available for students to complete their secondary and post-secondary education, students, who are not successful in joining further streams of education and training, are phased out of education and seek employment. This has become a critical situation in Oman because students are seeking employment without any appropriate skills. The problem of preparatory leavers is even serious due to their age, (15 years old) and the non-availability of jobs for those aged less than 17. The figures for school leavers from preparatory and secondary stage with no further education and training are shown in Table-XXXV and XXXVI.

Although the annual figures for the students do not seem to be too high, the accumulated figures are significant to the extent that may cause a serious problem of unemployment at the time when Oman is in great need of decreasing its reliance on non-Omanis. In 2005 the accumulated figures for dropouts from the preparatory stage is expected to reach 66113 students, while residuals from secondary stage will be 128206

Table - XXXV : Residuals from Preparatory stage with no Post-Preparatory Education and Training.

No.	Description	87-90	Number of Students			
			90-95	95-2000	20001-05	87-2005
1	Total Preparatory	28228	82463	106355	130810	345859
Distributed to :						
2	General Secondary	18851	54764	76633	94182	244430
3	Secondary Islamic	360	600	600	600	2160
4	Secondary Technical	216	360	360	360	1296
5	Secondary Agriculture	150	250	250	250	900
6	Secondary Commercial	360	600	600	600	2160
7	Vocational Training	4050	7470	7650	7650	26820
	Commercial	(1350)	(2250)	(2250)	(2250)	(8100)
	Technical	(2700)	(5220)	(5400)	(5400)	(18720)
8	Health Science	300	550	550	550	1980
9	Total (2-8)	24317	64594	86643	104192	279746
10	Residual (1-9)	3911	15569	19715	266218	66113

students. To enable these residuals to find gainful employment it will be necessary to mount short training courses.

The cost of education becomes crucial at a time when Oman is undergoing economic depression. If the present dropout rates continue and assuming that the student dropouts have an average of three years

Table - XXXVI : Residuals from Secondary Stage with No further Education and Training.

No	Description	No. of Students				
		87-90	90-95	96-2000	2000-05	87-2005
1	Secondary General Leaver	09937	33077	54631	68881	166326
2	Islamic Secondary Leaver	400	500	500	500	1900
3	Total Secondary Leavers (1+2)	10337	33577	55131	69181	168226
Distributed to:						
4	Qaboos University	1800	3000	3000	3000	3000
5	Scholarships	300	500	500	500	1800
6	Private Study	300	500	500	500	1800
7	Technical College	495	675	675	675	2520
	Business	(161)	(215)	(215)	(215)	806
	Technical	(344)	(460)	(460)	(460)	1714
8	Teacher Training	2540	5420	5980	6100	20046
9	Telecommunication Training Centre	210	350	350	350	1260
10	Banking Institute	300	500	500	500	1800
11	Total (14-10)	5945	10945	11505	11625	40020
12	Residual (3-10)	4392	22632	43626	57556	128206

of schooling at primary level, then the total money spent during

the period 1987-1990 will be :

31846 (drop-out x 253 (cost/ student/ annum)

3 years.

= 24,171,114 Rials Omani.

While the money spent on primary drop-outs during the period 1990-1995 will be 70078 x 253 x 3 =

53,189,202 Rials Omani. So, more than 24 million Rials Omani will be spent on primary stage dropouts over the five year period for the period 1986-1990 and 53 million Rials Omani during the period 1990-1995. These figures don't include the student places wasted requiring capital expenditure to provide additional facilities. Furthermore, these students will revert to illiteracy. Therefore programmes in abolition of illiteracy should be expanded and this will involve extra costs. In addition wastage of expenditure will occur on dropout from other stages. The dropout rates in technical education are also high - the cost of a student in technical education annually is around 3,000/- Rials Omani ie. more than five times a student at secondary level.

7.5.0 Results of the Survey:

The results of the survey are shown in Appendix I. The following points can be stated on the basis of the information provided by the survey.

7.5.1 Women in the Work force:

Women manpower growth in general is in equal proportion with male manpower in Oman. However, in 1985 the active female manpower did not exceed 6.7% compared to 99% for males. The survey that was carried out on manpower in Oman showed that 39.4% of directors in public and private sector believe that women have no effective role in the work force. Around 30.3% believe women can work

in secretarial and typing jobs, while 21.2% mentioned that they can only work in administration finance, public relations etc. Only 3% of the directors mentioned that women can work in the fields of draughtsmanship and other technical jobs. With regard to future employment of women in the labour market, employers felt that women are not likely to enter new fields of occupations (30%) while (33.3%) mentioned that the women will still remain in clerical work, secretarial and typing. The same percentage believe that women will also work in administration and finance. The other sectors which are seen as providing acceptable employment for women are:

i- Health Sector:

An examination of the statistics on the medical and paramedical staff employed by the Ministry of Health showed that 95% of sanitary assistants and medical orderlies were Omani in 1985, compared to only 8 percent of physicians. Also, nearly a quarter of Omani Doctors (57) and three quarters of Omani Dentists (8) were females. Omani nurses accounted for more than 50 percent. (Ministry of Health 1985 Statistical Report - Table (5.3)).

ii- Education Sector:

The Education sector is one of the most favourable sectors for women. The total num-

ber of Omani female in the labour force in the Ministry of Education in 1984 was 1,167 from a total female labour force of 3,678. This represents 32% of the total labour force. The participation rate of the female work force is increasing. This sector gives high priority to Omanization so as to replace non-Omani teachers who may come from different cultures and affect our social fabric in Oman. Furthermore, the system of having separate schools for girls in Oman has encouraged females to take jobs as teachers.

iii- Social Workers:

Community care and social service are spreading in Oman, especially in the rural areas where community development programmes have been started by the Ministry of Social Affairs and Labour. One of the obstacles that affect the scheme for social services in Oman is the lack of female participation. Due to social reasons, male social workers are not allowed by the community to do social surveys with the families in most of the rural areas. The need for more female social workers is becoming a high priority in order to implement community development programmes.

7.5.2 The Role of the Employment Office In Recruiting Nationals to Work in the Private Sector:

The survey showed that the employment offices play a very small role in recruiting Omani nationals to work in the private sector. The recruitment of Omanis is carried out by each organisation in the private sector according to its own policies. The recruitment for the public sector is mainly carried out by the Ministry of Civil Service.

7.5.3 Employment of National and Expatriate Labour Force:

Both private and public sectors have different views on the employment of national and non-nationals. 65.2% of the directors in the public sector and managers in the private sector prefer to recruit from the national work force while 34.8% preferred an expatriate work force. In addition, the survey showed that more Omani directors prefer to employ the national labour force, than non-Omani directors and the difference is their views in noticeable - 78.6% and 44.4% respectively. The advantage of recruiting national manpower was seen as part of national interest (39.5%). The other advantage lies in their stability and continuity (10.5 %). The same percentage was in favour for the sake of the economic future of the country.

The recruitment of non-Omanis put down to the non-availability of nationals in certain specialisations (20.4%). Around (19.4%) of the directors

prefer non-Omanis for their skills and experience. They also (17.2%) preferred the employment of non-Omani for their disciplined approach to work, and (15.3%) favour non-Omanis because are less costly than nationals. The high expenses involved in recruiting Omani nationals were cited by (28.6%) of the directors. On the other hand, the administrative problems involved in recruiting non-nationals was one of the main concerns of many directors (35.3%).

7.5.4 The Present Labour Market Requirement of national Labour Force:

It is interesting to find out from the survey the different views of both the public and the private sector employers regarding future manpower requirements. The public sector emphasis was mainly on technical and vocational skills (22%). The need for workers in the electric sector (Installation and Mechanical) seems to be high. (11.1%) declared that the future requirements will be for workers skilled in machines and metals. The same percentage pointed operation and plant maintenance. The response for clerical and administrative work was just (5.6%). On the other hand, the private sector employers gave high priority on administrative accounting, supervision marketing (17.6%). Laboratory Science had second priority (11.8%) while other specialisations were not seen as likely to require large numbers of

personnel. There are three main reasons for this striking difference in views on the subject of future manpower requirements:

- i- The public sector does not find difficulty in recruiting nationals for administrative jobs. Omanis prefer to work in public service for better wages, better job security and benefits and shorter working hours. Dropouts from school apply in high numbers for various administrative jobs in the public sector.
- ii- At the managerial level, graduates from Universities are bound to serve at least 2 years in the civil service as a compensation for the expenses the government has borne in educating them abroad. Otherwise, they have to repay the scholarship costs.
- iii- On the other hand, the private sector finds difficulty in recruiting nationals at higher levels for the reasons explained in (2). Moreover, drop-outs from schools are not welcomed by the private sector mostly due to the communication problem and non-availability of the appropriate skills. The modern private sector is heavily run by non-Omanis. English language has become essential in the management of the sector. On the other hand, school leavers are weak in English language.

Consequently they find it difficult to be accepted by the private sector, and even if they are accepted at lower grades, the wages offered are unattractive to them.

7.5.5 Obstacles to Omanization:

The survey showed that the main obstacles lying in Omanization are the quantity and quality of the work force. (26.7%) expressed their views that national manpower is under-skilled, under-experienced and under trained. The same percentage indicated that available Omani nationals are insufficient in number. Moreover 20% of the employers see Omani nationals as having poor attitudes to vocational work and preferring white collar jobs. (13.3%) showed anxiety over the high rate of turn over of the national labour force.

7.5.6 Teaching and Vocational Education in Oman:

Oman has experienced a rapid growth in its education system since the 1970s, but despite this expansion it has not met the manpower needs of the economic and industrial development. There were around 2500 students in technical and vocational institutes in 1986 compared to 244,259 students in general education (1%).

The responsibility for technical and vocational education in Oman lies with various organisations. Apart from the University which is an independent body, the following bodies are responsible for technical education at secon-

dary and post secondary level :

- * The Ministry of Education and Youth Affairs has the responsibility for technical secondary education (industrial, agricultural and commercial) and teacher training at post-secondary education stages.
- * The Ministry of Social Affairs and Labour has the responsibility for Vocational Education and Training at secondary level and technical education at post secondary level (Technician courses and Business studies).
- * The Ministry of Health runs the Institute of Health Science (Nursing and Paramedical courses).
- * The Central Bank of Oman run the Institute of Banking.
- * The Ministry of Posts, Telegraph and Telephone runs the Telecommunication Training Centre.
- * Companies and Industrial Establishments run their own training centres.

7.5.7 Co-Ordination among these institutes is essential. The survey showed that although at high level, co-ordination does exist through the Council of Education and Training this co-ordination is mainly limited to policy matters. The co-ordination at the implementation level is too low. The survey also showed that training in industry is not effectively supervised. Only 9.1% of the directors

felt that there is sufficient governmental supervision, while 27.3% indicated that the government has no full supervision and only carries out some sort of inspection. The same percentage said that the government body just sends circulars to the centres with no supervision, and 18.2% of the directors expressed their views in not training government supervision at the centre.

7.5.8 The Efficiency of Technical and Vocational Training:

According to the survey, personal interest in undergoing technical and vocational education is their principal source of motivation for 31.9%; while 21% began technical education in order to obtain a qualification. Only 12.3% felt that completing their studies would enable them to secure a job. Most of the students (57.6%) pointed out that the scores and marks they obtained determine their specialisation, not their personal choice. About 25.7% were influenced by other students in their selection of a specialisation. Only 16.7% showed that the selection was due to the influence of the educational institution's administration.

7.5.9 Sufficiency of the Incentive of the Technical/Vocational Institutes:

25.6% of the students see that the financial incentives offered by the technical/vocational institutes are the most important ones. Then come the other incentives, such as the availability of the social services (23.1%); while securing jobs

upon graduation seem so be a very low incentive. When the students were asked about the sufficiency of the incentives offered, 22% said that they were sufficient, while the majority felt that they were insufficient. 39.7% and 38.2% see that they were sufficient to ascertain extent.

The students felt there were insufficient financial incentives. 42.2% see the insufficiency of equipment, tools and educational aids.

7.5.10 The Extent and Reasons for Student Drop-outs in the Technical/Vocational Education Institutes:

23% of the supervisors argued that the percentage of the technical student dropout is 1-10% while the other 23% of them said it is 11-20%, but still others (23%) feel that the drop-out rates are more than 30%. The main reason for drop-outs as mentioned by the supervisors is family problems (50%) Students' laziness was quoted by 16.7% and 15.3% see it is as due to academic failure.

7.5.11 Career Plans of the Technical/Vocational Students:

23.7% of the students said they have no career plans upon graduation while the majority (59%) said they would like to work in the government. Only 9.2% said they would work in the private sector while 3.9% expressed the intention to start a business of their own.

7.5.12 Programmes Adopted in the Technical and Vocational Institutes:

A- Strengthening the Technical and Vocational Education Programme:

The largest percentage of administrators, supervisors and teachers (21.7%) felt that the emphasis on practical training is the key point in the technical and vocational education programmes. The main strengths of the programmes are: efficient and up-to-date equipment, tools, machines, new materials and methods (14.7%), up-to-date syllabi and programmes suitable to the needs of the labour market and the technological changes (10.5%), and good student guidance (8.4%).

B. The Aspects of Weakness in the Technical/ and Vocational Education Programmes:

21.7% of the administrators, supervisors and teachers emphasised in their answers the weakness of the technical and vocational education programmes in general. Other negative factors according to their answers are: Inflexible and out-dated programmes (16.7%), inefficient administration, weak guidance (12.5%) and poor equipment, materials tools and aids (10.8%).

7.5.13 The Degree of Benefit from the Theoretical Education and the Practical Training:

One third of the graduates (35.5%) maintained that the benefit from the theoretical education was

high, while more than half (59.7)% said that it was fair. Of the rest only (4.8%) said that there was little benefit from the theoretical education. (37.7%) of the graduates answered that was great benefits to be derived from the practical training. More than half of the respondents (52.5%) said it was fair. A few (9.8%) said the benefit from the practical training was little.

7.5.14 The Suitability of the Theoretical and Practical Training Duration:

A small proportion of the administrators, supervisors and teachers (4.7%) stated that the duration set for the theoretical education was more than what was needed, but most (79.9%) maintained that it was suitable to the needs. 15.4% said it was insufficient. As to the practical training duration, only (1.8%) of the administrators, supervisors, and teachers said it was longer than needed. The majority (65.2%) said it was suited to the practical training requirements. About one third (32.9%) said it was insufficient.

7.5.15 The Medium of Instruction used and that must be used in the Technical/Vocational Education Institutes:

A great number of the administrators questioned (40%) said Arabic was the only medium of instruction, while only (10%) said it was English. Half of them (50%) assured that both languages are used as the official medium of instruction in the technical/vocational in-

stitutions.

As to what medium of instruction is to be used, more than a quarter of the administrators, supervisors, and teachers (27.4%) answered that Arabic must be the only medium of instruction. Only (12.5%) said that it must be English. The majority (60.2%) saw the need to use both languages.

7.5.16 Conformity of the Technical/Vocational Educational Programmes with the Technological Changes:

25% of the inspectors surveyed felt that the teachers and instructor keep up, with new developments in their fields of specialisations through the VTI's libraries, through their supervisors and inspectors (22.2%) through the literature (11.1%), and through other means (2.8%). However more than one third of the inspectors answers (38.9) indicated that the teachers and instructors do not keep with what is new in their fields of specialisations.

When asked about the reasons of non-familiarity with the new trends and technology in their specialised fields, (34.6%) of the teachers and instructors said it was the lack of (books, periodicals and library facilities. Then come other reasons like, lack of courses and training programmes (15.4%) and poor educational inspection and guidance (11.5%).

7.5.17 Suitability of the Technical/Vocational Programme to the Labour Market Needs:

A few of the supervisors and teachers (10.6%)

stated that the technical / vocational education programmes are considered to be very suitable to the labour market requirements, but the majority (64.4%) felt that they are only suitable to some extent. Only (9.6%) of them said they did not know. 15.3% said they were unsuitable to the labour market's needs.

As to the methods of co-ordination between the different institutions concerned, the greatest number of the administrators' answers (30.7%), stated that it was done through correspondence between the technical / vocational institutions and the public and private sector institutions to ascertain their vocational needs. Then comes the co-ordination through in-service training in these institutions (23.1%). 1.7% said it was done through enlightening the trainees by information from other institutions. But (23.1%) said that there is no co-ordination between the technical / vocational institutions and the public and private sector institutions.

7.5.18 Suitability of Graduates Work to the Technical/Vocational Education They Have Had:

The professional success of the technical /vocational graduates depends greatly on whether they take up jobs in their specialisations. The vast majority of the subjects (73.3%) said that the graduate's technical/vocational education was very relevant to their work. 11.7% said it was

suitable to some extent. But 15% stated that their technical/vocational training had no relevance to the kind of work they are doing.

7.5.19 Sufficiency of the Education Aids
Used in the Technical/Vocational
Education and Training:

A small percentage of the supervisors and teachers' answers (6.7%) showed that the educational aids used in the Technical/ Vocational educational education institutions are quite adequate, while 38.5% of the answers regarded them as sufficient to some extent. But the majority, 44.2%, said that they were fair. 6.7% said they were below the required levels, while 3.8% said they were very inadequate.

7.5.20 Sufficiency of the Buildings and
Utilities in the Technical/Vocational
Education Institutions:

50% of the Technical/Vocational administrators answered that the premises are well suited for the theoretical training, while the rest 50% said they were fairly well suited for the theoretical training.

As for their suitability for the practical training, 40% of the administrators believed that they were only sufficient for the purpose, while 50% said they were moderately good for the purpose. Only 10% of them said the premises were unsuitable for practical training. Then came the issue of safety measures: 60% said the buildings and utilities conform to safety measures to a

large extent; the rest, 40% said they were moderately safe.

And as for their suitability for extra curricular activities 42.9% of the administrators said they were very suitable. The majority of them 57.1% said that they were fairly suitable.

7.5.21 Efficiency of the Methods of Students Evaluation in the Technical/Vocational Education Institutions:

The great majority of the teacher's responses (72.2%) indicated that the student evaluating methods are good indications of the students achievement upon graduation. A small proportion of the answers (15.2%) were of the opinion that these methods are unreliable. 12.6% said they did not know.

7.5.22 Efficiency of the Student Guidance Programmes in the Technical/Vocational Education Institutions:

20% of the administrators answered that the student guidance programmes in the Technical / Vocational Institutions are quite reasonable. While 40% of them said they were fairly good. A few 10%, said they were poor. About one third (30%) said there was no student guidance programmes in these institutions in Oman.

7.5.23 Sufficiency of the Technical/Vocational Institutions Teachers and Instructors:

16.6% of the Technical / Vocational education institutions administrators said the institutions suffer from shortage of teachers and instructors in

two specialisations. The statistics were identical for these two sections: the automobile section(8.3%) and metal works section(8.3%). The rest, ie.83.4% felt that the teachers & instructors quotas sufficient.

When the administrators were asked about the reasons behind the shortages in the teaching staff, it was said that the most important reason was the poor incentives for teachers and instructors (50%).

7.5.24 Percentage of the National Teachers/Instructors to the Expatriates:

20% of the respondents said that there are no national teachers and instructors at all. The majority (50%) said the percentage is 1:20 in their educational institutions. The rest of the figures were between 21% and 40%. But most of the answers assured that the national teachers and instructors in Oman represent not more than 20% of their total staff.

Two main reasons were given for the shortage of national teaching staff by the administrators. 60% of the interviewed, attributed the shortage of the teachers and instructors to their scarcity while 40% said it was the result of poor incentives.

7.5.25 The Problems faced by the Technical/Vocational/Education Teachers/Instructors and the suggestions they provide to solve them:

According to their answers the importance of the

problems came in this order:

38% students problems, 28.4% poor incentives, 20.9% insufficient facilities and equipment, 5.2% administration problems.

The solutions suggested:

25.6% to raise and increase allowances and incentives 21.7% to solve students problems, 17% to provide more facilities and equipment.

7.5.26 The Role of the Technical/Vocational Education Institution in the Development of the Teachers and Instructors:

50% of these institutions administrators state that most of the training courses are held in Oman, while 30% said they are held both abroad and in the country. Only 20% stated that the institutions do not hold any training courses at all.

In feedback on whether these courses are given to national or expatriate teachers/instructors, 12.5% of the institution's administrators said they were given to nationals only, while 87.5% assured that they were provided for the expatriate as well as to Omani national teachers. As far regards usefulness of these courses 50%, said they were very useful.

7.5.27 Availability of In-service Training in the Various Sectors:

18.2% of the interviewed assured that there are centres within the public and private sectors establishments for training nationals, while 15.2%

said that the training is carried out outside the country. The majority of the employers (57.6%) see training for nationals as disregarded and state that no training centres are available to train them.

7.5.28 The Role of the Higher Education Institutions in the Technical/Vocational Education:

The study shows that the higher education institutions have but a small role in preparing technical / vocational teachers in the country. This role is confined to the training of some workshop instructors and some class teachers.

The relation between the technical/ vocational education and the higher education in the country, as it is in all Arab countries, is weak. Such training does not represent a route to university and post-graduate education. The role of these institutions in the technical/vocational education has only two aspects of little importance:

- a- Providing pedagogical courses for the technical/vocational teachers as in the Oman Technical Industrial College.
- b- Providing the technical/ vocational institutions with some of their manpower requirements in the form of administrators non technical/vocational teachers.

7.5.29 The Criteria for the Selection for Training Abroad:

The following criteria are applied for deciding on training abroad:

- The sort of training is not available inside the country.
- The training is in a rare specialisation.
- The training is given in the same job specialisation.
- The suitability of the course of the individual's level, job requirements and methodology of the course itself.

7.5.30 Efficiency of the Criteria for the Selection for Training Abroad:

45.5% of the personnel directors at the public and private sectors in Oman said that the criteria for the selection for training abroad are moderately efficient. While 27.3% felt that they are quite efficient, 18.2% said they were very efficient. Only 9.1% were of the opinion that they were inefficient. Their inefficiency was attributed to two factors, unsuitability of the scholarships conditions (66.7%) and the poor standard of the trainees in English language (33.3%).

7.5.31 The Efficiency of the Training Course:

45.2% of the Omani graduates said that the training courses were of great value, while 42.9% said that they were fairly useful. But 9.5% felt that they were of little value. Only 2.4% said they were of no value. As regards the preference for

courses abroad or at home, 85.2% of these graduates preferred courses abroad, while the rest, 14.8%, preferred home course.

7.5.32 The Vocational Guidance in General Education and its Effects:

13.1% of the Omani intermediate (preparatory) school administrators stated that there are no students guidance programmes towards technical education. The rest of them stated that there are such programmes.

Only 4.3% of them said that these programmes are very effective. But the majority 47.8% said they are effective to some extent. 24.8% said they are effective sometimes.

As for the nature of these programmes, 19.3% said there are no programmes at all. The rest 80.7% assured that such programmes are available.

27.4% of the administrators said the programmes concern is with the students academic achievement problems, while 19.4% said they deal with the students problems with the administration and the teachers. 12.9% said the emphasis is on the behavioural and social problems of the students. They refer to the importance of having the students being aware of their vocational and future careers. 6.5% of the administrators said that these programmes, area of concern is with the extra curricula courses and the formation of activities groups.

Concerning the types of the general education students guided officially or unofficially by their schools towards the technical / vocational education. Only 8.3% of the intermediate (Preparatory) school administrators in Oman are of the opinion that there is no such guidance. The rest stated that such guidance does exist.

47.3% of them said the type of students guided towards the technical / vocational education are those who have technical / vocational tendencies, while 22.2% said that they are the academically weak students. Only 2.8% said that they are the academically good students.

7.6.0 Methods Used to Induce the National Workforce to the Technical/Vocational Jobs:

7.6.1 The Incentives:

The majority (31.9%) attributed it to the personal interest and the sense of national need. 21% cited the desire to acquire a qualification, 12.3% felt that the motivation is to secure a job. 11.6% of the students said that the parents had influence on their decision to join the technical/vocational education.

As for the incentives offered to induce the national workforce to seek technical/vocational jobs, the majority of the public and private sectors personnel managers interviewed 48.6% believed that there are financial incentives given, 31.4% and others said that there are moral incentives,

14.3% said that the establishments and factories hold training courses in office and abroad for their national employees. Also, around 66.7% feel that the incentives offered are adequate.

In comparing the views of the directors working in the public and private sectors, it was noticed that the former group feel that more allowances should be offered to nationals as incentives (40%), while the directors in the private sector emphasise the necessity to involve nationals in economic development (30%).

7.6.2 The Mass Media Role in Encouraging the Youth to Join the Technical/Vocational Education:

There are radio programmes on technical/vocational awareness. In these programmes, concerned officials are interviewed to shed light on the different specialisations, and the benefits and financial incentives for students have. The TV shows films on the VTIs in the Sultanate, and their activities and interviews their students on their opinion on the courses in these institutes and the technical/vocational professions as careers.

There are also magazines and newspapers that publish information given by training official and answer readers' inquiries. In addition, visits to the general education schools are organised by the Directorate General of Vocational Training in collaboration with the Ministry of Education

to brief the students on the significance of the vocational careers.

The Directorate General of Vocational Training holds exhibitions of the VTI's students production in the Vocational Training Institutes themselves and at exhibitions and functions.

7.7.0 Attitudes and Opinions the General Education Students of Technical/Vocational Education:

7.7.1 As the preparatory (intermediate) stage of the general education students are the main source of intake to the technical institutes and schools, a number of questions were sent to them about the different aspects of technical/vocational education. Here is a summary of their answers :

- * Many of them think that general education is more useful than technical education.
- * In spite of this they think that technical / vocational education is a guarantee for the future.
- * A larger number think that technical education will solve the problems of the foreign workforce.
- * The great majority think technical education will help the country progress.
- * The majority think that technical education gives the chance for those who cannot follow their general education.
- * Many of them think that it reduces the burden on parents.

* Many of them think that work in this field is more difficult than clerical work.

It can be said, therefore, that the preparatory school students' attitudes towards technical / vocational education are positive in general. However, when asked about their plans to undergo such training themselves, 53.5% of them said they had no intention to do so. 26% said they did not know, while 20.5% said that they would begin it. The reasons given for their reluctance were as follows :-

- 33.5% because they lack the aptitude.
- 23.2% preferred to continue their general education and then go on to university.
- 21.8% see that general education as bringing greater financial rewards.
- 10.9% because of the negative attitudes of society and the family towards technical education.

The reasons for those who wish to join it were as follows:

- 37.9% financial reasons
- 29.5% personal interest.
- 25.2% national motivation.

7.7.2 The Attitudes and Opinions of the General Education Students, Parents, and Guardians towards Technical/Vocational Education:

There is no great difference between the parents'/guardians' answers and the students' answers. They are both positive towards technical / vocational

education in general.

27% of those parents / guardians who were against their sons joining technical / vocational education said it is because they want them to continue their general and university education. 23.9% said because it is unsuitable for their son's aptitudes and talents, 13.2% said general education is economically more useful, 12.2% said the social and family opinion of technical / vocational education is low, 8.2% said they do not want them to join because of the negative opinion the society has of technical / vocational education graduates. 5.4% felt general education is more useful to the country. Other reasons represented 4.1%.

They who wish their children to join technical / vocational education gave the following reasons : 34.7% economic reasons, 27.6% patriotic reasons (technical / vocational education is more useful to the country). 19.8% because of the son's personal interest, 6.2% for their son's self development and independence and 5.3% influence of publicity, 4.2% other reasons.

7.8.0 The Technical/Vocational Education Syllabi in the General Education Curricula:

In general education curricula, syllabi and extracurricular activities, there is a great need for more effort to be made towards acquainting the students with technical/vocational education in the country.

There are no programmes in general education streams that could be considered technical or vocational, except art work and drawing lessons for boys, and house keeping, stitching, cooking and needle work for girls. But the objective of these courses is not to make the pupils aware of technical/vocational careers. They are meant as a means of recreation for the boys, and preparing the girls for their family duties.

7.9.0 Manpower Imbalances:

Given the present rate of economic growth, which is expected to rise after 1990, and with the present enrolments and progression rates of school leavers from the educational and training system, taking into consideration the low rate of female participation in employment, it is expected that Oman is likely to rely upon 150,000 non-Omani workers in 1990 to achieve its planned sectoral GDP. This would represent around 86% of the total demand - Table - XLII. Attrition rates were calculated as per World Bank estimates as follows :

A - 1	Scientific Technical Profession	4.33%
A - 2	Other Professionals (non-Science)	3.8 %
B - 1	Higher Level Technician	2.8 %
B - 2	Other Technicians	4.45%
B - 2	Other Sub-Profession (non-Science)	6.49%
C - 1	Skilled Officer Workers	16.9 %
C - 2	Skilled Manual Workers	12.7 %
D - 1	Semi-skilled Office related	12.6 %
D - 2	Semi-skilled Manual workers	14.4 %
E - 3	Other Semi-skilled	13.4 %

F	Un-skilled	14.7 %
---	------------	--------

It is also noted that with depressed economic conditions and resultant reduced total employment, the Oman share of employment is expected to improve from 43% to 64.7%, in 1990. The number of non-Omani employed at skilled manual work will be 16877 and 62566 at semi-skilled manual work. Other semi-skilled jobs will be filled by (41637) non-Omanis.

7.9.1 In the technical professional occupations, four out of five workers are projected to be non-Omanis in 1990. In skilled office occupation, the Omani share is expected to be high - four out of five are also expected to be Omanis. But we must be careful that secondary school leavers are also given access to this category of workforce since they will require special training in clerical and office practice. The highest ratio of non-Omanis will be found at the semi-skilled manual level where it is expected that nine out of ten jobs will be held by non-Omanis.

7.9.2 The vocational training institutes run by the Ministry of Social Affairs and Labour have been developed only from the preparatory to secondary level. Consequently, the only formal source of semi-skilled manual workers has been undeveloped. In the absence of special short courses or evening courses in Vocational Training Institutes, and in the absence of vigorous on-the-job training programmes, the Omani labour market will

continue to rely heavily on foreign workers at the semi-skilled manual level.

7.9.3 At the higher levels (technician & professional levels) a high share of jobs will go to non-Omanis. If further educational development at post secondary and university does not take place, then Oman will have to rely on non-Omanis at these levels, creating in the future a surplus of Omanis at skilled office levels.

7.9.4 The situation of manpower imbalances, given under the same circumstances, becomes even more bleak by 1995. While 190,000 foreign workers are expected to be needed in Oman, around 80,000 Omanis are likely to have skills unsuited for available jobs in 1995 - see Tables - XXXVII and XXXVIII.

At the unskilled occupation level, the projections show over 58,000 Omanis in excess of the demand. At the same time, nearly twice as many jobs at semi-skilled level are expected to go to foreign workers due to the shortage of properly trained Omanis.

7.9.5 At the skilled level, a shortage will be seen at the skilled manual level, while a surplus will be available at the skilled office related jobs. Therefore, it will be necessary to increase training opportunities at technical secondary level and reduce the enrolment of students in general secondary education. The Omani share in the labour market will remain in 1995 at 63 percent.

TABLE XXXVII : ESTIMATES OF MANPOWER SHORTFALLS IN 1990.

OCCUPATIONAL SECTOR	Omani Stock in 1985	Attrition During 86-90	Additions from ETS 86-90	Change Stock in 1990	Demand in 1990	Shortfall Surplus in 1990	Omani Share of Total Employment (%)	Addition in Allocated Omani Work-force
A-1 Scientific Tech. Professional	600	26	778	1352	7127	5775	18.97	
A-2 Other Professional Non-Science	4800	182	1628	6246	10983	4737	56.87	
B-1 Higher Level Technicians	1200	34	58	1224	1854	630	66	
B-2 Other Technicians Post-Secondary	2200	98	486	2588	10029	7471	25.8	
B-3 Other Sub-Professional Post Secondary	4900	318	2657	7239	10934	3695	66.2	
C-1 Skilled Office Secondary Education Vocational/Technical	4300	727	9459	13032	16019	29282	81.37	
C-2 Skilled Manual Secondary Vocational/Technical	4400	559	551	4392	21269	16877	20.6	
D-1 Semi-Skilled Office Related Preparatory	8500	1071	6473	13902	20599	6697	67.45	
D-2 Semi-Skilled Manual Preparatory	5200	749	125	9576	67566	62990	6.77	
E Other Semi-Skilled Primary + Training	97700	13092	14664	99272	140909	41637	70.45	
F Unskilled	102700	15097	34448	122051	118597	(3454)	102.9	
T O T A L	236500	31953	71327	275874	425883	153491*	64.7	4126

* Excludes project surplus Omani workers.

TABLE XXXVIII : ESTIMATES OF MANPOWER SHORTFALLS IN 1995.

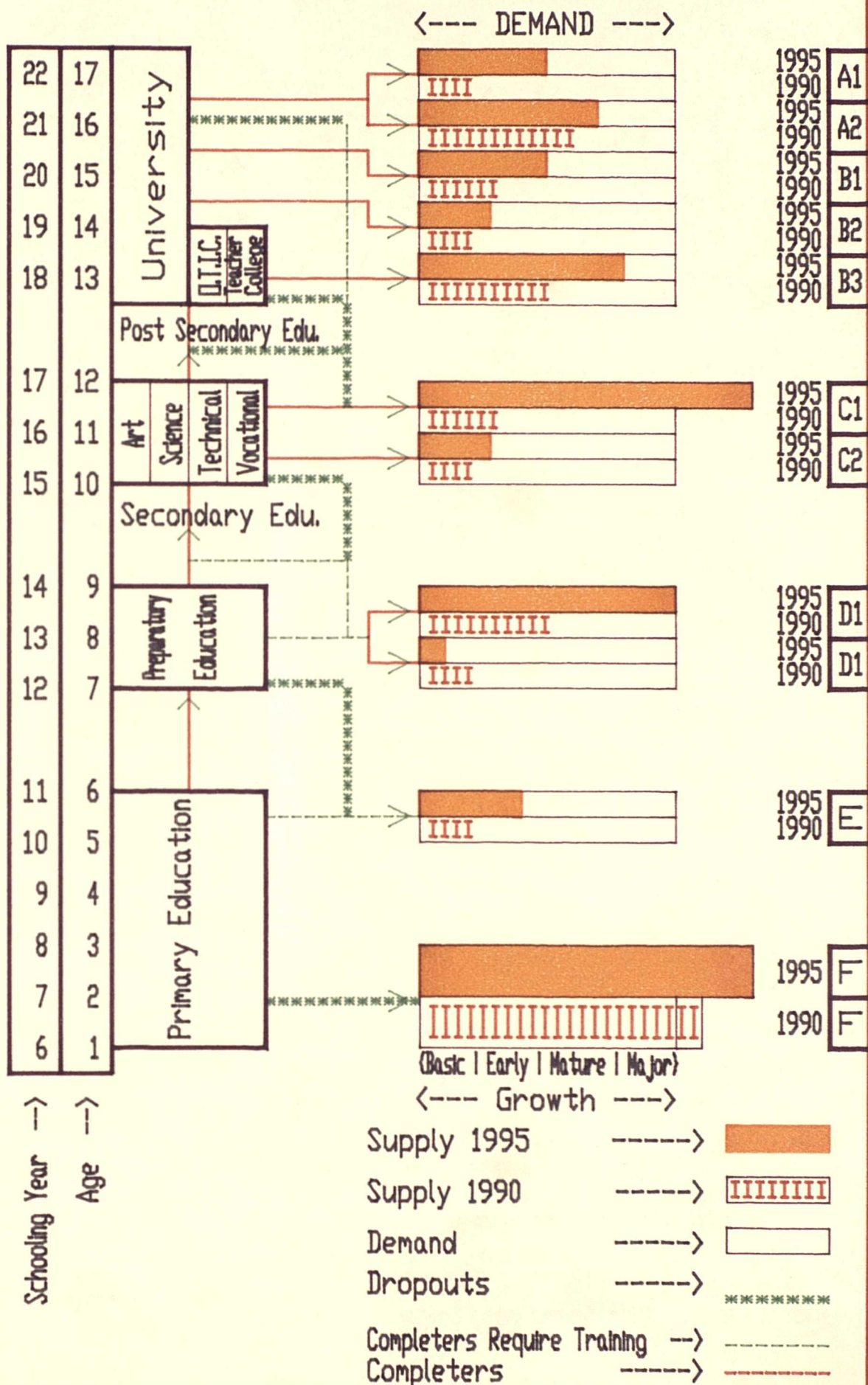
OCCUPATIONAL SECTOR	Omani Stock in 1990	Attrition During 90-95	Additions From ETS 1990-95	Omani Stock in 1995	Demand in 1995	Shortfall Surplus in 1995	Omani Share of Total Employment (%)	Addition in Allocated Workforce
A-1 Scientific Tech. Professional	1352	58	2104	3398	8220	4822	41.3	
A-2 Other Professional Non-Science	6246	273	2334	8307	12348	4041	67.3	
B-1 Higher Level Technician	1224	342	160	1042	2067	1025	50	
B-2 Other Technician Post Secondary	2588	115	900	3373	11167	7794	30.2	
B-3 Other Sub Professional	7239	470	4560	11329	11985	144	94	
C-1 Skilled Office Secondary Education	13032	2202	24732	35562	18028	(17534)	(197.3)	
C-2 Secondary Education Skilled Manual	4392	558	3180	7014	25001	17987	28	
D-1 Semi-Skilled Office Occupations	13902	1752	14700	26850	24052	(2798)	(111.6)	
D-2 Semi-Skilled Manual (Acp.)	4576	659	370	4287	81324	77037	5.2	
E Other Semi-Skilled	99272	13502	2100	88070	234075	146065	37.6	
E Unskilled	122051	17941	86584	190694	131925	(58769)	(144.5)	
T O T A L	276874	37672	141724	379926	560191	258915*	67.8	

* Excludes projected surplus Omani workers.

7.9.6 The imbalances in manpower supply and demand for the period 1995 are shown in Fig. XVIII. The future manpower requirements projected and the manpower supply expected by adopting the present policies show that they don't operate in tandem. The estimates obtained, however, can be used as indicators which assist in deriving a manpower development model.

7.10.0 To summarise, then, it is clear that much more needs to be done towards training Omanis for higher level positions of responsibility (Professional and Technical level. They need to be equipped with professional and advanced technical skills. Also, skilled and semi-skilled manual jobs are going to rely heavily on expatriates. At the same time, figures show a surplus of nationals at skilled and semi-skilled office workers. Therefore, a new manpower development model urgently needs to be adopted, to avoid imbalances between manpower supply and demand.

IMBALANCE OF MANPOWER SUPPLY AND DEMAND 1990\1995



CHAPTER VIII

MANPOWER DEVELOPMENT MODEL

8.0 It is obvious from the previous finding and analysis that Oman faces problems in its present manpower development plans. The manpower imbalances projected together, with deficiencies in education training and training for rural development, emphasise the need for a new model to assist Oman in its human resources development.

8.1 Planning Process

To develop a manpower development model, it is necessary to build up a planning process to assist in manpower planning. The model is shown in Figure (XIX). The first step in the planning process is to predict the extra labour force required to execute the development plan.

8.2 The second step is to look at the total manpower required in Oman in terms of the existing stock of non-Omanis in the labour force and the extra labour force required in step (1). The third step is to draw a manpower development model for the Oman manpower supply according to the labour market requirements. If it is found that the supply will not match the demand, then it may be necessary to decrease economic growth or draw up an expatriate recruitment plan to provide the labour market with its manpower requirements.

8.3 In developing a manpower development model, it is important that manpower and development or training programmes should be implemented in parallel with manpower planning requirements. These requirements should be up

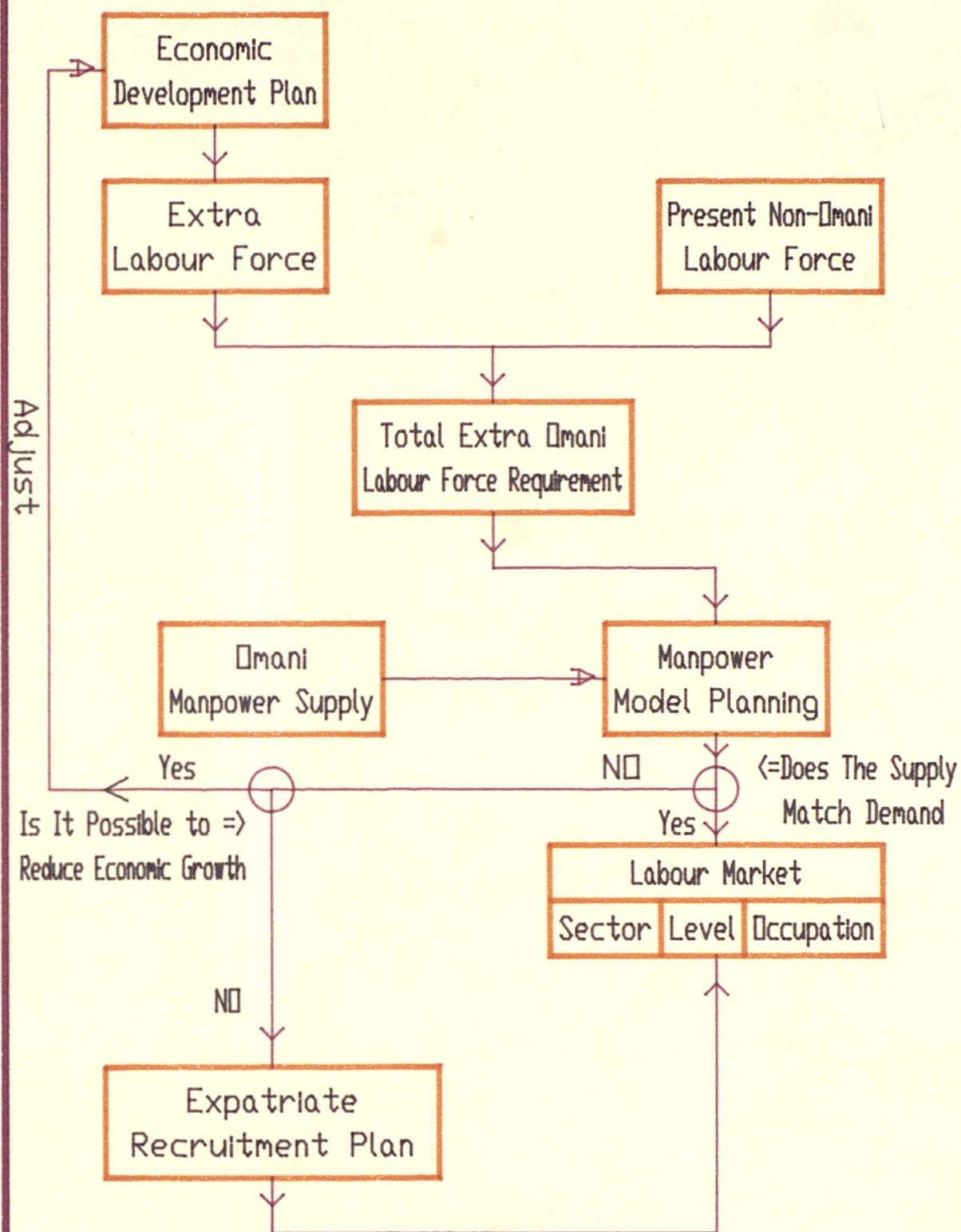


FIG: XIX
Schematic Diagram of Manpower Planning Process for Oman

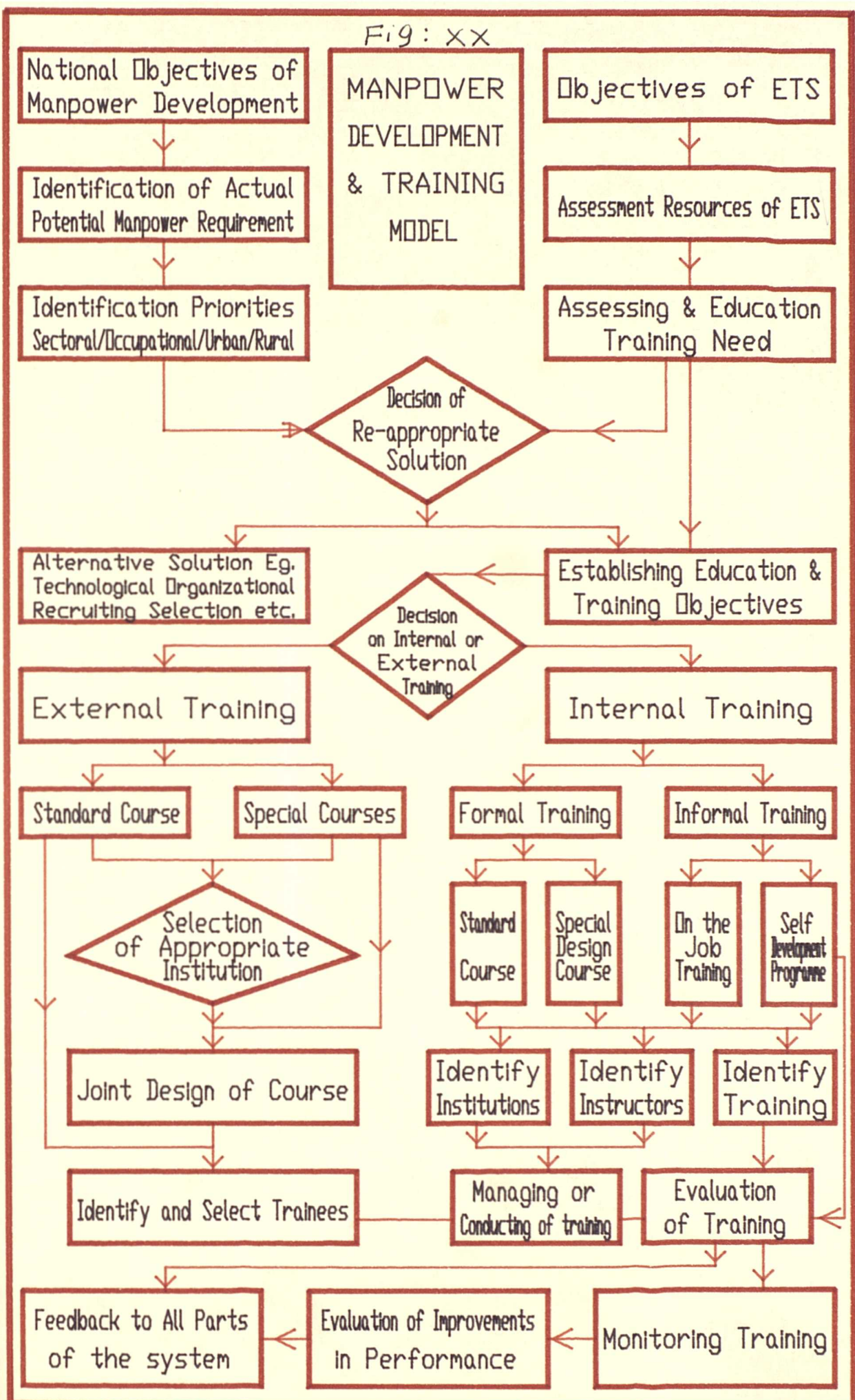
dated, so that problems revealed during the implementation of training programmes, can be analysed, evaluated and improvements in performance can be achieved for future training.

8.4 Manpower Development Model

The manpower development and training model as shown in Fig. (XX) can be designed as follows :

- i) It is necessary to have clear policies on manpower development and identify potential manpower requirements by analysing sectoral/occupational levels in urban and rural areas.
- ii) The objectives of educational and training systems should meet the national objectives of manpower development in Oman, and the philosophy of education and training should be developed accordingly.
- iii) Before assessing education and training needs it is necessary to assess the resources available in the educational and training system.
- iv) The manpower requirements, together with the assessment of training needs, will require appropriate decisions, taking into consideration other alternatives that may assist in overcoming some problems of manpower, such as introducing new technology in industry, restructuring organisations, recruitment and selection procedures, etc.
- v) The establishment of education and training objectives is necessary before the decision is taken on whether training is to be external or internal.

Fig: XX



- vi) Internal training may be formal or informal. Whatever type of training is required, the identification of institution, instructor & type of training should follow.
- vii) External training may be standard or by course. The external institute involved should be involved in the design of special courses.
- viii) What ever type of training programmes are adapted, it is essential to have a good evaluation of the out-put of the programmes. Management of training should also become an important element in the process.
- ix) Monitoring of training will lead to the evaluation of improvement in performance, and feedback received from the evaluation should be made available to all parts of the system, so that appropriate development of the system can take place.
- x) It is not practical for a remote office administration to draw up training programmes since they are not in contact with the day-to-day problems which a training programme should faces. Therefore informal training should be one of the priorities in the coming years in Oman, i.e. On-the-job training.

8.5 To develop a manpower development model, it is necessary to build up priorities for Omanizing various sectors of the economy and at various post levels. Setting the priorities involves many factors, but some must be considered essential to the success of the plan. In the

Omani context, the following factors are seen to be of importance:

- i) The sectors of the economy which are seen by the government as very important, are those sectors which have priority for economic development. The future employment growth in these sectors should be taken as an indicator to define priorities - Table - XXXIX.
- ii) The present Omani participation-rate in various sectors. The less the participation rate, the more the emphasis for Omanization is required.
- iii) The attitudes of Omanis towards employment in various economic sectors and at various occupational levels. This is important to consider especially at the early stages of development, to avoid high attrition until the attitudes and expectations of Omanis are changed due to vocational and career guidance and working life experience.
- iv) Special consideration should be given to the development of the skills of women for jobs which are not only acceptable to them, but are also accepted as appropriate female jobs by employers. This will encourage more participation of women in the labour market and decrease reliance on expatriates.

8.6 The management of human resource development is influenced by external factors that affect its operation and results. These influences may be political

TABLE XXXIX : MANPOWER REQUIREMENT AND ITS GROWTH

S E C T O R	Manpower Requirement in 1000s and Percentage of Increase								
	1985	1990	(%)	1995	(%)	2000	(%)	2005	(%)
Agriculture and Fisheries	137	147.8	7.9	156.11	5.6	146.1	(.64)	153.5	5.0
Oil and Gas	6	5.4	(-10)	-	-	-	-	-	-
Mining and Quarrying	1.2	1.7	41.7	1.9	11.8	2.1	1.5	2.3	9.5
Manufacturing	9	10.4	15.6	12.6	21	15.3	21.4	18.5	21
Construction	164.9	99.3	(-40)	123.6	24.5	153.8	24.4	191.5	24.5
Trade	77.4	56.3	(-27.3)	63.7	13	72	13	81.4	13
Hotels and Restaurants	9.8	11.4	16.3	12.2	7	13.2	8.2	14.2	7.5
Transport & Communications	27	39.2	45	43.3	10.5	47.7	10.1	52.6	10.3
Finance and Banking	7.1	7.3	2.8	7.6	5.3	8	5.3	8.5	6.2
Personnel & Com. Services	43.1	59.12	37	73.6	70.8	91.6	24.5	114.1	24.6
Government Services	68.5	60.88	(-11.1)	65.6	7.8	70.6	7.6	76	7.6
T O T A L	551.8	498.88	(-9.6)	560.2	12.3	639.2	14.1	732.2	14.6

cultural or social. In designing the manpower development the following facts have to be considered.

- That education is the right of all Omani nationals up to preparatory level (9 years of education).
- The plan to diversify education after preparatory stage should be based according to manpower requirements, and not on the number of places available in educational institutions. If places in general secondary education at any stage are seen to be more than the manpower requirements at post secondary level, then ultimately they should be reduced and resources diverted to meet the real manpower needs.
- The manpower development model should be based on estimates already discussed. A rolling plan should be adopted to evaluate the manpower planning process adjust the development programme, and when necessary, to achieve the manpower requirement targets in quantity and quality.

8.7 Priorities of Training

The priorities for the Omani labour market, according to the guidelines, set above, will be as follows :

I. Agriculture and Fishing:

This sector is an important sector of the economy to be developed for the future. There are no moves to encourage the agriculture sector to grow at present, primarily due to shortage of water resources and the inexistence of any fruitful subsidiary scheme to encourage development. Fish-

ing is one sector which is expected to be developed rapidly. The government has taken steps to encourage the development of this sector. The agriculture and fishing sector mainly depend on unskilled and semi-skilled manpower (ie. category E and F). Since the manpower for these categories is supply by people who have not joined the schools or are drop-outs from primary education, then two necessary steps are necessary to provide this sector with most of its requirements:

- Include practical programmes on rural activities in schools related to rural economic and environmental needs. Mobile workshops could be used to visit schools and run special programmes to decrease the cost of running these programmes.
- Community development programmes and women's societies along with government agriculture extension farms can assist in running programmes directed towards of job-literacy for adults. National training centres could play a major role in training on maintenance and repair of agriculture and fishery machinery and equipment.

II. Oil and Gas Sector:

Oil is the backbone of the economy in Oman and it will remain so for several years. This sector is well established and the wages are attractive to Omanis who like to work in this sector. Due to

Table - XL : Employment of Nationals and their participation rate in various economic sectors
(Source : MOSAL - 1987).

SECTOR	NATIONAL Nos	Rela- tive %	NON-NATIONAL Nos.	Rela- tive %	TOTAL Nos	Rela- tive %	Omani Partici- pation Rate %
Agriculture	110000	45.9	15000	4.8	125000	22.6	88
Fishing	12000	5	-	-	12000	2.2	100
Oil & Gas	3200	4.3	2820	0.9	6020	1.1	53
Mining and Quarrying	450	0.2	670	0.2	1120	0.2	40
Manufacturing	2000	0.8	7020	2.3	9020	1.6	22.2
Construction	12520	5.2	152380	48.8	164900	29.9	7.6
Hotels and Restaurants	950	0.4	8760	2.8	9710	1.8	9.8
Transport & Communication	24130	10.1	2930	0.9	27060	4.8	89.2
Finance and Banking	2000	0.8	5090	1.6	7090	1.3	28.2
Personal and Comm. Service	17130	7.2	26820	8.6	43950	8	37
Public Service	40500	16.9	28000	9	68500	12.4	59.1
TOTAL :	239650	100	312100	100	551750	100	43.4

the depressed economy and fall in oil prices, it is expected that the employment in this sector will fall by around 10%. According to 1987 figures, the Omani participation rate was around 53%. This sector relies mostly on a professional, technical and operative labour force. A high percentage at high middle management level is required. The obstacle to Omanization in this sector at

the management level is communication problems. Therefore, intensive English language courses are necessary to enable better rates of Omanization in this sector - Table - XL.

III. Mining and Quarrying:

Although the sector is important, the employment rate is low compared to other sectors. It depends mostly on semi-skilled and skilled operative workers. Special adult pre-service training courses could be mounted as to recruit Omanis into this sector.

IV. Manufacturing:

In the coming years, this sector is expected to grow rapidly. The government in its development plan has put great importance on this sector as a future source of income. This sector is expected to double its work-force. According to 1985 figures, the Omani participation rate in this sector was low -22.2%. More Omanis are required to be trained to join this sector. The detailed study on the manpower situation in this sector carried out by the Ministry of Social Affairs and Labour suggests that about 86% of the work force in this sector are production workers, operators of transport vehicles and other equipment. Highly specialised workers, professionals and technicians, constitute about 4.1 percent followed by sales workers, 4.1 percent, clerical workers, 2.8 percent, service workers, 1.6 percent and manage-

ment workers 1.0 percent. Special programmes could be designed to give training in required skills. Most of these programmes could take the form of on-the-job training preceded by pre-service courses or sandwich courses in the VTIs or Colleges.

V. Construction:

The majority of employment opportunities in Oman exist in this sector. In 1985 this sector employed 54% of the total labour force in Oman. However, the Omani participation rate did not exceed 8%. This sector is unattractive to Omanis. It is predominated by non-nationals who work at low wage levels. Construction jobs are mostly manual and such work demands a particular work orientation which Omanis find difficult to adopt. To increase Omanization in this sector, further steps should be taken to encourage employment opportunities at the Work at this level is accepted by Omanis, and is hoped such a development would encourage more Omanis to work at skilled and non-skilled levels in this sector.

VI. Trade, Hotels and Restaurants,
Finance and Banking:

These three sectors are expected to grow significantly. The government already already has plans to develop tourism which will encourage the business in hotels and restaurants. The banks have been given a deadline by the Central Bank of Oman

to Omanize the staff in the banking sector at a level not less than 90% by 1991. Omanis wish to work in these sectors, as they provide white collar jobs. It is essential to develop more specialised business studies courses at secondary and post secondary education to give omanis the required skills for these jobs.

VII. Transport and Communication:

The participation rate of nationals in this sector is quite good. In 1985 it was 89.2%. By the year 2005 employment opportunities are expected to double (as compared to the number of jobs in 1985). Most of the work-force in this sector are drivers. The non-nationals are mostly engaged as heavy vehicles drivers or machine operators. Special arrangements could be made to train Omanis in these jobs to replace expatriates.

VIII. Personal and Community Services:

This sector has a high priority socially for Omanization. Its main two sub-sectors are Education and Health services. The expansion in teacher training colleges at post-secondary level will make possible the replacement of expatriate teachers at primary level. The capacity of the College of Education at Qaboos University is presently limited. It is important to expand this capacity to produce more teachers at post-primary levels. It is also important that the University and Teacher Training College cooperate closely so that

more graduates of the Teacher Training College can continue their studies at the University. Oman Technical Industrial College should also mount special courses to train instructors to make it possible to Omanize the teaching staff in the Vocational Institutes. Courses are also required at the technician level for paramedical and laboratory technicians for the hospital. Expansion will also be necessary at the college of medicine at Qaboos University.

IX. Public Services:

In the past, this sector has recruited Omanis. At present, the Omani participation is 50%. Expatriates mostly occupy technical jobs. Omanis need to be given specialised training and incentives to take over these jobs.

8.8 The survey of the manpower situation in various sectors reveals the importance of identifying priority areas. The next step is to establish desired Omanization rates for each sector. The scenario of priority could be looked at from different levels, high (H) medium (M) and low(L). High areas mean that priority for Omanization should be given urgent consideration and the period for Omanization should be as short as possible. It is difficult to say that Omanization should be 100 percent, but, taking maximum account of the public interest, a target percentage could be set by policy makers.

The priority matrix for Omanization in various sectors is shown in Table - XLI.

Table (XLI) : Matrix of Priority Level for Economic Sector for Omani Labour Market.

SECTOR	OCCUPATIONAL GROUP									
	A 1	A 2	B 1	B 2	B 3	C 1	C 2	D 1	D 2	E F
Agriculture and Fisheries	L	H	L	H	L	L	H	L	H	H
Oil and Gas	H	H	H	H	L	L	H	L	L	L
Mining and Quarrying	H	L	H	M	L	L	H	L	L	H
Manufacturing	H	H	H	H	L	L	H	L	M	H
Construction	M	H	H	H	M	H	H	L	M	H
Trade	L	M	L	H	L	H	L	L	L	M
Hotels and Restaurants	L	H	L	M	L	M	L	L	L	L
Transport and Comm:	L	L	H	L	L	M	H	L	M	N
Finance and Banking	L	H	L	H	L	L	M	L	L	L
Personal and Community Services	H	L	H	L	H	H	H	M	H	L
Public Service	H	M	L	M	H	M	L	H	L	H

Note: * Surplus is expected beyond 1990. Diversification is necessary to other levels.

** Surplus is expected beyond 1995. Diversification or upgrading the graduate is required.

8.9 Omanization Process

It is clear that a formula is needed to estimate the desired numbers of Omanis to be employed any occupational group (especially those which are deemed essential) as professionals, managers, technicians and semi-skilled

and manual workers. The projection required in terms of Omani employment share could be derived through the following compound growth formula, assuming Omani employment in any sector is required to grow at rate r_1 over the next five years and expatriate employment to be $M_1(t)$ at any time t . And $M_1(0) \exp (r_1 \cdot t)$ where $M_1(0)$ is Omani employment at time $t=0$.

Omani employment at time $t = 0$. Likewise expatriate employment at time t in $M_2(t) = M_2(0) \exp (r_2 \cdot t)$. Total employment at any time $M(t) = M_1(t) + M_2(t)$. Each component of the total growing at the specified compound rate of growth. Then the following algebraic manipulation applies :

$$\begin{aligned} M(t) &= M_1(0) \exp (r_1 t) + M_2(0) \exp (r_2 t) \\ P_1(t) &= \frac{M_1(t)}{M(t)} = \frac{M_1(0) \exp (r_1 t)}{M_1(0) \exp (r_1 t) + M_2(0) \exp (r_2 t)} \\ &= \frac{1}{1 + \frac{M_2(0)}{M_1(0)} \exp (r_2 - r_1) t} \end{aligned}$$

Where P_1 is the proportion of Omani employment in total total employment $M = M_1 + M_2$

It can be seen that $P_1(t)$ decreases or increases as r_2 is greater or less than r_1 . If $r_2 = r_1$ than:

$$P_1(t) = \frac{1}{(1 + \frac{M_2(0)}{M_1(0)})}$$

This is a very simplistic approach to relate employment to various other structural features of the economy.

- 8.10 The Omanization for any sector and level could be based on this formula assuming the number of years that would seem reasonable by the planners to Omanize that sector.

9.0 Recommendation and Conclusion:

9.1 Management and monitoring of training is one of the most important of manpower development in Oman and needs to be examined carefully. It is too expensive to have different ministries supervising technical education and training in Oman.

A centralised independent organisation with clear and sufficient co-ordination with public and private sector could be a means of developing the manpower development system in a rational manner.

9.2 It should be clear, that any model implemented for manpower development should take into consideration the social aspects of employees and trainees with special consideration to training for rural development.

9.3 The success of manpower development will also depend on other conditions in the labour market, such as training facilities, cost effectiveness and employees' attitudes. Therefore, the following aspects of the problem should be observed and developed.

9.3.1 It is necessary also to have accurate data on population and other related labour market information. It has been stated that the Sultanate is going to conduct a comprehensive household population survey for Oman with the assistance of the United Nations Development Programme. This would be very welcome and will help enormously in plans to rationalise the situation in the Omani labour market. It is hoped that once it is completed, a repeated periodical exercise should be

carried out before the operation of the economic development plan. That is to say, the exercise should be carried out every five years before the Five Year Development Plan is implemented. .

- 9.3.2 It is also necessary to improve the quality of education and increase the efficiency of the educational and training systems. Reducing dropout rates and improving the quality of education and training will lead to a better prospect of employment for the school leavers.

Special short-term programmes and on-the-job training are necessary to upgrade the skills of Omanis. The levy rebate scheme run by the Ministry of Social Affairs and Labour as per the Ministerial Decree 10/1978 should be reconsidered to encourage the private sector to train more Omanis.

- 9.3.3 To reduce the cost of education the following proposals are to be looked at :

- i) Make primary education compulsory for all children at the first stage, then extend it to all states when facilities and staffing levels are sufficient.
- ii) Make preparatory education compulsory for males at the first stage. This will allow the school leavers to be accepted in the labour market as apprentices when full schooling at preparatory stage is complete. In further years the preparatory stage can

be made compulsory for both sexes.

- iii) High level screening of curricula and syllabi should be carried out at preparatory level to ensure that inputs at the secondary level match the needs of the country at technical and professional levels.
- iv) The technical schools and vocational institutes should co-ordinate their educational and training activities. Students who wish to proceed further from preparatory should be directed to join these institutes for obtaining specialised job-related skills.
- v) The Vocational Institutes should not concentrate only on long term training courses. The work of these institutes should be varied so that can offer short-term intensive training courses and day-release training.
- vi) Also, students joining the Vocational Institutes could be geared at an early stage to be a part of industry. Part of the cost could be borne by industry, subject to the proviso that the trainee will work in that industry for a certain period.
- vii) With regard to women, special courses could be mounted to train them for jobs accepted by them and helpful for the economic sector ie. as administrators, clerks, typists,

cashiers, saleswomen, secretaries etc.

- viii) Special arrangements should be made to teach some vocational courses at the general secondary and preparatory stage. These courses should be part of general education. The school in the urban areas should concentrate on more industrial type courses, while in rural areas the courses should be rural oriented. This will help the drop-outs to have some skill to assist industry and participate in social and economic development.

9.3.4 Attention should be given to wage structures in the public and private sector. The imbalance of the wage structure in the two sectors discourages Omani nationals from working in the private sector. The private sector plays a big role in the economy. It is a free market. Until the government takes the necessary steps to control its wage structure, the reality will be that the private sector will depend heavily on low paid non-Omanis and create unemployment for nationals. Certain proposals could be looked into :

- i- Reduce the wage structure in the government sector and develop a set of minimum wages for the private sector. At present, the only minimum wage structure available is for unskilled workers. It is essential that a minimum wage structure be enforced for semi-

skilled, skilled, technician and professional levels in the private sector.

- ii- A minimum progressive Omanization rate should be imposed on private industries and companies. It could be 10% annually. No permits for employing non-Omanis should be given, until and unless the industry fulfils the Omanization requirements.
- iii- Industries should be encouraged to train Omanis through an appropriate levy-rebate scheme.
- iv- Incentives could be given to industries and companies which employ high proportion of Omanis. Omanization should be considered one of the factors in evaluating the industrial loan released by the government (Oman Industrial Bank to industry). Also in evaluating tenders, Omanization should be considered as a factor in awarding contracts.

9.3.5 Technical/vocational education should be evaluated for its future role in developing nationals. The programmes should be well structured according to the needs of industries. More collaboration is required between the institutes and industry. The expectations of students in the training centres are too high with regard to the salary levels after completing their courses. Vocational and career guidance is very necessary, especially in early

stages, to mould the students towards the conditions and circumstance of both the teaching and his ultimate industrial working environment.

9.3.6 Omanization of teaching staff is essential. The majority of teaching staff are non-Omanis. They affect the common culture. This sector should be given a high priority. It is essential to motivate the nationals to join the teaching profession. It may be necessary to offer special allowances for teachers until Omanization has reached a good standard. In-service training programmes for the existing teaching work force is necessary to update their knowledge and skills.

9.3.7 It is necessary to evaluate the existing methods of testing and testing standards to assure their appropriateness to the objectives and context of the education and training offered. The Ministry of Social Affairs and Labour has made plans to build an upgrading and skilled trade test centre in the industrial area of the capital. It is very important that this centre should have very close links with industry and follow up the development of courses and trade testing in other training centres.

9.3.8 The development of a manpower planning unit in the Ministry of Social Affairs and Labour is essential. The prospects of balancing the manpower supply and demand will left to chance, if a continuous overall rolling-plan is not made. Such a unit will enormously strengthen the overall efforts to raise the

level of manpower planning in Oman.

9.3.9 The imbalances pointed out and suggestions put forward will require difficult policy decisions. Some would involve short-term costs, others may have long-run costs. It is not an easy decision, but one must remember the fact that the reliance on non-Omanis will increase, if no further steps are taken to Omanize the work force. In 1995, 250,000 non-Omanis are expected to be in the labour market, assuming the average annual remittance here from a non-Omani worker of RO: 1,500/-, that would also represent an outflow of RO: 375 million per annum. Therefore, it is necessary that steps should be taken by different authorities to press forward with plans for Omanization.

9.3.10 The development in rural areas faces great difficulties due to rural urban migration. It is essential to insure that the problems of migration be looked at very carefully and the authorities do their best to assure a better quality of life in the rural areas. The education and training system should be geared to the needs of the rural economy.

9.4 Manpower development is a complex process. The success of manpower development in Oman requires effort and co-ordination between different organisations. It is very easy to speak about a manpower development and training process. To overcome the problems, clear objectives, policy decisions and careful implementation are necessary. If enough resources are planned for education and training

systems, then the success of manpower development will depend on the Ministries responsible for education and training. The key factors to be looked at are the dynamics of the labour market and the social aspects of the question.

9.5 The survey carried out showed a lot of inadequacy in the ETS system - the incentives, the resources, students' expectations, curricula, teaching staff etc. In Oman, the development of the three dimensions (Substance, Process and Structure) has at different rates. The diagram illustrates the situation. The ETS has developed its substance (Schools, Staff etc.) to approaching a mature stage at which its growth rate is likely to begin levelling off. The system's structure dimension (organisation characteristic of the system) is lagging behind as it is still at an early stage of growth. This may be due to the rapid expansion in the system's substance. The process function is behind its expected levels of development. Still it is in the basic growth rate which affects the effectiveness of the ETS system.

9.6 To overcome the manpower development problems in Oman, the education and training systems should be viewed as a complex dynamic system consisting of inter-related parts of with containing these elements:

[a] Substance

It means that the system should have physical reality, i.e. as appropriate schools, teaching staff and other financial resources.

[b] Structure

It means that the ETS system in Oman should have formal and informal structures in both the main Ministries, Education and Labour. Close co-ordination should take place at all levels to ensure best possible input and output of the ETS system.

[c] Process

This means the system should function and change dynamically. It should generate and transform outputs according to social and economic requirements. Therefore, policies, procedures and planning should be the key factors to be looked into in assessing the dynamics of labour and manpower requirements. At present the following pattern exists (Fig XXI). It is important to ensure that development of the system is integrated dynamically to reach its utmost growth and achieve its objectives.

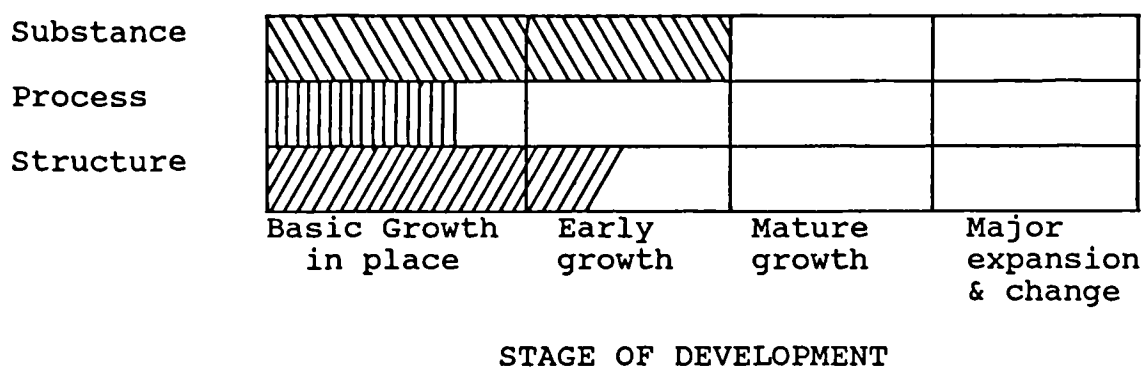


Fig (XXI) : Development of Education and Training System in Oman.

ABBREVIATIONS

- | | | |
|-----|--------|--|
| 1) | ALESCO | Arab League Education, Science and Cultural Organization |
| 2) | ALO | Arab Labour Organization |
| 3) | ETS | Education and Training System |
| 4) | HMSO | Her Majesty's Stationery Office |
| 5) | ILO | International Labour Organization |
| 6) | IPA | Institute of Public Administration |
| 7) | MOEY | Ministry of Education and Youth |
| 8) | MOH | Ministry of Health |
| 9) | MOSAL | Ministry of Social Affairs and Labour |
| 10) | MPU | Manpower Planning Unit |
| 11) | OIB | Oman Institute of Bankers |
| 12) | UNESCO | United Nations Education, Social and Cultural Organization |
| 13) | VTI | Vocational Training Institute |

BIBLIOGRAPHY

- Abdel Dayem, A., 1975, "The Changing Arab World", Education on the Move, 24-28, UNESCO.
- Abdel Mo'ty, Abdul Basit, 1983, Effects of Expatriate Employment on Social Aspect, Arab Manpower Institute, Kuwait.
- Abdel Mo'ty Yusuf, 1984, Nation Exposed to Danger, Arab Bureau of Education for the Gulf States, Riyadh, Saudi Arabia.
- Al-Aidroosy, O.A., 1982, "Manpower Between Universal and Stageous Planning", Al-Itihad Magazine, Issue dated 10-6-1982, United Arab Emirates.
- Ackoff, A.L, and Gupta, S.K., "Scientific Method Oppionionizing Applied Research Decision", New York.
- Agarwal, S.P., 1969, Manpower Demand Concepts and Methodology, Meenakshi Prakashan, India.
- Agarwal, S.P., 1969, Manpower Supply Concepts and Methodology, Meenakshi Prakashan, India.
- Ahuja, Y.L., and Birks, J.S., 1982, "Some Characteristics of Labour Importing : A Comparison of the Sultanate of Oman with Other Arab Oil Exporting States", MOSAL - Oman.
- Ahuja, Y.L. and Birks, J.S., 1982, Manpower and Development in the Sultanate of Oman, Report No. 1, MOSAL - Oman
- Ahuja, Y.L. and Birks, J.S., 1983, Labour Imports : Qualitative and Quantitative Aspects of Non-Omani Employment in the Sultanate of Oman, MOSAL - Oman.
- Alesco, 1985, Technical Education in Arab States", ALO, Tunisia.
- Alex, S. (Sir), 1982, "The Relationship Between Education and Industry" (Based Upon a Talk by Sir Alex Smith, Education Arabia Conference 22-24 March 1982, Saudi Arabia.
- A.L.O. 1982, Social Affects of Manpower Migration in Arab Countries A.L.O., Baghdad.
- Arab Labour Organization, 1982, Seminar on the Strategy of Arab Manpower Development 4 - 6 December, 1982 - Arab Labour Bureau, Baghdad.
- ALO 1982, Arab Manpower and its Development Aspect, A.L.O., Baghdad.
- Baghdad University, 1980 p. 19, Papers on Seminar on Economic and Social Developments Aspect in Arabian Gulf, Baghdad University, Baghdad.

Blaug, M., Peston, M. and Ziderman, A., 1967, Utilization of Educated Manpower in Industry - A Preliminary Report, Oliver and Boyd, Edinburgh.

Blaug, M. 1973, Education and the Employment Problem in Developing Countries, I.L.O., Geneva.

Blaug, M. 1980, An Introduction to the Economies of Education, Penguin Books, London.

Blaug, M., 1980, The Methodology of Economics, Cambridge, University Press, UK.

Birks, J.S. and Sinclair, C.A., 1980, Arab Manpower - The Crisis of Development, Crown Helm, London.

Birks, J.S., 1982, Counterpart Training within the Directorate of Vocational Training, MOSAL - OMAN.

Birks, J.S., 1983, A Study of the Sultanate of Oman's Workforce : Dimensions, Characteristics and Future Trends, MOSAL - OMAN.

Birks, J.S., 1983, The Impact of Non-Omani Teachers - A Labour Market Perspective MOSAL - OMAN.

Birks, J.S. and Issa, M., 1983, Education, Training and Manpower Needs in Oman - Overview and Leading Issues - Report Number 4, MOSAL - OMAN.

Birks, J.S., 1984, The Kuwaiti Labour Market - Some Lessons for Oman - Document Number 26 MOSAL - OMAN.

Birks, J.S., 1984, A Human Resource and Labour Market Development Strategy for the Sultanate of Oman - MOSAL - OMAN.

Birks, J.S. and Issa, M., 1985 Development in the Sultanate of Oman : Progress Through Investment in Human Resources - MOSAL - OMAN.

Boissiere, M. and Issa, M., 1985, Estimates of Trends of Omani Employment in the Modern Sector, Manpower Report 685 - Ministry of Social Affairs and Labour - Oman.

Boissiere, M. and Issa, M., 1986, A Report on Increasing Omani Employment in Manufacturing Firms Receiving Loan Support of Decree 83/80, MOSAL - OMAN.

Brown, Edward Kinard, 1978 Foundation of Educational Evaluation, Philadelphia, USA.

Chorley, R.J., 1964, Geography and Analogue Theory, Annals of the Association of American Geography, 54, 127-132, USA.

Davis, R.G., 1966, Planning Human Resource Development - Educational Models and Schemita Rand, McNally & Company, Chicago, U.S.A.

D'aeth, R., 1975, Education and Development in the Third World, Saxon House Studies - England.

Al-Day'm, A., 1982, Education and Strategy of Arab Manpower Development, A.L.O., Baghdad.

Development Council, 1989, Statistical Year Book, Development Council, Sultanate of Oman.

Development Council, 1976, First Five Year Development Plan", Development Council, Sultanate of Oman.

Development Council, 1980, Second Five Year Development Plan, Development Council, Sultanate of Oman.

Ministry of Education, 1985, Statistical Year Book Ministry of Education, Sultanate of Oman.

Ministry of Education, 1985, Features of Past Education in Oman, Ministry of Education, Sultanate of Oman.

Ministry of Education and Youth Affairs, 1986, The Identification of Teaching Competence, MOEYA - OMAN.

Ehrlich, P.P., 1977, Population Resources Environment, W. H. Freeman, Sanfransisco.

Naklah, E.A., 1975, Arab American Relations in the Gulf, Foreign Affairs, Washington D.C.", American Enterprise - Institute for Public Policy Research.

Enid, W., 1979, The Modernization of Labour in the Arab Gulf States, Basrah University, Iraq.

Essawy, A.R., 1984, Developing Higher Education in Arab Countries, Dar Al-Nahdha Al-Arabic, Beirut, Lebanon.

Fulton, O. and Gordon, A., 1982, Higher Education and Manpower Planning, I.L.O., Geneva.

George, D., 1958, Mathematical Economics, Macmillan, London.

Green, J., A Teacher-Made Test, Harper and Row, New York.

Hagget, P., 1968, Locational Analysis in Human Geography, Edward Arnold, London.

Hallock, J., 1981, Education, Training and its Traditional Sector, UNESCO, Paris.

Hector, C., 1969, Quantitative Methods of Educational Planning, International Textbook Company, Pennsylvania, UNESCO.

Johnson, I., 1985, Industry in Education, Longman, UK.

Ibrahim, I., 1981, "The Impact of Arab Expatriates on Social and Political Development in the Gulf States", The Arab Brain Drain, Ithaca Press, London.

I.L.O., 1979, Guidelines for the Development of Employment and Manpower Information Programmes in Developing Countries, I.L.O., Geneva.

I.L.O., 1979, Manpower Assessment and Planning Projects in the Arab Region - Current Issues and Perspectives, I.L.O. Geneva.

I.L.O., 1982, Final Report on Employment and Manpower Problems and Policy Issues in Arab Countries, I.L.O. Geneva.

I.L.O., 1983, Employment and Manpower Problems and Policy Issues in Arab Countries : Proposals for the Future, I.L.O. Geneva.

I.L.O., 1983, Rural Labour Markets and Employment Policies : Issues Relating to Labour Utilization Remuneration and the Position of Women, I.L.O., Geneva.

Issa, M.S., 1984, Towards Optimal Utilization of Professional Workforce in the Sultanate of Oman, Policies and Practices, Ministry of Social Affairs and Labour, Sultanate of Oman.

I.L.O., 1984, Employment and Manpower Planning, ARTEP, Bangkok.

Issa, M., 1984, Characteristics of Omani Workers Seeking Employment in the Private Sector, MOSAL - OMAN.

Issa, M., 1985, Political Implications of National Manpower Utilization and Substitution in the Arab Gulf States, MOSAL - OMAN.

Al-Itahad Magaznine, 1982, Grammar of Araboodiya Language, 7-6-1982, United Arab Emirates.

Al-Kawary, K.A., 1982, Resources of Instability of Population in Oil Producing Countries in Arab Peninsula, Qatar University, Doha.

Kenney, J.P.J., 1972, Manpower Training and Development, George G. Harrap and Company Limited, London.

Khayat, H., 1982, Population in Arab Gulf States, Centre of Human Studies and Document, Qatar.

Kutin, T.S., 1970, The Structure of Scientific Revolutions, University of Chicago, U.S.A.

Lester, R.A., 1966, Manpower Planning in a Free Society, Princeton University Press, New York, U.S.A.

Mallalah A. Habib, 1985, Outline of the History of Oman, Mazoon Printing Press, Sultanate of Oman.

Mamdooh Saleh, 1985, Retrospective Evaluation of Forecasting Methods for Qualified Manpower Needs for Egypt, Forecasting Skilled Manpower - UNESCO.

Mangum, G., 1979, Job Market Futurity, Olympus Publishing Company, Saltlake City, U.S.A.

Mansoor, A.M., 1975, Manpower Planning Theory and Practice, Printing Agency, Kuwait.

Mansoor, A.M., 1975, Reading in Human Resource Development, Kuwait Printing Agency, Kuwait.

Mohammed Moosa Yusuf, 1986, "Oil Prices", Al-Watan Magazine, 14-4-1986, Sultanate of Oman.

Moorsy, M.A.A., 1982, Higher Education and Its Effects in Developing Arab Gulf States, Arab Bureau of Education for the Gulf States, Riyadh.

Moorsy, M.A., 1985, Higher Education and Its Responsibilities in Developing Arab Gulf States, Arab Bureau of Education for the Gulf States, Baghdad.

Al-Najar, B., 1985, Characteristics of Expatriate Manpower and Its Affects on National Manpower Planning, Council of Ministers of Arab Social Affairs and Labour of Arab Gulf States, Bahrain.

Nolker, H., 1980, Vocational Training, Teaching, Curriculum, Planning, Verlag - Federal Republic of Germany.

Nordland, W.J., 1982, Report on Minimum Wage Study in the Sultanate of Oman, World Bank, Washington.

Oman Magazine, 9th April, 1986, Development of Education in Oman, Oman Magazine Press, Oman.

Psacharapoulas, G., 1985, Education for Development, World Bank, University Press, New York.

Al-Rawi, M., 1985, Human Resource Development, Council of Ministers of Social Affairs and Labour of Arab Gulf States, Bahrain.

Razik, T.A., 1972, Systems Approach to Teacher Training and Curriculum Development - The Case of Developing Countries, UNESCO, Paris.

Razik, T.A., 1978, Comparative Analysis of Curriculum Change and Development in the Arab Countries, UNESCO, Paris.

Razik, T.A., and Nabive, J.P., 1983, Report on the Education and Training System of the Sultanate of Oman, MOEYA, OMAN.

Razik, T.A., 1983, Internal Efficiency of the Omani Educational System - A Study of Educational Wastage, Ministry of Education and Youth Affairs, Oman.

Razik, T.A., 1983, The Education and Training System of the Sultanate of Oman, Ministry of Education and Youth Affairs, Sultanate of Oman.

Razik, T.A., and Kight, H.R., 1985, Student Occupational References and Their Implications for Educational, Vocational Training Planning and Manpower Development in Oman, Ministry of Education, Sultanate of Oman.

Al-Rumaihi, Mohamed G., 1982, Negative Affects of Asian Employment in the Gulf, Al-Arabi Magazine No. 280, 16, Kuwait.

Saad Aldin, I., 1983, Affects of Expatriate Manpower on Development and National Manpower Development, Institute of Planning, Kuwait.

Sada Al-Isboo, 1982, Employment of Nationals in the Gulf States, 1-6-1982, Qatar.

Saighroon, A.Z., 1982, Role of Continuous Education, A.L.O., Baghdad.

Serageldin, I., 1981, Manpower and International Migration in the Middle East and North Africa, World Bank, Washington.

Sinclair, C. and Birks, J.S., 1981, International Migration and Development in Arab Region, I.L.O., Geneva.

Sinclair, C.A. and Birks, J.S., 1980, Arab Manpower, Groom Helm, London.

Standing, G., 1982, Labour Force Participation and Development, I.L.O., Geneva.

Society for Experimental Biology, 1960, Models and Analogies in Biology, Cambridge.

Ministry of Social Affairs and Labour, 1983, Employment, Productivity and Economic Growth in the Non-Oil Modern Private Sectors in Oman - Document Number 51 - Oman.

Ministry of Social Affairs and Labour, 1985, Recent Wage Trends Recorded in the Annual Employment Survey in Oman, MOSAL - OMAN.

Ministry of Social Affairs and Labour, 1985, Manpower Planning and Development in the Omani Banking Sector, Document Number 15, MOSAL - OMAN.

Al-Tamimy Abdul Malik Khalf, 1983, The Political Effects of Foreign Migration, Institute of Arab Planning, Kuwait.

Al-Tamimy Abdul Malik Khalaf, 1983, Inhabitation in the Arab Region, Institute of Arab Planning, Kuwait.

UNESCO, 1974, Revised Recommendation Concerning Technical and Vocational Education, UNESCO - Paris.

UNESCO, 1984, Glossary of Educational Technology Terms, UNESCO - Paris.

United Nations Economic Commission for Western Asia, 1981, The Population Situation in the ECWA Region (Oman, Beirut - Leban).

UNICEF, 1989, Changing Attitudes and Behaviours to Improve Situation of Women and Children in Oman, UNICEF - Muscat.

Whitehead Consultancy Group, 1972, Economic Survey in Oman, Ministry of Social Affairs and Labour, Sultanate of Oman.

World Bank, 1981, A Proposal for the Establishment of a Manpower Planning Unit within the Ministry of Social Affairs and Labour in Oman, World Bank, Washington.

World Bank, 1981, Assessment of the Manpower Implications of the Second Five Year Development Plan in Oman, World Bank, Washington.

World Bank, 1982, Training for Rural Development in Oman, World Bank, Washington.

World Bank, 1984, World Bank Development Report, Oxford University Press, New York.

World Bank, 1988, Regional Review of Alternative Modes of Vocational Training and Technical Education, World Bank, Washington.

Youdi, R.V. and Hinchliffe, K., 1985, Forecasting Skilled Manpower Needs, UNESCO, Paris.

BIBLIOGRAPHY NOT IN THE TEXT

Abdel Dayem, A., 1983, Education in Arab World - Present and Future 1950 - 2000, Dar Al-Alam, Beirut (ARABIC).

Ahmed, B., 1978, Training Basis, Dar Al-Nahdah, Beirut (ARABIC).

Ashoor, A.S., 1983, Manpower Management, Dar Al-Nahdha, Beirut (ARABIC).

Bass, B.M., 1958, Training in Industry (The Management of Learning), Taistock Publication.

Bowey, A., 1965, A Guide to Manpower Planning, Macmillan.

Boydell, T.M., 1971, A Guide to the Identification of Training Needs, British Association for Commercial & Industrial Education.

Davis, I.K., 1973, Organization of Training, McGraw Hill Book Company.

El-Ghanim, M.A., 1971, Education in the Arab Region Viewed from the Marakesh Conference 1970, UNESCO, Paris - Document No. 1.

Guystarding, 1982, Labourforce Participation and Development, I.L.O., Geneva.

Al-Hansy, M.M., 1984, Introduction in Statistical Analysis, Dar Al-Nahdah, Beirut (ARABIC).

Maliassis, L., 1966, Economic Development and the Programming of Rural Areas, UNESCO, Paris.

Mansoor, A.M., 1976, Readings in Development of Human Resources, Publishing Agency, Kuwait (ARABIC).

Mansoor, A.M., 1978, Manpower Planning Theory and Practice, Publishing Agency, Kuwait (ARABIC).

Razik, T.A., 1984, The Internal Efficiency of the Omani Educational System, MOEY, OMAN.

Stogdill, R.M., 1970, The Process of Model Building in the Behavioural Sciences, The Norton Library, New York.

Schmida, L.C., 1983, Education in the Middle East, America-Mid East Education and Training Services Inc., Washington.

Todaro, M.P., 1976, Internal Migration in Developing Countries, I.L.O., Geneva.

UNESCO, 1973, Technical and Vocational Education and Training, UNESCO, Paris.

World Bank, 1983, Manpower Issues in Educational Investment - Paper 624, World Bank, Washington.