TO THE MEMORY OF MY BELOVED FATHER

ABSTRACT

Iraq is fortunate in comparison to many other developing countries. It possesses a diversity of renewable natural resources, in addition to oil and capital formation, which can utilized to educate the public and raise standards of living to aid the development of the national economy. However, a major problem impeding the achievement of this objective is the country's lack of qualified people and skilled labour to carry out the process of national development.

The central purpose of this study is to explore the potential need for the integration of education and national development and to study the development and planning of the education system during the period 1958-1982.

The study points out that although the development and planning of the education system in Iraq has increased noticeably during the last decade, the goal of producing trained human resources to meet the challenges posed by accelerating modernization has not been sufficiently realized, because, while the present institutions of education have had positive impact on development programmes they have failed to provide the manpower needs for socio-economic development. The significance of this study results from the need to investigate the problems of education and the status of human resources in relation to the complex process of implementing development programmes in the country.

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A.L.O.	Arab Labour Force
B.I.D.	Barrels Per day
C.S.O.	Central Statistical Organization
A.A.S.	Annual Abstract of Statistics
G.D.P.	Gross Domestic Product
G.N.P.	Gross National Product
I.B.R.D.	International Bank for Reconstruction and Development
P.E.P.	Provisional Economic Plan
D.E.P.	Detailed Economic Plan
N.D.P.	National Development Plan
L.R.	Land Reforms
I.D.	Iraqi Dinar - 1000 fills = 3.39 Dollars
I.L.O.	International Labour Force
I.N.O.C.	International National Oil Company
I.D.C.	Iraqi Petroleum Company
L.D.C.s	The Less Developed Countries
M.E.E.S.	Middle East Economic Survey
M.P.C.	Mosul Petroleum Company
M.R.P.	Mediterranean Regional Project
O.E.C.D.	Organisation for Economic Co-operation and Development
U.N.	United Nation
T.T.I.	Teacher Training Institute
T.T.C.	Teacher Training College
F.T.I.	Foundation of Technical Institute
U.O.T.	University of Technology
G.F.I.W.	General Federation of Iraqi Women

INTRODUCTION

Iraq is one of the developing countries which have great potential for social and economic development. It possesses a sound material base, composed of arable land and mineral resources (mainly oil), which is capable of raising the standard of living of its relatively small population. It also possesses capital formation which can be utilized to educate the public and to aid the development of national government.

The central purpose of this study is to explore the potential need for the integration of education and national development and to asses the development of the educational system between 1958-1982. The study points out that although the development and planning of the education system in Iraq has increased noticeably during the last decade, the goal of producing training human resources to meet the challenges posed by accelerating modernization has not been realized. However, while the institutionsof education have had a positive impact on developmental programmes, they have failed to provide the manpower for socio-economic development.

This study is based on three different sources of data and information:-

1. Official Statistics

These include annual reports on all economic activities published by the central statistical organisation, and various Ministerial reports as well as occasional samplings which have been conducted by relevant bodies. The quality and reliability of these sources vary greatly. It is generally believed that the reliability of educational data is moderate to low and it tends to suffer from major short-comings. Firstly, inadequacy of coverage, and secondly, the highly aggregated nature of data.

It is commonly believed by social researchers that educational statistics are over-estimated for political reasons, for the government has regularly and intentionally overstated the actual achievements in educational sector. Moreover, there is a major conceptual problem with official data. The unit of investigation is often defined in rather broad and arbitrary terms, where some features of the unit can be easily ignored, modified or misunderstood. It is observed that data on the education sector published by different official bodies show wide statistical discrepancies. These discrepancies can be explained partly by a completeness of the collected data and partly by variations in conceptual definitions employed by various official bodies.

2. Research Work

These consist of all accessible studies with total or partial reference to development and planning of the education system in Iraq, they are important secondary sources of information. They not only provide diverse interpretations of data and evolution of the effects of education of the development of the country and its consequences, but also provide additional information on unpublished, classified data, for the represented data has been collected in the field-work studies and is generally reliable. It can thus be used to point out inconsistencies in official statistics.

3. Personal Observations and Discussion

In the course of writing this study, the author visited her country in 1983 and held a series of discussions with the Director General of Educational Planningof the Iraqi Ministry of Education, the Foundation of Technical Institutes, University of Baghdad, University of Almustansriya, University of Mosul and the Department of Manpower in the Ministry of Higher Education and Scientific Research.

These discussions provided valuable insights into the factors influencing the development of education in Iraq as well as to obtain information on the educational planning system. In the course of this study, references to personal observation are made to clarify some of the ambiquities implicit in official information.

This thesis is organized in the following way.

Chapter One provides a background to the characteristic features of the Iraqi economy and identifies major bottlenecks in the process of investment, as a consequence, for the most part, of the backwardness of the qualitative aspects of manpower and the level of Iraqi economic development.

Chapter Two discusses the Iraqi experience in development planning since the early 1950's: the changing features of these development plans are considered as well as their successes and failures, especially in so far as these relate to education.

Chapter Three provides an analytical study of the Iraqi population and its composition. In that chapter, I analysed the nature and composition of the Iraqi population with the intention to provide a basic understanding of the educational needs of the country and the resources needed to satisfy these needs.

Chapter Four assesses the labour force, its structure, size and distribution among the economic sectors and the demand for educated manpower since education is an investment in the production of qualified manpower.

Chapter Five discusses the available literature concerning the economics of education, the residual factor approach, the manpower requirement approach and the human capital approach with emphasis on the rate of return of education and the screening hypothesis approach.

Chapter Six outlines the educational policy in Iraq and to what extent educational policy has benefited the education of the Iraqi people. It also examines the type of schools in contemporary Iraq, their poor contribution to the development of the country and resultant lack of qualified cadres in most sectors of the economy at the present time.

Chapter Seven deals with the structure of the education system in Iraq a special mechanism for developing the human capabilities that are demanded by national change.

Chapter Eight provides a critical review of the technical education system. It asks why the Foundation of Technical Institutes was created; How it provides trained middle-level technicians for all economic sectors, how it keeps up with modern development in technology, and how it speeds up the process of economic development especially.

Chapter Nine examines the role of higher education in economic development in Iraqi, evaluates how higher education in Iraq has revealed rapid institutional growth in recent decades and examines the trends and problems of higher education.

Chapter Ten is the concluding chapter in which the main arguments in the thesis are explained. Th chapter concludes with some recommendations to improve the development and planning of the education system in Iraq.

CHAPTER ONE

The Characteristics of the Iraqi Economy

1.1 Introduction

1.2 Characteristics of the Iraqi Economy

1.3 The Geographical Characteristics of Iraq. Its Resources and Potentialities

1.4 Iraq's Development Strategy

1.5 The Agricultural Sector and Its Role in the Development Process

- 1.5.1 The Development of the Agricultural Sector in Iraq
- 1.5.2 The Land Tenure System
- 1.5.3 Land Reform Law of 1958
- 1.5.4 Land Reform Law of 1970

1.6 The Industrial Sector and Its Role in the Development Process

1.7 The Role of Oil Sector on the Iraqi Economy

- 1.7.1 The Development of Pipeline in the Oil Industry
- 1.7.2 Nationalization of Oil
- 1.7.3 The Share of Oil Sector in GDP
- 1.7.4 The Impact of Oil Revenue in the Iraqi Economy

1.8 Iraq's Gross Domestic Product Growth, 1958-1980

1.9 Conclusion

1.1 Introduction

Iraq gained its independence in 1932. At that time the Iraqi economy measured by the burden of neglect, inherited from Turkish rule and the short span of national experience relied essentially on the agricultural sector. It should be noted however that the economy as a whole was in a better state than that of many other newly independent nations. Oil which is one of Iraqi's natural resources, helped to transform Iraq from a relatively poor agricultural country to one with a speedy developed and planned economy. The increasedoil revenues were used by successive governments to carry out different policies to develop the nation's idle resources.

However, the poor and incommensurable educational structure of the labour force in Iraq has profoundly retarded the achievement of uneven distribution of the economic development have exacerbated the problem of the already inconvenient qualitative structure of the educated and skilled manpower.

In this chapter the characteristic features of the Iraqi economy are presented; to identify major bottlenecks in the process of investment as a consequence, for the most part, of the backwardness of the qualitative aspect of the manpower. The level of Iraqi economic development is discussed.

1.2 The Characteristics of Iraqi Economy

The Iraqi economy has been since the 1950's characterised by many features, such as the increasing domination of the oil sector in the national economy. The consequence of this is the fact that the national economy became a mere service economy neglecting the development of the basic sectors like industry and agriculture.

The development of the oil sector led to a gap in the standard of living between the rural and urban areas which resulted in the continuous migration of the farming population to the major cities. This has greatly affected the structure of the labour force.

After the 1958 revolution the country did not achieve economic independence. The national economy remained under the British control and despite the development witnessed in the industrial sector it still depended on developing consumer and light industries without serious attempts towards establishing basic and heavy industries.

With the inception of July 1968 Revolution, national economy began a completely new phase. A well balanced economic independence by nationalizing the multi-national companies the country has secured the procurement of 100 percent of the oil revenues where before the nationalization the share of the country from oil revenues was only 50 per cent. The industrial sector started to develop and numerous new agricultural industries was initiated, in the agriculture sector.

all the feudal and semi-feudal relationships in the Iraqi countryside worked on establishing state collective and co-operative farms; concentrated treating the most fatal land problem suffered by the twin rivers valley, namely, Salinity also increased the importance of the public sector in various sectors of economy like agriculture, industry, foreign and internal trade etc. This section forms the basis of socialist transformation in Iraq by providing free education, free health care and free social services.

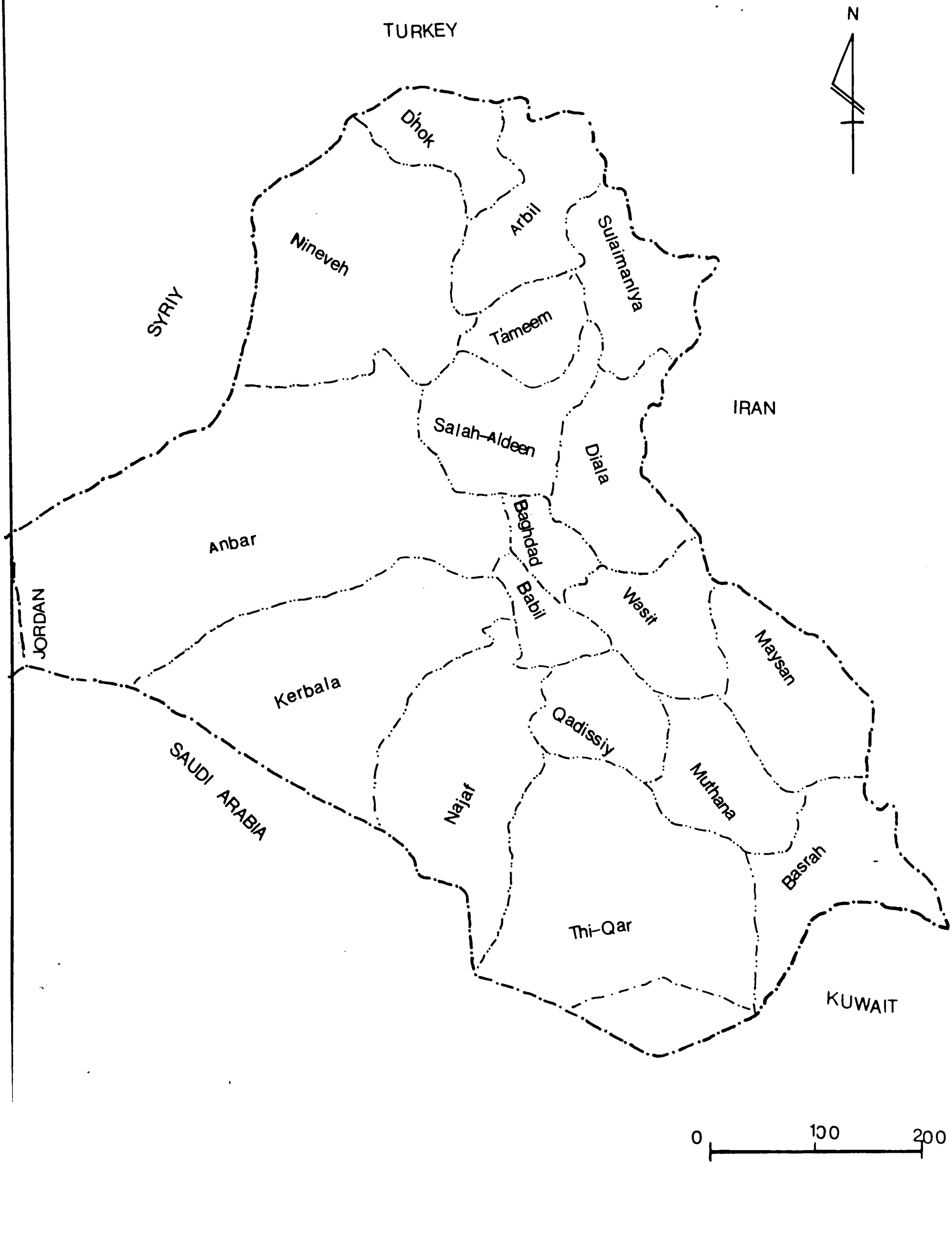
The diversification of the economic resources has an invaluable cultural impact. The creation of a consumption-orientated society has an adverse effect in the long run. The cultural aspect of production and its impact on creating a productive society is an invaluable objective which is not amenable to simple economic calculation.

Iraq, unlike most of the oil producing countries, is favoured in natural resources other than oil. Therefore it is not justifiable to maintain the national economy under the domination of one sector, namely oil. In the past the country was not politically stable but since 1968 the country enjoy stable political life.

1.3 The Geographical Nature of Iraq, Its Resources and Potentialities

Iraq forms a rough triangle, situated in South West Asia as shown in Figure 1.1. She occupies a prominent position on the Arabian Gulf and is surrounded by Arabian countries to the North West, West and South namely Syria, Jordan, Saudi Arabia and Kuwait, bounded by other non-Arab countries with Iran on its east and Turkey on its northern frontier .

Figure (1-1) Map of Administration Uints of The Republic of Iraq



Iraq's total area is estimated at 410,000 square Kilometres Geographically, the country is divided into four regions with widely differing soil condition and natural vegetation.

1. The north mountainous region
2. The valley region, the plain laying between two rivers
3. The out plain which formsthe pasture region
4. The desert region inhabited mainly by the Nomad Bedouins

Most of the northern and north east parts of the country are mountainous, join the Turkish chain of mountains to the north and the Iranian mountains to the east. The western plateau rises towards the west where its semi-desert or desert landsjoin the Syrian and the Jordan deserts. The river valley extends down the middle from the north to the south. The valley area is irrigated by the abundant water of Iraq's great twin rivers, the Tigris and Euphrates, both of which spring from the Turkish mountains. The two rivers join each other in the south of the country making the Shat-Al Arab water extension which pours the mixed water of these two rivers into the Arabian Gulf. (Ministry of Information, 1977, p. 13).

The fact that the two rivers come closer to each other in the southern most part of the country where several of their tributaries pour great quantities of water into the low lands of the south led to the creation of the marsh area in the southern provinces of the Nasiriya, Imara and Basra. The marshes are one of the best spots; for growing rice, this is in addition to the great quantities of fish which they provide for the various provinces in the country.

Iraq's fertile land which is irrigated by the two rivers, Tigris and Euphrates. The system of irrigation knows various forms - though not always the most efficient but usually the easiest irrigation by pumps, flow and natural flooding are common forms of irrigation but irrigation by water pumps is a relatively new system since most peasants could not afford it in the past. (Ministry of Planning, 1978, pp. 10-11).

In addition the system is usually used in small areas for the crops where this system of irrigation can be used because barley and wheat for example, cover large, areas their cultivation depends usually on rainfall.

Climatically, Iraq has a Mediterranean type of climate, therefore, its climate is hot and dry in summer and summer lasts from May until October, and it iscold and rainy in winter and it lasts from December to March, the northern parts depend mainly on rain where as the middle and the southern parts depend on both rain and on the water of Euphrates and Tigris.

Iraq has considerable resources and potentials for development. These potentials reside not only in its oil but also in other no less important factors.

1.4 Iraq's Development Strategy

The present socio-economic and political system and hence, development strategy, are based on the philosophy of the Arab Báath Socialist Party (A.B.S.P.) since 1968 is primarily associated with the

nationalised cultural perspective of an Arab nation with a human message, joining her past, present and future together. The country emphasized the centrality of planning and decentralized execution, taking into consideration the co-ordination of annual, medium and long term plans on the other. These plans were carried out and followed up on scientific and practical bases, ensuring association among various sectors. (See Chapter Two).

The development strategy in Iraq aims at the utmost and competent recruitment of all resources and potentialities available, within a democratic, national, progressive and human perspective ensuring rapid and constant economic welfare for the citizens, in the light of human, democratic and cultural relations, which embody the national principle of A.B.S.P.

The development strategy in the country is concerned with the development of the main sector such as industrial Agricultural and oil. During the last few years Iraq has laying down the foundation of its industrial future the concentration has been on cement, fertilizers. In fact Iraqi industrialization can rely on an import substitution strategy other factors such as existence of raw materials, agricultur and minerals,as well as the availability of manpower.

In the agriculture sector Iraq uses only 25% of its land.The government had giventhis sector a great attention in solving the problem which faced this sector as Iraq aims to have self-sufficiency in food. (Ministry of Planning, 1972, p. 13) However the internal political stability in Iraq since 1968 and the increase of oil revenue since the nationalization of oil in 1972 and the price increase of 1973-74 have secured the two most important preconditions for self-

sustained development. Most of the important schemes in infrastructure, agriculture and industry are still to be completed. Although Iraq has huge oil reserves and large gas reserves there is a desire not to let the oil sector dominate the economy but only to be the provider of foreign earnings to develop the rest of the economy. In that Iraq is among the few oil exporters who can help to have an eventual balanced economy.

Also the development strategy in Iraq is concerned with strong thinking tendencies of economic integration of connecting factors and economic interdependence, an increase in the Iraqi participation in joint investment projects and in economic social and cultural field has been an asset to the Arab nation.

Reflecting upon these objectives and taking into consideration Iraq's basic socio-economic characteristics the long-term strategy focuses on a number of key issues, development of adversified and highly integrated industrial base, strengthening of new economic management structures at all levels and in all sectors, regional decentralisation with a planned frame work, speeding up of education and technical training and authority in consumption.

1.5.1 The Development of the Agricultural Sector in Iraq

Agriculture has played an important role in the economic development process of the presently developed countries as a provider of capital accumulation and supplier of labour to meet the needs of expansion in other economic activities.

A well balanced agriculture development of the country depends on a large number of factors, the quality and the quantity of water and

land available of agricultural production are two fundamental factors on which the economy of the country is mainly based. There are several factors which also played on role on the level of agriculture productivity such as the techniques the methods used in exploitation of the land and the climate condition. (Al-Dahiri, 1975, p. 291).

As I mentioned earlier, the economy of Iraq is predominantly agricultural. The oil fields in the south and north are additional sources of economic wealth. Iraq,with its rich silt land between the two rivers the Tigris and Euphrates has, for centuries carried enormous quantities of silt from north-west to the south east, thus creating one of the most fertile regions in the world.

Most important of Iraqi's agricultural produce are the various kindsof corn, wheat, barley, rice and other grains. Iraq is the most famous country in the world for its dates, various kind of fruits and vegetables, also grow in most of Iraq's agricultural areas.

Agricultural development in Iraq is of significance not only for the Country itself, but also for the Middle East. Iraq became the main supplier of agricultural products, particularly of cereals, to the area. This would be far less costly to the Middle East than importing these commodities from distant areas such as Canada and Australia. (Qubain, 1958, p. 79).

Iraq makes no secret of its aims to achieve self-sufficiency in food and develop its agricultural potential to the point where it will have significant export capacity. Despite the importance of agriculture for the economic development a number of set-backs faced the agricultural development in Iraq such as the failure of various programmes of land reform which I am going to discuss in the following

sections. Moreover, the minority of landlords Ishaikhs and wealthy urban merchant controlled a large agricultural part of the country's fertile land, and the minority of poor peasants own no land. The difference between the average per capita income in urban and rural areas is not adequate to measure the gap which motivates people to migrate from rural to urban centres. In the economic development experience of Iraq, the classical role of the agriculture has been taken over by the oil with respect of the provision of foreign exchange to meet imported capital requirements.

There is no doubt that the Iraqi government have made and still are giving serious attention and devoted considerable effort and funds to agricultural development through social planning and various formal economic and agricultural establishment, and also through cultural means by introducing modern agricultural collectives. The government has always stressed the importance of raising the living standard of Iraqi farmers by establishing the so-called modern villages, which are provided with electricity, clinics, schools and other social services. Agriculture is described as the country's permanent oil. Large scale irrigation and land-reclamation schemes have been under way since before the dramatic increase in oil revenues that followed the 1973 oil price rise. Irrigation contracts have continued to be awarded despite the war with Iran.

1.5.2 The Land Tenure System

Prior to 1958, Iraq has been occupied and influenced by many invasions i.e. the Mongols, the Ottoman Empire and the British. They all made their contribution to the existing land system. All these

powers have failed to solve the land tenure problems in the country. (Ali, 1955, p. 53).

Since over 70 per cent of the population is employed in agriculture or allied industries, land tenure is the human problem par excellence in Iraq. In one way or another it lies behind most, if not all, of the social, economic and political problems of the country. (Qubain, 1958, p. 80).

The system of land tenure predominantly a tribe system It existed until the beginning of the twentieth century during the Ottoman period, The land belonged to the state, and each tribe occupied an area which it settled in and used for cultivation. (Haider, 1942, p. 86). Under this system, each tribe held part of the cultivated area called dirah. Which it considered to be exclusively for the use of its own members. The head of the tribe (Shaik) was given a percentage of the production in return for which he gave certain social, economic and political services to the tribe as well as the provision of hospitals and keeping the mudhif (the coffee house, the village hall, and the civic and social centre of the tribe). The rest of the land was sometimes distributed among the families of the tribe, according to the members of fighters who had helped to seize the land from another tribe, or according to the amount of land reclaimed. The chief characteristics of this kind of tribal land tenure society can be identified as a kind of self-sufficient economy where each local community produced most of the essential goods. This resulted from isolation, lack of agricultural facilities, knowledge and the absence of physical and economic security in these regions. However, the land was cultivated in small plots by the tribal subsection or clans under the direction of the Sirkal (Sub-tribal chief) who organised the number

of tribes on a sharecropping basis, the peasant generally receiving a half or two-fifths, or one-third of the product (Warrines, 1948, pp. 104-105).

As a result of the development of communication which connected various Iraqi cities to each other, and the huge rewards for agricultural exports, the economy of rural areas was changed from self-sufficiency to a commercial economy. The change of crops included wheat, barley, paddy and cotton. These crops involved changes in the shift from subsistence farming to the growth of cashcrops.

The Ottoman tried to solve the land problems by introducing a law (the land code for settling) which defined clearly the right of the use and transfer of the state's land. (Ali, 1955, p. 57). However, the law classified lands into five main categories:

1. Mulk Land held in absolute freehold ownership.
2. Matruka Land reserved for public purposes in actual practice considered as state land.
3. Wagf Religious trust land usually designated for both private and public benefit.
4. Miri Land where the ownership belonged to the state but the usufruct went to the holder.
5. Mawat Land dead or unclaimed land.

Due to the inefficiency on the part of the administration the law was not applied except in a few localities. However, there were three advantages of the code law. Firstly, the government became the direct recipient of land taxes. Secondly, it was hoped that nomadic tribes would now be encouraged to settle. Thirdly, increased cultivation

would boost agricultural productivity. But Warriner (1969, p. 76) noticed that the code was not as successful as it might have been, for many reasons. It was formulated in Constantinople on the basis of conditions of land tenure, with no clear understanding of the local laws and customs governing land ownership in the country, nor of the traditional rights which were extremely effective when applied in the countryside (Hussain, 1983, p. 77).

However, after the collapse of the Ottoman empire, the British troops occupied the country in 1917. The immediate British concern seems to have been the cultural and commercial interests in Iraq. The tribal revolts removed large parts of the country from the control of the central government. These local revolts, required a political and administrative formula other than military occupation. (Heller, 1976, pp. 77-96).

During 1920-1932 Iraq was under the British mandate. The British tried to solve the land problem during this period because these reforms would have risked their control over Iraq on the other hand, it explained why the British were dependent on the feudal system. (Baali, F., 1966, p. 13).

At the same time when the British mandatory power took place, the land tenure system was in a state of complete chaos. (U.N., 1951, p. 25). The British government decided that the best plan for controlling the situation would be to court the allegiance of the shaikhs, who would in their turn, implement the British policy in the countryside and quell any resistance at source. (Pool, 1979, pp. 65-75).

So to achieve this end a large number of seats in the national parliament, which was first convened in 1924, was allocated to shaikhs, whose political involvement would, it was hoped, promote loyalty to the government. (Batatu, 1978, p. 103). Table 1.1 shows the representation of shaikhs in parliament before the revolution of 1958.

In 1921 the new government of Iraq come into existence. It inherited all the past chaos and confusion of the land tenure system. The government decided in 1929 with the help of Sir Ernest Dawson, a British land settlement expert to study the land tenure problem and to formulate this situation which was based on the law of 1932 and 1938. The recognized types of land tenure as shown in Table 1.2.

In accordance with the above land classification Table 1.3 reveals the breakdown of the lands by type of ownership up to 1958. This table shows that the most common type of land ownership in the Miri lands which accounts for about 98% of the total was state land leased out as Tapu, Lazma or unsettled land. Out of 32 million dounm of arable land less than it was privately owned. However, it should be noted that out of the total arable land only 23 million dounms were actually exploited. The most common type of farming operation was share cropping, either on state or privately owned lands. On the other words, the land owners provided the farmer with the necessary means of production such as seed, irrigation etc. On both state and private farms land owners supervised farm operations. Therefore, the produce was divided between the land owner and the farmer according to the custom followed in each regions in the northern region. The share of the land owner was one half of the produce. In the central region the share of the land owned was 5/9, and in the souther region where the land irrigated by flow the share was 2/3.

TABLE 1.1

Representation of Shaikhs in Parliament in Selected Years

The Turkish Parliament (1917)	No. of Shaikhs Deputies	Total No. of Deputies	%
The British-sponsored constituent assembly	1a	34b	2.9
1924	34	99	54.3
1925	17	88	19.3
1928	13	88	14.8
1930	14	88	15.9
1933	18	88	20.5
1937	21	111	18.9
1943	37	116	31.9
1947	45	135	33.3
1948	46	135	34.1
1953	49	135	36.3
1954	49	135	36.3
1954	51	135	37.8
1958	52	145	35.9

SOURCE: Batatu, 1978, p.113, Table No. 6.1.

a. This deputy came from a family of Shaikhly origin, but was not himself a Shaikh.
b. This was the number merely of Iraqis and not of all Ottoman deputies.

TABLE 1.2

Types of Land Holding and Their Use Pre-1958

Type of Land	Legal Ownership	Users of Land	Use
1. MULK LAND	Private	Peasant Share Cropper	Agricultural productive use
2. MATRUKA LAND	State	Public Agents	Road, Parks, Channels, etc.
3. WAQF LAND	Religious Institutions	Religious, agents of peasants	Charity and productive use of Agriculture
4. MIRI LAND			
a. Miri Sirf	State	Public agents	Building and productive use agricultural.
b. Miri Tapu	State	Shaikhs & Peasants	Productive use Agriculture
c. Miri Lazma	State	Individual, Shaikh and Peasants	Agricultural productive use

The most salient feature of ownership in rural Iraq was the concentration of land properties in the land of few tribal shaiks and wealthy merchants. This is clearly exploitation by the land owners because the exploited parts of these properties were sufficient enough for the property of their owners. Table 1.4 demonstrates the proportion and distribution of the land ownership in Iraq pre-1958. There is a large difference between the big land owners and the small ones and that the large properties dominated Iraqi agriculture. Eighty-six per cent of land holders owned about 11 per cent of cultivated holdings. Their holdings were size which varied between less than one dounm and less than 100 dounms, while 2 per cent of the land holders controlled about 68 per cent of the total area. By comparing the size of Iraq's rural population, which numbered 3,854,966 in 1957 with the number of holdings at 168,364, we find that only 4.37 per cent of the total rural population owned land. This resulted from the legal settlement of 1933. In fact many of the peasants were apprehensive that registration of title to land might mean more taxes and/or military services, or omnipotent money lenders. Moreover, the tribesmen were not fully informed about the law. The shaiks gained a legal title to the land and the original owners became their tenants (Warriner, 1962, p. 136, Qu bain, 1958, p. 83) and the peasants became tenants or share croppers. Because they were powerless and ignorant they lost their land. An estimation for the peasant income family around ten to twelve dinars per year in southern Iraq. (Jawad, 1945, p. 21). Dinar equals a pound. By law the peasant should received 40 per cent of the crop but the shaikh took his share for providing irrigation, seed etc. (Warriner, 1948, p. 114). So the lack of education and the consequent ignorance of legal technicalities made the peasant in this situation. While at the same time making the feudalists richer through acquisition of land as point by Sundrum that the pressure to introduce western forms

TABLE 1.3

The Classification of Iraqi Land 1933-1958

Type of Tenure	Land holding in Agricultural Use		Land in all Iraq	
	Dounm (a)	%	Dounm (b)	%
Miri Sirf Land	4684537	14.57	59550436	33.52
Miri Tapu Land	12481588	38.82	13167301	7.41
Miri Lazma land	10587676	32.92	12166937	6.84
Total Miri Land	27753801	86.31	84924674	47.77
Milk (Privately owned)	257998	0.80	1236236	0.70
Waqf Land	439075	1.37	887504	0.50
Matruka Land	-	-	7259701	4.80
Total Surveyed Land	28450874	88.48	94308115	53.05
Unsurveyed Land (b)	3703939	11.52	84468685	49.95
Total Land	32154813	100.00	177776800	100.00

SOURCE: Hashim, Umar, and Al-manufi, 1971, p.26.

TABLE 1.4

The Distribution of Cultivated Land Holding in Iraq Pre-1958

Size	Number of Holding	%	Area in Donums	%	Average in Donums
Less than 1.0	22.801	13.5	8524	-	0.4
1.0 - 3.9	35.157	20.9	64531	0.3	1.8
4.0 - 19.9	45.539	27.1	429910	1.8	9.4
20.0 - 39.9	18.891	11.2	527474	2.3	27.9
40.0 - 59.9	10.802	6.4	521806	2.2	48.3
60.0 - 99.9	11.612	6.9	894707	3.8	77.1
100.0 - 199.9	11.464	6.8	1575881	6.8	137.5
200.0 - 339.9	5.459	3.2	1479198	6.3	271.0
400.0 - 599.9	1.639	1.0	812922	3.5	480.2
600.0 - 999.9	1.510	0.9	1166735	5.0	766.0
1000.0 - 1,999.9	1.395	0.8	2012643	8.6	1442.8
2000.0 - 3,999.9	1.066	0.6	2999040	12.9	2813.4
4000.0 - 9,999.9	682	0.4	4078593	17.5	5980.3
10,000.0 - 19,999.9	181	0.1	2457408	10.5	13,573.8
20,000.0 - 49,999.9	70	-	2099872	9.0	29,955.3
50,000.0 - 99,999.9	19	-	1334102	5.7	70,215.9
100,000.0 and over	5	-	876913	3.8	176,382.6

- Less than 0.1 per cent.

SOURCE: Fuad Baali, 1966, p.29, Table (5).

of ownership of land, the partial monetarization of certain economic relation was the spur to these two changes, to money tending internal migrations, the influx of oriental aliens in some areas and the super imposition of a colonial administration that aimed mainly at correcting taxes and maintaining peace and order, which resulted in down, of the indigenous system of rights and obligations, law as and procedures. (Sundrum, 1983, p. 116).

1.5.3 Land Reform Law of 1958

Agricultural production in Iraq has been largely influenced by two land reforms, the first of which was attempted in 1958 and the second in 1970.

The government passed in 1958 the Agrarian Reform Law. It was one of the major reforms undertaken by the 1958 revolution after the overthrow of the Monarchy regime. This revolution promised to remove all the social injustice and improving the agricultural sector. In fact by 1958, 99% of the country's total cultivatable lands were under the ownership of just 2% of total population as it has been stated, that by 1958 about four million fallatin ,peasants were completely landless, while 3.34% owned 12 million dounms (i.e. 2500 sq m), representing 50% of Iraqi's cultivatable land. Not only that but a minority dounms each. (Gabby, 1978, p. 82).

In 1959 the Minister of Agraian reform summarised the purpose of the law as follows:

1. The abolition of the feudal land holding system.
2. Protection of small and medium peasants.
3. The redistribution of land into smaller production units owned by tenants who were the actual producers.
4. The increase of the standard of living of the rural population and to raise their social standards in general.
5. Production of raw material for industry and food for the working class.
6. Expansion of agricultural co-operatives.

These indicate the diversity of the objectives of the land reform law, since they include economic, social and political objectives. The economic objective aimed at increasing the living standard of the peasants through the improvement of production. The social objective aimed at abolition of the fedualism by eradicating fedual states of land concentration.

The political objective is to destroy the political influence which the feudal lords enjoy as a result of their ownership of a vast area of the land.

However, the main principles of land reform of law 1958 were as follows. Firstly, the expropriation of privately owned land holdings in excess of 1000 dounms of irrigated land or 2000 dounms of rainfall land. The state has taken over ownership of the sequested land and compensation has been paid to the previous owners. Secondly, the distribution of expropriated land to occupying and other cultivators in order of priority in unit ranging from 30 to 80 dounms or irrigated land from 60 - 120 dounms of rainfeld land. Thirdly, payment of compensation based on assessed land values of expropriated land owners

and payment by the new owners of the full purchase price of holdings over 20 years membership for receipt of land, and wide functions including marketing of products, supply of farm equipment and organization of agricultural production. Fourthly, the law introduced a new pattern for divisions of produce between peasants and the landlords on the old holding, and between farmer and the land reform authorities on the redistributed lands.

Finally, the law defined the minimum of agricultural workers and established agricultural co-operatives (Hariri, 1959, pp. 55 - 60). The law made it compulsory for any farmer who received land from the land reform to join these co-operatives.

The 1958 law proved to be a complete failure not only due to the nature which clearly favoured the interest of the landlords by giving them the right to choose the land they were authorised to keep. In other words, the law gave them the right to keep the best land with the highest productivity abundant water, close to the town centres and leaving the unfertilised land to the farmers. The landlords found a way by passing the law. They used to subdivide their properties into smaller parts and registering under the names of their sons and wives. Further more the law failed to compensate fedaloard for the land nationalised. Therefore the peasants who had to compensate the landlord through the government.

Therefore, the land they received was often poor and they were unable to pay for the extensive improvement necessary to make it productive many fell into debt with the agricultural bank. Thus, the farmer paid more than he used to pay to the landlords before the law. (Ministry of Information, 1977, p. 48). Since the revolution of 1968,

the most radical progress in Agrarian reform was achieved in 1969. Compensation for landowners and their right to choose the land they kept under the 1958 Agrarian reform law was abolished the land was distributed freely to the peasants.

1.5.4 Land Reform Law of 1970

A new law of Agrarian reform was issued in 1970 (Law No: 117). This law introduced to correct the weakness that affected the performance of the previous law. In an attempt to relative the previous beneficiaries of debt, it aimed to abolish the compensation of landlords and the right to choose their lands and was offered the land free of charge to the peasants on the other hand, the law aimed to improve the living conditions of the peasants, increase the agricultural production and to build a socialism in the rural area of Iraq through the abolition of the feudal lord . (Ismael, 1975, pp. 77 - 95).

The law was provided with a new and radical principles for the development of agricultural sector one of the pillars of social and economic development in the country. Its main principles were:

1. Limitation of the maximum of land ownership to 200 dounms. Those owned more than the maximum limit had to give up the extra.

2. The beneficiaries of the redistribution were not to be charged for the land. All outstanding debts to the Agricultural Bank were to be abolished.

3. The distribution of the land was based on fertility irrigation methods, type of yield and proximity to the market. Thus a maximum of 200 dounms of land if irrigated by rainfall was given free of charge to peasants, but a maximum of only 60 dounms if it was artificially irrigated.

4. The law abrogated the compensation principle to the landlords, and at the same time the redistribution of lands was carried out without the repayment.

5. The law required all peasants to join a co-operative society, irrespective of whether they worked for the landlord or were beneficiaries of the redistribution.

This law was more successful than the previous one. Expropriation went ahead and redistribution was accelerated. The expropriated area under this law amounted to about 3.3 million dounm by 1976. (Ministry of Planning, 1976, p. 111).

The redistributed land between 1969 and 1983 was about 6.9 million dounms distributed to about 206707 landless peasants. During the above period the number of beneficiaries has recorded the highest increase in 1976. This was due to the government, issues the, law no. 90 of 1975 for the application of land reform in the Autonomnas region. The redistributed land reached to about 9.7 million dounm satisfied 262520 landless peasants by the end of 1983.

From the above discussion one may conclude that the expropriated area of about 10.6 million dounms under the first and the second land reform programmes which is satisfied the needs of 262520 landless

peasants by the end of 1983. Add to the number of 205945 beneficiaries under temporary contract under the Ministry of Agrarian reform in the first land reform programme. Then the number of beneficiaries totalled about 468465 landless peasants under the first account about 63.4% of the total (685000) landless peasants in the country according,to the 1957-58 Agricultural Census.

The second law (No. 117) stressed the importance of establishing co-operative to held the poor peasants not only individually but collectively by providing them with seeds, fertilizers, marketing advice, all the facilities to prevent them from selling their product before the harvesting time under a reasonable price.

The main objective of the newly established co-operative can be summarised as follows:

Firstly to organise the various kinds of agricultural plans and utilize the land intensively. Secondly to increase agricultural production. Thirdly, to help the farmers in hiring agricultural machinery, tools and means of utilizing chemical fertilizers and insecticides, and the reclamation of land and its improvement. Fourthly to help the farmer in marketing the agricultural products generally and pre-marketing methods such as harvesting, classification and guarding of crops as well as storage, dehydration, canning, shipping etc. Fifthly to improve the living condition of farmers. Sixthly to assist in obtaining loans for farmers and to render any other services necessary for the advancement of agricultural development.

The government was greatly concerned with agricultural co-operative which led to an increase in new establishments all over the country. The 1970 land reform law provided not only for the establishment of the co-operative to help the peasants individually but also collectively.

The Iraqi government desired to expand three forms of agricultural development: state farms, collective farms and co-operatives: The emphasis placed on it was to make agriculture the dominant and most development section. Meanwhile, the spread of socialist culture among the peasantry was to be vigorously promoted. (Ministry of Information, 1979, p. 81). On the state farms, the land belongs to the state which controls production, marketing and peasants are employed as wage earners. On collective farms, the land belongs to the collective and peasants share the product on the basis of their participation in cultivation.

In co-operatives, the land belongs to the co-operative: the peasants who participate in cultivation receive payment, each according to his contributing work (Khadduri, 1978, pp. 120 - 121). Table (1.5) shows the number and area covered by the organisations have increased remarkably in 1981, as compared with the 1968 figures. The area under co-operatives grew at the annual rate of 41.2 during the period 1968 -1981 the area under collective farm great at annual rate of 21.8% and 12.4% the state farms. Moreover, if one look at the annual rate of growth of the number of three organization, Once can see that the number of co-operatives, collective and state farms grew at annual rate of 10.9% and 18.6% and 12.4% respectively during the above period.

There is no doubt that the rural area in Iraq have been improving and the condition of the peasants have been significantly improved. The ABSB, who have ruled Iraq since 1968, led to a significant improvement in the process of the agricultural development.

> "Despite the radical reform laws, reducing the limits of ownership and thus providing extra land for distribution to poor peasants there are still many peasants who own no land and are compelled to hire out their labour to small and medium landowners, or to migrate to the towns in search for employment. The natural increase in population, has taken the form of nuclear families and the growth of mechanization of farming will raise their numbers still further. More and more peasants will have to sell their labour to land owners or move to towns. As a result, exploiting in rural areas will increase, promoting a new sort of class conflict, while at the same time unemployment worsens. Moreover, the break up of large land holdings, through in itself progressive and democratic, reduces productivity and harms the general development of agriculture.
>
> (Political Report, 1979, p. 84)

The development over the last decade, therefore, casts no doubt on the governments agricultural strategy. The modernization of agriculture in recent years is expected to bring major development to agriculture especially after the mechanization of this sector. The long term strategy of Iraq Agrarian reform is to achieve self-sufficiency and develop its agricultural potential and in particular to increase its contribution to exports. Despite their efforts to develop agriculture in Iraq the government faced the problem of migration of workers and the highly skilled with in Iraq from countryside to cities and towns. The problem of inter-migiration will be discussed in Chapter Three.

To conclude, the future agricultural development in Iraq indicates that this sector will be able to meet the domestic demand of raw material and food stuffs, as Iraq has the largest percentage of unused, but potentially productive land of any country in the near

TABLE 1.5

The Development of Co-Operative, Collective and State Farm in Iraq 1968-1981

KIND	YEAR	MEMBER		MEMBER		AREA	
		NO.	RATE OF GROWTH	NO.	RATE OF GROWTH	DOUNMS	RATE OF GROWTH
COOPERATIVE	1968	503		63319		263038	
	1981	1951	10.9		14.9	23500000	41.2
COLLECTIVE *	1972	6		490		24100	
	1981	28	18.6	1346	11.8	143000	21.8
STATE FARM	1968	5		-		167000	
	1981	23	12.4	-		767000	12.4

SOURCE:
1. Ministry of Planning, 1968, p. 153
2. Ministry of Planning, 1978, p. 68
3. Political Report, 1982, p. 130

* The collective farm were first established in Iraq in 1972.

east. It will be able in the same time to contribute in meeting the requirements of Arab countries and some of the Third World's developing countries.

1.6 The Industrial Sector and Its Role in the Development Process

In Iraq industry is a new phenomenon, Until the beginning of the twentieth century industry was almost non-existent. Consumer goods and other things came from abroad or produced by traditional methods,

Though the roots of Iraqi industrial sector stretch back to the mid-nineteenth century. The industrial sector was small and confined mainly to cottage industries. These ancient crafts were the basic industry at that time.

The first modern factory was established for repairing steam ships. Since that time Iraq has come into contact with Western countries and with Western economic forces. Following World War I, Iraq fell under the British domination, economic policy making reverted to the authorities and the growing role of the industrial sector can be seen in a number of small industrial establishments, emerged, such as textiles, cigarettes, alcoholic drinks, soap, confectionery, materials were established. By 1945 the government established the industrial bank which encouraged the private sector. Industrial growth occurred as the oil revenues increased. The government played its role in two ways; with a large government share in the ownership of industry and in their high contribution to public investment in industry. (Fatah, Z., 1979, p. 813).

During the 1950's the government witnessed a significant increase in oil revenue following the advice of British experts, a so called Development Board was established in 1950 to lay down the planning and execution of government industrial projects. The World Bank Mission of 1952, which investigated the state of industry in Iraq suggested that industrial projects should only be adopted if they used existing resources. (IBRD, 1952, pp. 20-37).

In fact in 1954 there were only 727 factories in Irao employed more than ten workers and 21,723 factories employed less than ten workers each, while 10,157 workshops employed only one worker each (Ministry of Planning, 1968, p. 22), the period 1951-1954 was lagging far behind schedule and out of 14 million ID originally allocated for industrial projects in the first amended programme only 2.58 million ID were invested for the years 1955-1959. Industry was neglected while agricultural sectors allocations amounted to ID 138.4 million. Industry sector received ID 57 million on which only ID 32.2 million was spent. The Development Board's main concern was agricultural projects in the first and second programmes. (Ministry of Information, 1977, p. 69).

After 1958 revolution, the industrial sector accomplished some development and occupied the leading position among the sectors. In 1961 the government issued a detailed economic plan in which 160 million ID was allocated to the industrial sector out of 556.2 million ID allocated to various economic sectors.

Rondey Wilson pointed out that such plants, a small oil refinery for internal requirements two cement factories abitumen refinery and a cotton and weaving mill. There were no plans to develop export

capacity in any of these plants and even the domestic market was insufficiently catered for. Items in all categories continued to be imported. (Wilson, 1982, pp. 225-226).

It can attempted to strengthen the industrial sector in 1964. The government nationalised about 30 industrial companies, all private and foreign banks and insurance companies, (E. Penrose and E. F. Penrose, 1978, p. 470). The industrial sector during this period suffered from bureaucracy and a lack of qualified staff. This weakened its efficiency.

Although the 1965-1969 economic plan allocated about 26.1% to industrial sector making it the largest beneficiary of the plan allocation, (Ministry of Planning, 1968, p. 13) Technical in competence as well as the lack of qualified man power and necessary skill prevented full realization of the plan's objectives.

However, the industrial trend of pre-1958 continued until 1968. These trends were the continued prevalence of small scale industrial establishments the bias in favour of Baghdad as the main beneficiary of the industrial sector in terms of location of establishment, employment, wages and the generation of capital and also the percentage of consumer goods industries. (Al Nawwab, N., 1979, p. 145).

However, the assumption of office by ABSP 1968 marked new beginning in Iraq's industrial development. A significant development took place in this sector, such as the completion of the industrial projects which were initiated previously but delayed to several years, the completion of previously contracted industrial projects the expansion of the existing factories and their operation at higher

capacity as well as the introduction of new industries and the encourage national capital to establish small and medium industrial projects to benefit from the national bourageoisies experience in this field. Emphasis was put on the creation of new industries especially those depending mainly on local raw materials and those with export capacity. These type of industries proved to be more beneficial, especially since Iraq has considerable potential in initiating many industries based on local raw material such as cement et.

The government has achieved tremendous success in the improvement of industrial sector.

> "The activity of processing industries in the region grew at an annual average of 14% during 1969-1974. This growth was reflected in the average of employed manpower which increased from 2.4 million persons in 1969 to 2.87 million in 1974, i.e. the average annual compound was 3.7%. The highest rate achieved in the construction sector was 9.9%, water and electricity 7.3%, processing industries 6.0%. Besides the general quantitative unit number of industrial production in 1972 rose by 8.3% from that in 1971 and by 35.5% from that in 1969".
>
> (Ministry of Information, 1977, p. 75)

The availability of the natural resources encourage the creation of the industrialization of the country. Iraq is rich with minerals such as sulphur, phosphates, ceramic clay, glass, salt, sand, low grade coal, gypsum, iron, copper as well as oil which comes at the front of all natural resources and play a major role in determining the type of industry. (Stevens, 1982, pp. 168-169).

The aim of any developing country is to develop the industrial sector side by side with the agricultural sector. For the industrial development in Iraq all it relays on the oil and its product such as gas and etc. The development of the petrochemicals, fertilizers and steels all based on oil production and refinery in this field.

A number of the strategic industrial projects were completed forming an outstanding weight in the achievement of objectives laid in the national development plan of 1976-80. The most important project completed in last years of the plan. The chemical fertilizers project with a capacity of one millions tons a year in Akashat, the petro-chemical complex with a capacity of 150 thousand tons a year of plastics in Basrah some 85% of production in meant for export (Cockburn, 1977, P.V.). For the iron and steels Iraq's paid a great attention to build plants one in Khor Al Zubair which was still under construction at the start of the war, and the second at Um Qassar for iron production start production in 1978. The cement production has reached a level to satisfy its internal market and export to the Gulf

countries. In fact Iraq has seven cement plants and aiming to have sufficient suppliers to provide a reserve and an export surplus as well.

In the oil industry, the oil refining capacity had increased to 140 million b/d in 1981. as well as the number of refineries increased up to nine.

It is becoming clear that a successful industrial development in Iraq depends on five primary factors: the use of oil and gas to promote industrialization directly; the achievement of a satisfactory balance between the agricultural and industrial sectors; the utilization of expensive energy to enable industries to be competitive in International markets: the integration of regional and national development plans the encouragement of private investment to complement and aid in the implementation of the government economic and industrial planning.

The oil expanding countries have a tendency to view industrial development apart from the oil industry. In part this stems from the traditional foreign owned and enclave nature of the oil sector. But as government have begun to gain greater control over their oil resources it is evident that petroleum may be one of the best fields for industrial expansion, especially in the case of products that require high imports of energy or petroleum derivatives.

Iraq is a lucky country it has got the natural resources and the capital and the political instability. It should have a good chance of achieving a proper balance between the development of the two main sectors, agriculture and industry. Although there is some problem such

as how to improve the international competitiveness of their industrial products' rising, per capita productivity may be the only solution. Efficiency and productivity can be improved by specialization in industries that require labour supply also the identification of the industries capable of making the greatest contribution of their overall development.

1.7 The Role of Oil Sector on the Iraqi Economy

The country's development has resulted from the interaction of three sectors: oil, the manufacturing and services, and the agricultural sector. These distinct interact in several ways.

For the oil sector provides the capital needed for the growth of the other two sectors, but does not receive any substantial return flow of resources from either the manufacturing and service or the agricultural sector. By contributing a large share of the capital needed for the growth of the rest of the economy, however, the oil sector obviates the most pressing constrains on growth faced by developing countries foreign exchange.

The manufacturing and service sector draw on the oil sector for funds needed for its expansion, and on the agricultural sector for labour and raw materials. Its output is sold mostly to the agricultural sector. If Iraq is to become an advanced country, no longer dependent on oil revenues, the modern sector must ultimately be capable of generating its own capital requirements. At that time the economy must be in a position to look to the oil sector not so much for its capital requirements, but as a source of expensive raw materials and energy.

The oil sector, therefore, must become an appendage of the rest of the economy if the country is ultimately to achieve self-sustained growth.

The agriculture sector currently uses the products originating in the oil sector and manufacture and service sector. Because of limited employment opportunities in the oil sector, however, labour leaving the agriculture sector must find work in the manufacture and service sector. As the country's development continues, this loss of labour will inevitably lead to the shrinkage of the agricultural sector relative to the other sectors for the country to sustain growth, the transfer of workers out of agriculture must be accompanied by increases in productivity so that the increased prices or imports.

The major mechanism of growth in the country involves the manner in which oil revenues are channelled into the economy. Initially, revenues reach the modern and agricultural sectors through the government budget, which is itself composed of two basic components, current expenditures arising out of public services and development expenditures used for implementation of the nations public investment allocation as outlined in the five year plans. Once allocated and expanded, these oil financed development expenditures contribute greatly to the expansion of the economy's productive capacity indeed, many of the current bright spots in the agricultural, industrial and service sectors are a direct result of the transfer of resources to them the oil sector. Oil revenues thus represent an easy source of savings and of foreign exchange, readily convertible to capital formation via imports of machinery and equipment. Because of oil revenues the country has not had to use fiscal and monetary policies so necessary in GNP. Oil revenues on the scale currently received by Iraq actually allows for the attainment of increased growth and consumption.

In effect oil revenues soften the conflict that any country must resolve between meeting the needs of the present and future generations. While the numerous benefits of oil to the country are clear, the authorities must deal with a number of risks inherent in the reliance on oil revenues for developing, currently, there are three particularly pressing development problems facing the country.

The nation's growth process has begun to require an ever-increasing level of oil revenues in order to sustain its growth momentum. Measures must therefore be under taken to develop the modern sector in a manner that will enable it to pick the slack in demand when the trend in the growth of oil revenues begins to taper off and decline. The dependence of the authorities on oil as an easily accessible source of revenue has also tended to related the development of a tax base sufficiently broad to be closely interwoven with the mainstream of domestic economic activity. In addition an easy supply of foreign exchange, as provided by the oil sector has encouraged newly established industrial firm in the private sector to orient their production towards the rapidly growing modern sector than towards the more competitive markets.

The long term development of Iraqi economy as in the case of all oil exporting countries, will ultimately depend on the building of a non oil export sector capable of meeting the future import requirements. The government is aware of these problems and has not let the present availability of foreign exchange divert its attention from the country's long range growth requirements. A number of measures have been introduced into the country's development plans to enable the economy to adjust to the eventual decline in oil revenues.

1.7.1 The Development of the Pipeline in the Oil Industry

Oil pipelines in Iraq had significant effects on this sector's output and oil exports. Most of the Iraqi oil is exported through pipeline routed via other countries, due to the geographical location of the Iraqi oil fields in the north and south of the country. Between 1934 - 1952 five pipelines were built to connect the Iraqi oil fields with the ports of export in the Mediterranean sea at three terminals the Haifa in Palestine, Tripoli in Lebanon and Banias in Syria. (Penrose and Penrose, 1978, p. 137). After their completion the pipelines considerably increased the export capacity of crude oil and the export of the Iraqi oil among oil exporting countries had risen significantly. By 1948 an increase in the capacity of the Banias pipeline was completed by 1952 for the export of the oil from the northfield in Iraq for the southfield oil in Basra. It was cheaper to transport oil through the Arab Gulf rather than send it by pipeline across Syrian territory to Banias and Tripoli.

The Iraqi government revenue rose from an average of 4 million Iraqi dinars during the period 1931 - 1935 to 28 million Iraqi dinars during the period 1946 - 1958 round 18% coming from oil. Between 1952 and 1958 the Iraqi output doubled oil revenues, the biggest increase in output occurring between 1951 - 1953 when completion of the pipeline coincided with the decline in Irani output. (Penrose, 1978, p. 141).

In 1966 about one third of Iraq's oil was exported by tankers from Basrah and two thirds was pumped through the pipeline to the Mediterranean at Tripoli in the Lebanon and Banias in Syria.

Because the Iraqi oil was exported via non-Iraqi routes more pressure on the state in its attempt to safeguard the continued flow of oil revenues, either because of a political trouble or other reasons, such as the 1967 war the closure of the Suez Canal, the nationalization of oil in 1972, the 1973 war with Israel, in 1975 the strategic pipeline of crude oil and in confronting all exceptional conditions and consequently ensured the flow or Iraqi oil and its delivery to consumer countries. In two different direction from the north to the terminals on the Arab Gulf and from the south to the terminals on the Mediterranean. (Berindranath, D., 1979, p. 113).

In 1977 a new pipeline was opened between north oil field (Kirkuk) and Dortyol on Turkey's Mediterranean coast. This pipeline was designed to enable Iraq to be independent of other countries for the export of her crude oil Syria closed the pipeline of the Iraqi oil in 1981 as the Syrian government supported Iran against Iraq in the Iraqi - Iran War. The Iraq government expand the capacity of the pipeline through Turkey and started export more oil through Turkey. as well as Iraq started pumping oil through the new pipeline link south oil field of Iraq to the Saudi Arabian line to Yanbu. Another line is being built through Jordan to the Gulf of Agaba in Jordan, with a capacity of 1 million b/d and would be a joint venture project with Jordan, estimated to cost $ 1 billion. (Quarterly Economic Review of Iraq, 1984, p. 14).

So the pipeline development programme has become an area of considerable activity to ease the way in front exporting more oil in a safe ground.

1.7.2 Nationalization of Oil

The oil sector in Iraq is the most vital sector of the economy and its nationalization was an added boost to the development of the national economy in 1959. The Iraqi government and the oil companies (IPC) see Table 1.6, start their negotiations which lasted three years but the government failed to persuade the oil company to meet its demands and proposals. The demands were for free natural gas, relinquishment by the (IPC) of the greater part of its non-exploited concession area, revision of the profit-sharing arrangement and 20 per cent of the equity of the IPC to go to government. The annual increase of Iraqi oil production during the three years of negotiations was 5% - 1% while the oil production in Iran went up to 12% and in Saudi Arabia went up to 9% and Kuwait to 11.5%. The three year negotiations failed and the Iraqi government issue the law no. 80 of 1961, which recovered 99.5% of land under the control of foreign concessions which the companies had not developed (Mansfield, 1973, p. 334). Law No. 80 was the most extreme action that had been taken in the Middle East against the oil companies since the Iranian nationalization of the consortium oil in 1951. (Penrose and Penrose, 1978, p. 384).

Law No. 80 was denied by the oil companies while the role of the government participation in oil sector was reinforced by the reaction of the national oil company of Iraq (INOC), promoted by law No. 11 of 1964, through which the company has since under taken the task of direct exploitation of the country's oil. The operation of oil industry was also undertaken by the government along with the Iraqi petroleum company (IDC) group. They agreed by 1967 to restrict their rights of exploration of 3873 skm.

TABLE 1.6

Shares Distribution of the Oil Company in Iraq in 1932

	NAME OF COMPANY	NATIONALITY	%
1.	British Petroleum Company (ex-Anglo Persian Company)	British	23.75
2.	Campagnie Français des Petroles	French	23.75
3.	Royal Dutch (Shell) Company	British - Dutch	23.75
4.	Near East Development Corporation	American	11.8
5.	Calouste Sarkis Gulbezkian Foundation		5

SOURCE: Quarterly Economic Review, 1981, p. 13

By 1969 , the Iraqi government signed an oil agreement with the Soviet Union. This agreement was important because it gave the Soviet Union the first foot hold for influence in the Middle East oil producing countries. It guaranteed an immediate market for the Iraqi national oil company as well as gave Iraq some self-confidence for its ability to operate the oil industry without reliance on the IPC, and increased the skill and efficiency of the Iraqi caders in operating the oil fields. (Al-Khuwaiter, A., 1980, p. 46).

The reduction in the level of oil production continued by the IPC. The Iraqi government blamed the foreign oil companies for this reduction as the resulting loss of government revenue would affect the implementation of the economic development. (Political Report, 1979, p. 54).

During that period, the government , the Iraqi people and their organization were mobilized to fight the monopolies. (Political Report, 1979, p. 55).

On 1st June 1972 the government declared the nationalization of the IPC by law no. 69 of 1972 (Ministry of Planning, 1975, p. 135).

After the communique issued by the Iraqi government, a new development immediately took place and was speeded up. Nationalization the oil gives Iraq extra power to accelerate its socio-economic development.

1.7.3 Distribution of the Iraqi GDP

The oil sector has been dominant in the Iraqi economy since the early 1950's accounting for more than one-third GDP during the period 1953 - 1973. In comparison to other sectors, the oil sector is the main component of GDP. Although oil production and oil revenues went through time of increases and decreases over the last three decades, the GDP has remained in constant increase during that period. Its value increased from 128.9 million ID (39.9% of GDP) in 1953 to 6.4782 million or 64.7% in 1979. Despite the rapid increase in the value added of this sector its share in the GDP declined from 63.8% in 1960 to 34.1% in 1965 and 30.5% in 1970, but increased again in 1979 to 64.7%. Since the oil sector is one of the main components of the Iraq GDP fluctuations on the value added in this sector were reflected on fluctuation of the GDP as shown in Table (1.7).

The contribution of the oil sector to GDP is the largest population of the Iraqi economy during the period 1970 - 1979. (Ministry of Planning, 1983, p. 153).

1.7.4 The Impact of Oil Revenue in the Iraqi Economy

Since the begging of 1950's the economic and social development of modern Iraq can be connected to the development of the oil industry and its revenue to the budget of the Iraqi government. Because the impact of oil revenue upon economic and social development in Iraq in the twenty-four years following the discovery and production of oil was very small. The oil companies only paid the Iraqi government from 1927

TABLE 1.7

The Share of the Oil Sector in GDP During 1955 - 1979

(Million Iraqi Dinars)

YEAR	TOTAL GDP	OIL SECTOR	NON-OIL SECTOR	RATIO OF OIL SECTOR TO TOTAL GDP	% RATIO OF NON-OIL SECTORS TO TOTAL GDP
1955	386.6	162.7	222.1	42.0	57.4
1960	565.3	208.1	357.2	36.8	63.1
1965	830.9	283.6	547.3	34.1	65.8
1970	1188.8	362.6	826.2	30.5	69.4
1975	3971.5	2280.0	1691.5	57.4	42.5
1979	10011.2	6478.2	35.33	64.7	35.2

SOURCE: 1. Ministry of Planning, 1976, pp. 179 - 183
2. Ministry of Planning, 1980, pp. 153-165

- 1950 37.65 million ID. Table 1.8 shows the development of oil revenue during the period from 1927 - 1950.

In 1950's the Iraqi government established the DB and allocated to it all the oil revenue 70% to oil revenues for investment purposes. By 1952 the allocation decreased until 1958, the percentage decreased to 50%. The other 50% was provided . the ordinary budget to reduce the dependence of Iraqi economy on oil revenue and to improve the Iraqi economy on oil revenue and to improve the contribution of other sectors in developing activities.

1950 - 1958 the rate of growth of most developing countries was 4.8% a year but the Iraqi economy grew more rapidly than others.

The oil sector started to play a more significant role in the creation of GDP and investment plans started to become more ambitious. By 1959 the figure was 96.8 per cent and in 1970 64.8 per cent the government receipts from oil rose from 40.1 million ID to 79.8 million ID in 1958 and to 186.1 million in 1970, (See Table 1.9)

However, oil production in Iraq was sensitive to international political tensions such as the 1948 Arab - Israeli War, followed by the closure of Haifa pipeline, the Suez Canal crisis in 1956 then the destroyed of the Bazias pipeline in 1957 and by 1958 the overthrow of the monarchy in Iraq. After that the Arab - Israeli War in 1967 in all those cases, Iraqi revenue from oil were decreased.

TABLE 1.8

Total Government Revenue, Government Oil Revenue and Oil Revenue as Percent of Total Government Revenue in Million of Iraqi Dinars 1927 - 1950

YEAR	TOTAL GOVERNMENT REVENUE (1)	OIL REVENUE (2)	PERCENT OF (2)/(1)
1927 - 1933		0.64[a]	
1934	5.02	1.02	20.3
1935	5.36	0.59	11.0
1936	6.03	0.60	9.9
1937	6.94	0.73	10.5
1938	7.84	1.98	25.2
1939	9.21	2.02	21.9
1940	9.72	1.58	16.2
1941	10.16	1.46	14.3
1942	13.83	1.56	11.3
1943	18.10	1.88	10.4
1944	18.89	2.22	11.7
1945	20.22	2.32	11.5
1946	25.10	2.33	9.3
1947	26.02	2.35	9.0
1948	26.72	2.01	7.5
1949	28.63	3.24	11.3
1950	33.49	5.28	15.8

SOURCE: Qubain, 1958, p. 3

A annual average for 1927 - 1933 inclusive

TABLE 1.9

Oil Revenue Compared to Total Government Revenue

1951 - 1970

YEAR	TOTAL GOVERNMENT REVENUE	OIL REVENUE	PERCENT
1951	44.9	113.9	39.9
1952	74.4	40.1	53.8
1953	82.9	58.3	70.3
1954	97.8	64.3	69.2
1955	125.9	73.7	58.5
1956	113.8	68.8	60.4
1957	97.6	48.8	50.0
1958	137.2	79.8	58.2
1959	89.7	86.8	96.8
1960	103.6	95.0	91.7
1961	120.7	95.0	78.7
1962	114.7	95.0	82.8
1963	126.8	116.0	91.5
1964	146.0	126.1	86.4
1965	179.1	133.9	74.8
1966	158.6	140.7	88.7
1987	210.4	128.9	61.3
1968	220.4	170.0	77.1
1969	250.6	172.9	69.1
1970	287.0	186.1	64.8

SOURCE: 1. F. Jalal, 1972, p. 11
2. M. Brown, 1979, p. 114

Between 1968 - 1978 the Iraqi economy grew at annual rate of 8% compared with 5.4% for non-oil exporting countries.

The Iraqi government was heavily dependent on oil revenues for a high proportion of total export earnings and this dependence has increased since the oil price rise of 1973. The ambitious development programmes encouraged the government to increase oil production which jumped from 536,375 million barrels in 1972 to 736,275 in 1973 and the revenues increased from 575 million U.S.A. dollars to 1843 U.S.A. dollars. In the same period oil production reached a maximum of 1269080 million barrels in 1979 but fell to 968,582 million in 1980 as a consequence of the war with Iran. Revenues on the other hand recorded an increase from 21291 million U.S.A. dollars in 1979 to 25,981 million U.S.A. dollars in 1980, (See Table 1.10).

In fact the oil revenues have been the essential source of the Iraqi national income before and after the nationalization of oil companies.

The huge additional revenues were to cause massive national transformations. Government projects for economic and social development were expanded throughout the country. Moreover, the oil revenuesare the major resource of government finance development, finance and foreign exchange, and its contributes to Iraqi's balance of payments. The oil revenues havehelped Iraq to crease a self-sufficient economy capable of growth and its playing the leading role in the transformation of Iraqi economy. It had helped the government to meet recurrent expenditure, but also to provide the incentive for the government to formulate and execute economic development policies

TABLE 1.10

Iraq's Revenue from Oil 1971 - 1980

YEAR	MILLION U.S. DOLLARS
1971	840
1972	575
1973	1.843
1974	5.700
1975	7.500
1976	8.500
1977	9.631
1978	10.200
1979	21.291
1980	25.981

SOURCE: Ministry of Planning, 1981, p. 222

through the allocation of part of the oil revenue for capital expenditure. (Al Nasrawi, 1968, p. 24).

1.8 Iraq's Gross Domestic Product Growth 1958 - 1982

The oil sector has been dominant in the Iraqi economy since the early 1950's. Before that time the economy had been dominated by the agricultural sector which usedto be the main source of livelihood for about 70 per cent of the population.

The drastic rise in government revenues from oil in 1951 led the government to adopt the practice of medium term development plans. As such the development board as an autonomous entity was entrusted with the responsibility of planning and implementing what seemed necessary to accelerate economic growth. Most projects that were carried out during the term of this board were for the agricultural sector such as irrigation, canals and flood control.

The sectoral composition of the GDP of the Iraqi economy differs from that of other middle income countries like Mexico, Jordan and Syria, for instance.

This is illustrated in Table 1.11. The main contribution of GDP is due to services in the case of Mexico, Jordan and Syria, while it comes from the industrial sector in the case of Iraq. The industrial sector is dominated by the manufacturing subsector contribution to GDP in Iraq is almost less than half that of Jordan or Syria.

TABLE 1.11

Percent of GDP in Iraq, Mexico, Jordan and Syria at Current Price 1980

SECTOR	IRAQ 1980	MEXICO 1980	JORDAN 1980	SYRIA 1980
Agriculture	7	10	8	20
Industry	73 *	38	32	27
Manufacturing	6	24	16	21
Services	19	52	60	53

SOURCE: World Development Report, 1982, p. 115

NOTE: Manufacturing sub sector is part of the industrial sector but its share of GDP is shown because it typically is most dynamic part of the industrial sector.

* This number refers to petroleum industry Iraq's case.

The agriculture sector contribution of GDP is insignificant in the four countries although it is higher in Syria than in Mexico, Jordan and Iraq. The industry sector contribution of GDP is significant in Iraq compared with the other three countries.

Reflecting the high level of investment which corresponded to an increase in GDP, income per capita rose from 135.1 million ID in 1972 to 879.4 million ID in 1982, (See Table 1.12), out an average average annual rate of growth of 20.8. In fact this increase does not reflect the high rate of growth of GDP for the same period. May be attributed to the high rate of growth of the Iraqi population.

However, the general performance of the Iraqi economy during the period 1958 - 1982 can be illustrated as shown in Table 1.13. Let us put some remark about the relative importance of various sectors. First the commodity producing sectors (i.e. agriculture, mining, industry) constitute the largest proportion of the economy. Though this dropped from 57.3 per cent to 41.4 per cent over the 24 years. Secondly, the value added by agriculture declined considerably in its relative with its share of the GDP from 16.6 per cent in 1958 to only 12.8 per cent in 1982. This shows the decline of 3.8 per cent from the level of 1982. The decline in the share of agriculture GDP was primarily due to the slow relative growth rate attained by this sector. Which can easily calculated from the absolute figures presented in Table 1.13. During the overall 1958 - 1982 period, agriculture grew at an annual rate of 48.13 per cent. Actually this growth rate would have been much lower had we excluded the unusual rise in agricultural production which occurred in 1972. However, the growth rate was about 7.5 per cent annum during the period 1958 - 1968; 0.99 per cent per annum during the period 1968-1978 and 103.76 per cent per annum during 1978-1982 period.

TABLE 1.12

National Income, Gross Domestic Product and Per Capita Share (in Current Prices)

1972 - 1982 (in ID million)

YEAR	PER CAPITA GDP	GDP	PER CAPITA NI	NATIONAL INCOME
1972	135.1	1369.5	113.8	1153.4
1973	148.5	1555.2	132.0	1382.3
1974	314.1	3400.9	269.4	2916.3
1975	355.3	3974.3	318.4	2562.2
1976	453.2	5243.0	428.4	4935.3
1977	485.6	5858.2	458.1	5526.6
1978	562.8	7017.0	538.2	6709.9
1979	871.0	11167.2	825.9	10588.5
1980	1181.9	15647.2	1157.4	15323.0
1981	766.5	10477.3	653.0	8925.8
1982	897.4	12662.5	874.2	12334.8

SOURCE:
1. Ministry of Planning, 1980, p. 117
2. Ministry of Planning, 1981, p. 119
3. Ministry of Planning, 1983, p. 118

Iraq's Sectoral Contribution to GDP 1958 - 1982

(ID Millions)

SECTOR	1958		1968		1978		1982	
	ABSOLUTE	% SHARE OF GDP	ABSOLUTE	% SHARE OF GDP	ABSOLUTE	% SHARE OF GDP	ABSOLUTE	% SHARE OF GDP
Agriculture	101.8	16.6	186.3	17.5	206.5	9.1	1277.8	12.8
Mining	203.6	33.1	342.7	32.1	663.6	29.4	2962.6	29.8
Manufacturing	46.6	7.6	96.7	9.1	285.1	12.6	875.1	8.8
Construction	42.8	7.0	30.4	2.8	159.8	7.1	2080.6	20.9
Electricity and Water	1.9	2.0	9.6	0.9	43.1	1.9	65.0	0.65
Services	218.4	35.5	401.0	37.6	901.5	39.9	2687.6	27.0
Total GDP at 1969 Prices	615.1	100.0	1,066.7	100.0	2,259.6	100.0	9,948.7	100.0

SOURCE: Derived from Appendix A

The highest contribution of agriculture in GDP during the period under study was in 1972, which accounts for about 18.6 per cent of the total GDP (See Appendix A). This increase was mainly due to an increase in agricultural production because of good weather at the time throughout the country. A more realistic picture of the relative contribution of agriculture can be presented if we exclude mining sector (oil extraction). By doing so, the agricultural contribution rose to 16.6 per cent and 12.8 per cent in 1958 and 1982 respectively. Thirdly, the share of mining, mainly in oil extraction industry, was in absolute terms, just over 3¼ times as significant as it was in 1958, in relative terms it contributed 29.8 per cent to GDP in 1982 against 33.1 per cent in 1958.

This indicates that the agricultural growth rate was lower than the rest of the economy. This sector also experienced great fluctuations, this decline due to several factors which have contributed to the slow growth. The most important were salination, the absence of field drainage, bad weather conditions, traditional farming practices, the shortage of rainfall, the rural to urban shift of the population, the instability in the northern region from 1958 - 1978 and the weakness of the agricultural co-operatives agencies. Compared to the average growth of most of developing countries which stood at 4.8 per cent annually, the Iraqi economy has increased more rapidly at a rate of 5.6% per annum between 1958 - 1968 constant prices, Table 1.4 shows the growth rates of the economy of Iraq between 1958 - 1982.

The increase in the GDP prior to oil prices adjustment was mainly due to the higher rates of growth in mining construction, manufacturing and services sectors. The oil prices adjustment in 1973 the growth of the economy was more than that of 1968 - 1978 which stood at only 7.7

TABLE 1.14

Annual Rate of Growth of GDP

1955 - 1982

SECTOR	1958 - 68	1968 - 78	1978 - 82	1958 - 1982
Agriculture	6.2	1.0	57.7	11.1
Mining	5.3	6.8	45.3	11.3
Manufacturing	7.5	11.4	32.3	12.9
Construction	-3.3	18.0	89.9	17.5
Electricity and Water	17.5	16.2	10.8	15.8
Services	6.2	8.4	31.4	11.0
GDP	5.6	7.7	44.8	2.0

SOURCE: Derived from Table 1.13

per cent per annum while the period 1978 - 1982 recorded an annual growth of 44.8 per cent.

It can be seen from the above table that all the sectors of the economy contributed to this growth through manufacturing, and The electricity and water sectors contributedalarger share than agriculture, mining and the service sectors.

1.9 Conclusion

Iraq is one of the few developing countries that has a sort of balance between its natural resources and its population. In a world where the supply of natural resources is becoming scarce relative to growing demands, Iraq stands out as one of the few areas with vast potential for increasing the supply of a number of strategic minerals, in addition to oil. The country also possesses a diversity of renewable natural resources. It has only began to tap its large mineral deposits. It can also significantly expand agricultural output by increasing the amount of land under irrigation and productivity of those areas currently under cultivation. The country can therefore be relied on under the right circumstances, to add large amounts of a number of raw materials to world supplies.

The oil sector is by far the most important. It has remained the principal generator of the national income and more or less the sole source of financing economic development by providing the government with huge revenues and foreign exchange after nationalization in 1972. It also constitutes the base of all petrochemical industries.

But despite all these Iraq faces the common problems and difficulties that charactise manpower planning in most developing economies. It lacks the qualified personnel to carry out the process of development and the skills required for the implementation of projects and programmes, as well as the imbalance in the educational planning and the distribution of the manpower.

One of the Ba'ath governments ambition is to transform Iraq with in a comparatively short time into an industrialized substituting a strong manufacturing base capable of sustained growth and sizeable export earning, through a series of imaginative government policies and institutions. But the war with Iran have a major negative impact on the development of the main sectors in Iraq for years to come.

In the following Chapter I shall discuss the Iraqi national development plan since 1950's, with particular emphasis on the educational aspects of this plan.

CHAPTER TWO

The Process of Development Planning in Iraq 1950-1980

2.1 Introduction

Although Iraq has a relatively long history in development planning, a comprehensive appraisal of its past experience reveals that the country still faces major difficulties, especially in the need for skilled manpower and qualified planners to carry out the tasks of development. Also, planning experience in Iraq remains too poor to utilize quantitative analysis in rationalising the government as well as the kind of individual economic behaviour, which occurs in a considerable number of developing countries. Co-ordination between educational planning and manpower planning and various authorities has lagged behind the main body of planning in Iraq. The process of supplying development projects with various categories of manpower has been improvised onthe spur of the moment and regarded as an adjunct to each development project, rather than as a major aspect of national development itself.

The great merit of the Iraq evolutionary approach to economic planning was its defacto, though not explicit recognition that the country was not prepared in terms of technical personnel and institutional resources to run before it could walk.

In this chapter I shall discuss the country's experience of planning in general since the early 1950's, when, at the recommendation of certain western experts, and economic organizations, the Iraqi government adopted planning as a means towards social and economic development. As we shall see, the plans were faced with a number of difficulties which led to delays in the implementation of some projects and the postponing of some others, while others were completely abandoned. It was only during the 1970's that the process of planning

started to be more consistent and educational planning, despite the difficulties, started to be looked upon more seriously as one of the pre-requisites in any process of development.

The two national development plans of 1970-1974 and 1976-1980 will be examined to determine:

1. The process of goal-setting in educational planning.
2. The association of educational goals in both plans.
3. The linkage between national development gaols and education targets.

2.2 The Process of Development Planning

The strategic development adopted in Iraq, emphasized that the necessity to orient state intervention in directing economic activities in some form of central planning towards the building of strong a economy, granting priorities to development problems. In other words the state exercised direct control over investment, pricing and another decision in the public enterprises.

In fact most of the developing countries including Iraq, believe planning to be necessity and there is currently no developing country without some sort of development plan and planning ministry or authority.

Planning has become away of life in government ministries and every five years or so the latest development plan is paraded out with the greatest fanfare (Todar, 1981, p. 429).

Planning is viewed as one of the tools for the economic development although it involves a lot of preparation for the future. It is recognised as an instrument for changing the future.

Iraq has a longer experience of development planning than any other Arab country.

The year 1950 marks a new era in Iraq. It can therefore be considered as the year of shift towards development of the Iraqi economy. Because of the increase in oil revenue the Iraqi government decided to establish a development board. The board was given responsibility for all capital expenditure and was empowered to draw up a five year plan for the country's development.

Thus during the period 1951-1959 four investment programs drawn up by the development board. The first investment program in 1951-1955 which was almost immediately replaced by a second programme for the year 1951-1956 which was almost immediately replaced by a second programme for the year 1951-1956. Until the third programme for the year 1955-1959 period was superseded by the fourth one for the 1955-1960 period.

All these four programmes drawn up prior to the revolution of 1958. With the success of the 1958 revolution a rejection for the previous planning approach and immediate organizational changes were made following a review of planning machinery, a new law passed in 1959, abolishing the development board and the Ministry of Development and establishing an economic planning and a Ministry of Planning (E. Pensose, 1978, pp. 252-4). Planning objectives in this period were seeking more centralised direction in economic matters as in other

fields and a provisional economic plan adopted for 1959-62 period the emphasis was to complete the projects initiated in the previous period. Another plan called the Detailed Economic Plan which was to cover the period 1961-65 period. This plan marked the high point in Iraqi planning and proportion of expenditure to allocation was significantly higher than in 1950 and gave priority to the industrial sector.

The plan 1965-69 was a much more sophisticated than the previous. Two criteria were used, capital output ratios and capital to foreign, exchange savings ratios (Jalal, 1972, p. 54-59).

Following the revolution of 17-30 July 1968, the Iraqi region experienced two comprehensive plans which translated the philosophy and policy of the leading into the achievement of full-scale and rapid development.

Planning according to the party's (ABSP) ideology is therefore of central importance in the building up of the economy and all its different sectors and developing it in accordance with local (Iraqi) and national (Pan-Arab) needs both in present and future. Centralised planning was the basic ideal and principles which guided the planning and organization. Because centralised national planning was widely believed to offer the essential and perhaps the only institutional and organisational mechanism for overcoming the major obstacles to development and for ensuring a sustained high rate of economic growth. (Todar, 1981, p. 429).

Consideration was given to the co-ordination between the objectives of each stage and between medium and long-terms planning,

The execution of the plans that has been laid down and the provision of scientific and broad from work for popular control to fulfil its role.

1. The identification of the development economic situation inherited by the revolution and the scientific and objective study of this factor.
2. The full liberation of the resources and economy of Iraq from all types of foreign domination.
3. The building of a strong economy to achieve a large and continuous increase in national income leading to raising individual living standards and to reduce the disparity in incomes between various social groups and between the town and the countryside.

(Political Report, 1979, p. 93)

The Iraqi planning during the late 1970's has adopt a macro-economic rather than a micro-economic approach and defind the planning objectives in terms of what should happen to key aggregate economic variable.

Almost every developing country used in aggregate growth model in their planning model. Because it's ideal with the entire economy in terms of a limited set of these macro-economic variables is deemed most critical to the determination of levels and growth rates national output. (Todar, 1981, p. 435).

1970-1974 Five year development plan marked the major change over the previous plan in terms of planning methods and development strategy also. The second plan which took place in 1976-1980 plan marked by radical and important changes and transformation. The most distinct and

serious event in that period was the achievement of complete economic independance as a result of nationalizing the multi oil companies in the period between 1972 and 1975.

However, Iraqi and other oil countries are attempting to achieve economic and social development on self-sustaining basis. She has began to recognise that the most relevant goal of development is the improvement of the quality of the life for a national people and that increasing the national output of goods and services should be a means of achieving the development goal, rather than a goal in itself.

Nevertheless economic planning in Iraq has made a contribution to the country's growth through improving both private and government decision processes. Although planning results have fallen short of the high technical standards for planning set by economic and public administration specialists in developed countries, the governments planning strategy has recognized the technical, personnel and institutional limits that have prevailed in Iraq. Iraqi planning strategy has involved . recognition of the country's prevailing limitations. It has allocated relatively large amounts of resources to developing more and better statistical information and the advanced training of elite personnel. To this end, the expansion and modernisation of university education and research, and development more Further, large numbers of Iraqi students are currently studying in the worlds leading universities. The results of the country's drive to upgrade the quality of its high-level administrators.

The great merit of the Iraqi's approach of economic planning was its defacto, through not explicit, recognition that the country was not

prepared in terms of technical personnel, and institutional resources to run before it could walk.

2.3 The Development Plan 1951-1959

Economic planning in Iraq began with the establishment of the development board in 1950 by the government with the view to benefiting from the ever increasing oil revenues and mobilising them towards building up the structure of the Iraqi economy. Oil revenues in 1950 amounted to 6,885,751 ID while the oil revenues for 1945 and 1949 were respectively 2,709,886 ID and 3.318.701 ID (Aizat, 1961, p. 48).

Because of the extraordinary increase in oil revenues the international bank for reconstruction and development, In 1950 advised the Iraqi government to establish for the programme.

These funds oil revenues, almost all in foreign exchange, made it possible for the state to initiate programmeof development without the necessity of going through an austerity period or one of heavy taxation, either of which would probably have created considerable political unrest (Qubain, 1958, p. 34)

It was thought that the country's development could be entirely financed from the ever-increasing oil revenues. At the beginning it was suggested that all oil should be allocated for development programmes, But because of the increasing functions of the governmental developments, it was decided that only 70 percent of the oil revenues should go to the development and the rest to the regular government budget.

The main objectives of constituting this board was to draw up economic programmes aiming at developing the country's resources and the raising of standard of living of the masses. The developing of the country's resources, raising the standard of living and to insuring some continuity in development which frequent changes in governments have made virtually impossible in the past (IBRD, 1952, p. 169).

However, by 1952 the income of the development board was restricted to 70 percent of the oil revenues. The board was an autonomous agency with a budget entirely separate from the governments ordinary budget. By 1959 the share of oil revenue was reduced to 50 percent, where the other 50 percent had to go to the ordinary state budget as a source among others for financing current expenditure (Law No. 23, 1950).

The development board was charged with three fold-task of:

1. The presentation of the resource of Iraq and the rise standard of living of her people.
2. To undertake a general survey of the exploited and unexploited resources of Iraq.
3. To turn over the completed projects to the ministries concerned with administration and maintenance.
4. To make a report on its operation for the preceding year indicating the extent to which the general programme previously approved has been completed and the expenditures made in connection thereof.

In maintaining its development policy in the 1950's the government assigned the responsibility of the financing the construction of school and considerable increase to the budget of the Ministry of Education.

The board began building school, libraries, sending students abroad to continue their studies.

In 1950 school construction and various other aspects of educational planning were placed under the jurisdiction of the development board, an autonomous government agency established to promote more efficient use of the country's economic and human resources. Sums allocated to education in the state budget were substantially increased within a major school construction programme under the auspices of the board more than 700 schools were built between 1950 and 1958 (Smith, 1971, pp. 117-118).

Since the establishment of the development board the board presented four development plans during the period 1951-59. The first was designed to cover the period 1951-55, the second the period 1951-56, the third the period 1955-59, and the forth covered the period 1955-60.

The first board's programme 1951-55 fiscal years. This was put into operation by law No. 35 of 1951. The programme appropriated total expenditures of ID 66 million to be financed out of an anticipated revenue of ID 95.1 million. The allocation of the expenditures and the main sources of revenues are shown in Table 2.1.

The table shows that the allocation to the agriculture sector in this development programme was ID 30 million or 46 percent of the total planned expenditure, 24 percent was allocated to transport and communication revenue were estimated at ID 95.1 million out of which ID 9.1 million was expected to come from oil revenues and ID 4.0 million from the world bank as a loan to project. Owing to this fact by the end of the programme, there was a surplus. The difference between the

Planned Investment and Revenues of Development Programmes during the Period 1951-60

	First Programme 1951-1955 ID Million	%	Second Programme 1951-1956 ID Million	%	Third Programme 1955-1959 ID Million	%	Fourth Programme 1955-1960 ID Million	%
Planned Investment								
Agriculture	30.0	45.7	76.4	49.2	114.4	37.6	168.1	33.6
Industry	0.0	0.0	31.0	19.9	43.6	14.3	67.1	13.4
Transport and Communications	15.9	24.2	26.8	17.2	74.2	24.4	124.4	24.9
Building and Housing	12.6	19.2	18.0	11.6	60.9	20.0	123.2	24.6
Others	7.2	10.9	3.2	2.1	11.4	3.7	17.3	3.5
TOTAL	65.7	100.0	155.4	100.0	304.3	100.0	500.1	100.0
Planned Revenues								
Oil	91.1	95.8	164.6	97.6	215.0	99.6	385.0	98.7
Foreign Loans	4.0	4.2	4.2	2.4	-	-	-	-
Others	-	-	0.1	0.0	0.7	0.4	5.0	1.3
TOTAL	95.1	168.7	100.0	100.0	215.7	100.0	390.0	100.0

Source: Ministry of Planning, 1965, p. 110

planned revenues and expenditure of ID 29.1 million. This programme did not allocate anything for the industrial sector.

This was probably due to the result of not having any research done on the feasibility of establishing any kind of industry.

The programme was revised before implementation was started. Guided by the recommendations of the international world bank and endowed with additional world bank, the development board revised its first five year programme by introducing a new six-year programme for the years from 1951-56 as a result of the 1951 agreement between Iraq and the oil companies.

The new agreement stated that Iraq should receive 50 percent of the profits. This agreement improved the financial position of the country with a sizeable increase in oil. It was decided to give the board more permanent status. But the character of the projects remained the same as the original one although its scope in the general terms was enlarged.

In addition to extension the period to another year the revised version increased projected expenditures to 155 million ID. Revenue was estimated to total ID 168.7 million (Law No. 25 of 1952) 20 percent was allocated for industry, 17 percent for transport and communication, 12 percent for housing and 17 percent was allocated for other projects.

Once more the existing plan was revised and replaced by a new five year programme covering the period 1955-59.

The 1955-59 programme was more comprehensive than the previous two programmes, whether from the view point of the increased number of projects or the amount of expenditure. This new plan had become necessary for exceeded original estimates, Secondary, the cost estimates for the first plan were also no longer realistic and finally in 1953 Law had changed the basic of financing projects of other developments and agencies. (Qubain, 1958, p. 34).

The plan envisaged a total expenditure of ID 304 million and revenues for the period was established at about ID 215.7 million, was allocated according Law No. 43 of 1955.

Table 21 demonstrates that percentage share of agricultural projects was about 38 percent of the total planned expenditure. As a result of the increase in oil revenues and of some feasibility studies and availability of new amounts of among that could be appropriated for additional development projects.

Moreover in the field of education the role of the development board increased considerably through its development programme. Its projected activities were restricted to the building of schools, sending students abroad to study technical subjects mainly to meet part of its own needs for skilled personnell and to developing and improving research facilities.

The effect of the development board's role became broader in each succeeding programme.

However, this programme was being implemented by the British economist, Lord Salter (1955). who preparing for the board a report on the various aspects of the economic development in Iraq.

In May 1956 a new supplementary six-year programme 1955-60 replace a the previous programme the increase in oil revenues, the completion of several studies, and especially the recommendations of Lord Salter in favour of a more flexible and diversified programme (Law No. 54, 1956, p. 3). This programme called for expenditure of ID 500 million and the revenues were estimated to be ID 390 million. The allocation and the sources of revenues are shown in Table (2.1). This programme did not complete its full course for political reasons. Then the total expenditure allocated during the period 1955-60 ranged between ID 66 million to ID 500. One third of it went to the agricultural sector. None of these programmes adopted by the development board ever completed changes in either economic and political circumstances invariably led to the replacement of existing programme (Kadim, 1974, pp. 43-44).

During the fourth year of the implementation of this programme the revolution of 1958 succeeded in overthrowing the established regime and the establishing the development board which was replaced by ministerial committee. The committee and the Ministry of Development decided to continue the implementation of the programme but at a slower rate until such time as new machinery for development could be created. This new machinery was created in 1959 when the economic planning council was established and the development board and the Ministry of Development were replaced by a planning board and the Ministry of Planning.

2.4 The Development Plans Since 1959-1969

The second stage of economic development planning started after 1959 and lasted until 1969, An important change took place in the planning structure in Iraq after the 14th July 1958 revolution. During this period the development board and the Ministry of Development were replaced by the planning board and the Ministry of Planning.

Three development plans were adopted.

The first was the professional economic plan, (PEP) 1959-1962. The second was the detailed economic plan (DEP) 1961-1964 and the third was the 1965-1969 called the five year economic plan (FYEP).

2.4.1 The 1959-1962 Four Year Development Plan

It was started after the 1950 revolution and attempted to change certain aspects of DB line policy. The new regime took the view that the attitude of the previous regime was over cautious and the Law No. 181 of 1959 states that its aim is to:

> "Change radically to direction of the plan of previous regimes .... in manner which can serve the interest of the Iraqi people".
>
> (Law No. 181, 1959, p. 83)

The total allocation of the four years of the plan was estimated to be ID 393 million and the agricultural sector share in this plan was ID 48 million which represents 12 percent from the total proposed expenditure as is be shown in Table (2.2).

As regarded the distribution of allocations in this plan, it should be noted that the social investment in housing, health and

TABLE 2.2

Investment Allocation in the Provisional Economic Plan 1959-1962

Sector	ID Million	%
Agriculture	47.9	12.2
Industry	48.7	12.4
Transport & Communication	100.8	25.7
Building & Housing	190.7	48.7
Others	4.1	1.0
TOTAL	392.2	100.0

Source: Ministry of Planning, 1975, p. 57

TABLE 2.3

Educational Expenditure as a Percentage of Total National Budget 1958-1969

Year	Educational Expenditure ID	% of Total Budget
1957-1958	14452354	18.3
1958-1959	26189133	-
1959-1960	29250000	-
1960-1961	30815000	20.7
1961-1962	34750000	-
1962-1963	2972000	20.0
1963-1964	33750000	23.2
1964-1965	34750000	-
1965-1966	44000000	24.5
1967-1968	48646956	-
1968-1969	54694000	25.0

Source:
1. Ministry of Education, 1960, p. 4
2. Ministry of Education, 1964, p. 5
3. Ministry of Education, 1965, p. 7
4. Unesco, 1966, p. 70

education received more attention than in the previous programmes as shown in Table (2.3) the percentage was increasing every year.

Its noteworthy that the provisional plan was nothing more than an administrative device.

Almost two years later the provisional economic plan was replaced by a five year plan known as the Detailed Economic Plan (DED) for the year 1961-1965. This plan was formulated in 1961, according to Law No. 70, 1961 . The plan represents a new attitude toward planning in Iraq. It was the first plan to give high priority to the industrial sector over the Agricultural sector to which was devoted about ID 167 million, representing 29.4 present of the total planned expenditure while the share of agriculture was 20 percent as can be shown in Table (2.4).

2.4.2 The Development Plan 1965-1969

The comprehensive planning in Iraq started in 1965 when the five year economic plan 1965-1969 was introduced in drawing up this plan, the main principle were:-

First

To raise the standard of living by increasing the overall annual rate of growth in real terms by at least 8.0%, that of the agricultural sector by 7.5%, the industrial sector by 12% and the commodity sector as group 9.4%.

Second

To restore equilibrium to Iraqi economy and to reduce the dependence on oil revenues by diversifying investment and production.

Third

To give higher priority to the two commodity producing sector (i.e. Agriculture and Industry) and also to make social investments to improve human productivity and social welfare.

Fourth

To increase employment opportunities.

Five

To reduce inequalities in income and wealth to prevent monopoly

The total expenditure was ID 562.2 million and priority was given to the industrial sector with 30 percent. (Badre, 1972, pp. 298-299).

TABLE 2.4

Distribution of Investment Allocation 1959 - 1969

SECTOR	ECONOMIC PROGRAMME 1959 - 1962		ECONOMIC PROGRAMME 1959 - 1962		ECONOMIC PROGRAMME 1965 - 1969	
Agriculture	77.9	12.2	112.9	20.3	173	25.9
Industry	38.7	9.8	166.8	29.9	187	28.1
Transport	110.8	25.7	136.4	24.5	110	16.5
Construction	196.5	48.7	140.1	25.2	134	20.1
Others	14.0	3.6	-	-	2	9.3
TOTAL	392.9	100%	556.2	100%	666	100%

SOURCE: Eddine, 1974, pp. 12 - 15

The five year economic plan 1965-69 reflects the government's continued efforts to expand educational facilities of the plans total expenditure of 830 million dinars, more than 110 million was allocated to educational projects. priorities in dispensing the funds were assigned to the construction of 7900 primary school classrooms and to teacher training. In addition 435 secondary school classrooms and 14 vocational training schools were to be built by 1969. (Smith, 1971, p. 116)

Moreover the plan aimed at achieving full employment by the year 1969. The total number of unemployed persons reached 158.7 thousands in 1969.

The established amount of oil revenue was 69.5% of total revenues with the remaining finance coming from foreign loan. The amount of 95 ID million over 1965 - 1989. The rest was expected to come from utilized credit reserve funds and projects to be realized, (Ministry of Information, 1977, p. 30).

In the educational sector the plan emphasized the need for the development of this sector. A lot of attempts also were made to reform the educational system by stressing the need of vocational education, and technical, scientific training. Even through a supreme council for educational planning was set up in 1965 to plan for new educational policies and to deal with the problems resulting from the implementation of educational plans, no comprehensive plan before give a great attention to the education sector.

2.5 The 1970 - 1974 Five Year Development Plan

The National Comprehensive Plan (1970 - 1974) was implemented according to law no. 70 of 1970 and it was detailed as well as it was the first plan to consider specifically such aspects as manpower, technical training education, research and development. Moreover it came at the time of greater internal political stability than its predecessors.

During this plan Iraq proceeded to nationalize its oil resources, played an important role in sharpening the country's economy. The world oil market witnessed a sharp increase in oil prices, the increase added a greater amount of income to the state budget securing further financial income for this plan.

The plan aimed at achieving integration between all productive projects on a regional and national level, covering public and private activities, changing the structure of the economy and reducing dependence on crude oil. To achieve an overall growth rate of 6.2 percent per annum in gross domestic product and 7.1 percent in the net national income (law 70, 1970). This implied a growth rate of over 3 percent in per capita national income.

The objectives of this plan were more ambitious than those of previous plans. However, the main economic objectives were to concentrate on expansion and diversification of commodity producing sectors, agriculture and industry in order to build the foundation of a socialist society and to promote economic co-ordination and co-operation with other Arab countries (law no. 70, 1970, p. 133). Sought to promote the forces of production and make the best use of modern technology as well as to create balance in the development of different economic sectors.

Although the plan gave a great emphasis to the development of the industrial sector as well as the agricultural sector great attention in this plan.

The plan estimated investment allocation for the industrial sector was 20.0 percent, most of it spent on either the completion of

unfinished industrial projects from previous development plans or on creation of new projects. In the agricultural sector the investment allocation was 19.0 percent, building and services came third with percent and transport and communication percent. The total investments of this plan amounted to some 11437 million ID. See table (2.5) and (2.6).

TABLE (2.5)

National Development Plan 1970-1974
Distribution of Total Investment (Million ID)

Sector	Central Government	Public Sector	Private Sector	Total	Percentage of Total
Agriculture	185.0	8.0	18.0	211.0	18.5
Industry, Mining etc	132.0	212.0	50.0	394.0	34.5
Transport and Communication	60.0	54.3	35.0	149.3	13.0
Building & Services	75.0	47.0	182.0	304.5	26.6
International Obligation	44.0	-	-	44.0	3.8
Loans from Government Enterprises	27.3	-	-	27.3	2.4
Miscellaneous Investment Expenditure	13.6	-	-	13.6	1.2
TOTAL	536.9	321.8	285.0	114.37	100.0

Source: Ministry of Planning, 1976, p. 63

The social objectives included expanding education and health services and increasing employment opportunities.

In education the plan emphasized the need for development of this sector because one of the indicators for the growing importance of this sector was the increase in educational expenditure and its proportion on total expenditure Table 2.7 shows a big jump from 1970 to 1975.

Allocations of National Development Plans 1970-1983 (ID 000)

Plan Programme	Year	Grand Total	Other Allocation	Total of Economic Sector	Education Scientific Research	Building & Services	Transport & Communications	Industry	Agriculture
National	1970	116530	32262	84268	-	13000	15268	28000	28000
Development	1971	202000	36000	166000	-	28000	28000	50000	60000
Plan	1972	134500	45289	89211	-	22000	16000	28000	23211
	1973	310000	100000	210000	-	45000	40000	60000	65000
1970-1974	1974	1169000	459000	710000	-	175000	120000	225000	190000
TOTAL		1932030	672551	1259479	-	283000	219268	391000	366211
Investment Programme	1975 *	10760000	66500	1009500	-	188000	166000	448000	207500
Investment Programme	1976	1493500	608000	1432700	-	213200	242500	709000	268000
Investment Programme	1977	2377055	301578	2075477	79900	288100	351600	966000	389877
Annual Plan	1978	2800000	562000	2238000	119000	381000	438000	800000	500000
Annual Plan	1979	3283000	858000	2425000	185000	462000	436000	842000	500000
Annual Plan	1980	5240000	1300000	3940000	298000	1114000	850000	1173000	505000
Annual Plan	1981	6742808	1360000	5382808	272125	1899130	1284538	1246015	681000
Annual Plan	1982	7700000	2393489	5306511	182171	653340	1386900	1315675	768425
Annual Plan	1983	5350000	2014607	3335393	126988	1104514	809015	810505	484371

* Allocation for 1975 covered 9 months.

SOURCE: Ministry of Planning, 1976-80, p. 13

TABLE 2.7

Educational Expenditure for 1970 - 1975 and its Proportion to General Expenditure in (ID Million)

YEAR	EDUCATIONAL EXPENDITURE	PROPORTION OF GENERAL EXPENDITURE
1970 - 1971	57.0	17.6%
1971 - 1972	66.0	19.9%
1972 - 1973	74.4	21.7%
1973 - 1974	78.6	20.9%
1974 - 1975	119.7	18.7%
TOTAL	395.7	100.0%

SOURCE: Ministry of Planning, 1976, p. 14

The allowances for education had risen from ID 57.9 million in 1970 - 1971 to ID 119.7 million in 1974 - 1975. The proportion of these sums to a general expenditure shows an increase up to 1974 - 1975 while a decrease of 18%, in the same time it represents 1.5, half more than what was allocated for previous years.

We notice from Table 2.7 that there was a great gap from 1970 - 1975 this was due to the implementation of the free education law which enabled every one to join school without any financial outlay as well as the compulsory education lack in 1974 which allowed all children at age 6 to attend schools, The number of students attending schools had risen in the intermediate and secondary at a rate of 174 percent. (Ministry of Information, 1977, p. 136).

The health services received great attention and considerable importance. The plan aimed at using all possible ways to insure that all the people should have a free health service hospital beds increased by 52% in 1979 and the ratio of doctors to the population has now become one doctor to about 1738 citizens (Mohammed, 1980, p. 114).

2.6 The 1976 - 1980 Five Year Development Plan

The second comprehensive five year plan achieved rapid and comprehensive development and showed the role of planning as a means to conduct social and economic activity as well as it presented a deep and practical analysis of all aspects of life to help in choosing the best solutions in the light of human and material resources available. The most distinct and important event in this period was the achievement of complete economic independence as a result of nationalizing foreign oil companies and the political stability. These two events had a great effect on the National Development plan. To achieve a radical and important change and transformation in the economic and social field in the country and to accomplish a big leap in the people's standard of living and raising salaries and wages, diminishing some taxes, lowering the face of basic services such as electricity and water introducing free education and developing the health services.

(The political report of the eighth regional congress of the Arab Baath Socialist Party) stated:

> "The next five years must achieve this 'great leap forward' in the economic and social conditions of the country, a leap which will take it to an advanced state of development where the foundations of the national economy will be solidly based, ensuring its property. Equally, this stage will lay the foundations of a modern society and establish stable conditions for the people's well being".
>
> (Political Report, 1979, p. 165)

In fact the 1976 - 1980 development plan aimed for more radical changes in the national economy, It was based on the following points:

1. Expansion of the socialist sector in agriculture. To develop this sector so as to become the prevailing and leading sector, individualistic forms of agriculture to be discouraged in order to increase production and accelerate socialist transformation and raise the standard of living of farmers.

2. All foregoing trade must be controlled by the state which will centrally control the internal trade in which the public sector prevail. Due consideration will be given to the urgent requirements of the development plan which might necessitate some exceptions.

3. Consolidating the prominence of the public sector in industry and actively work accordingly to move away from state capitalism in this sector to a socialist democracy. The private sector will have to be further co-ordinated so that it can play its positive role in the development plan.

4. Public services will have to be directed in accordance with the requirements of development and socialist transformation.

(Ministry of Information, 1977, p. 116)

The plan required that the economy would gradually reduce its dependency on the oil sector, aimed at effecting quantitative transformations in the economic and social growth and to promote national self-sufficiency.

In addition, the plan aimed to achieve full employment of able workers in order to meet the requirements of the plan for skilled and

specialised technical manpower. Furthermore, available propositions point out that the labour force during 1970 - 1974 grew at annual rate of 3.7% (Ministry of Information, 1977, p. 118). This rate is expected to rise at annual rate of growth 4.1% during the period (1976 - 1980). On the other hand, the plan aimed to increase the labour force from 2.9 million in 1976 to 3.5 million in 1980. As can be seen from Table 2.8.

TABLE 2.8

The Planned Distribution of Labour Force for the Years 1976 - 1980

SECTOR	1976 NUMBER OF WORKERS 1959 - 1962 000		1980 NUMBER OF WORKERS 1959 - 1962 000		AVERAGE ANNUAL GROWTH
	ABSOLUTE	% OF THE TOTAL	ABSOLUTE	% OF THE TOTAL	
Agriculture	15710	53.0	15710	44.8	-
Industry	275.2	9.3	5142	14.7	17.0
Building and Communication	119.2	4.0	2230	6.4	17.0
Total Commodity Sector	19654	55.3	23082	65.8	4.1
Total Distributed Sector	3598	12.2	469.8	13.4	6.9
Services	6372	21.5	7320	20.9	3.5
TOTAL	29624	100.0	35100	100.0	4.1

SOURCE: Ministry of Planning, 1977, p. 13

This increase of the participation of labour force will result in an increase in the proportion of employees to total population from 26% to 27% during the above period. The labour force will also be better distributed between the economic sectors.

The above table also shows that the labour force has increased in all economic sectors except for the agriculture sector. The decline from 53% in 1976 to 44% in 1980 was due to the migration from the countryside to the towns where there was a better life, as well as the migration to another

economic sector such as industrial sector or the services sectors. Unless this shortage is replaced by the introduction of machines and by adopting mechanization and the use of modern technology in this sector.

In the distribution of total investment of the plan industry was given top priority over other sectors with 4360 million ID, that is about 31.9 percent. This government provided some 91.7 percent while the private sector provided only 8.3 percent. Agriculture came second with 2554 million ID represented about 18.7 percent of the total investment allocation. (See Table 2.9)

TABLE 2.9

National Development Plan, Distribution of Total Planned Investment, 1976 - 1980

(million ID)

SECTOR	GOVERN-MENT	%	PRIVATE	%	TOTAL	%	%AGE OF THE GOV-ERNMENT	%AGE OF THE PRIVATE
Agriculture	2374	19.7	180	11	2554	18.7	92.95	7.05
Industry	4000	33.3	360	23	4300	31.9	91.74	8.25
Transport and Communication	2200	18.3	180	11	2380	17.4	92.43	7.56
Construction and Services	1400	11.6	910	55	2310	16.9	60.9	39.39
Other	2026	16.8			2026	14.8	100	
TOTAL	12000	100	1630	100	13630	100	100	100

SOURCE: Ministry of Information, 1977, p. 133

The plan also estimated an increase in the per capita income from 349 ID in 1976 to 575 ID in 1980, a rate of 13.3 percent. It is nearly twice the target rate in the previous plan with an emphasis on supporting or purchasing capacity of the people's revenues (Ministry of Planning, National Development Plan 1976 - 1980, 1977, p. 8).

The plan aimed at increasing agricultural production by 7 percent (Ministry of Planning, 1977, p. 3) at the end of 1980 by using modern methods and equipment. As it pointed out:

> "The total value of production in the agricultural sector was expected to increase from 214.6 million ID in 1974 to 392.5 million in 1980. Consequently, the added value is planned to increase from 176.2 million ID to 244.5 million ID during the same period. As to the livestock section, the total production value is planned to rise from 127.8 million ID in 1974 to 232.3 million ID in 1980. The added value will then be 124.1 million ID compared to 82.5 million ID in 1974. Thus the agricultural sector will earn 389.6 million ID in 1980 as an added value compared to 258.8 million ID, 1974, i.e. of an annual compound rate of growth 7.1%.
>
> (Ministry of Planning, 1977, p. 120)

In the industrial sector the five years - 1976 - 1980 plan aimed at transforming industry and equipping it with up-to-date technology. The general industrialization strategy in the country stresses the pioneer role of the public sector in the industrialization process and the development and exploitation of natural resources. The private sector has also encouraged contribution to the building up of small size and mixed public and private sector industrial projects. (Ministry of Planning, 1978, p. 24). To create an economic surplus to enable the industrial sector and specially manufacturing industries to play an effective role in financing the investments of the development plans. Also to meet the needs of agricultural expansion with tools, machines and fertilizer and also to supply irrigation and drainage projects with their requirements of industrial materials.

Manufacturing raw material, fulfilling the growing needs of the local market for industrial good for both production and composition in all sectors and aiming for the local industrial production to replace goods imported from abroad. The growth of the petrochemical industry and other projects for expanding the wood and paper industries have also been accelerated. The plans have also provided for the exploitation to the maximum of such strategic industries as oil, gas, sulphur and phosphate together with the initiation of nitrogen and phosphate fertilizer projects. (Ministry of Planning, 1978, p. 25).

Another major aim was to improve the railways system, Old roads were improved other were to be built in order to increase their capacity to handle not less than 10 percent of the traffic movement.

The plans aims to continue to develop the public services while giving priority to education and public health.

The educational sector great attention in this plan as education is both an important social service and investment for the future. It helps to satisfy the needs of the economy for skilled manpower of all kinds, the needs of any civilised society for educated citizens who have been enabled to develop to the utmost their individual abilities and demand by individuals for education as a means both to improve economic prospects and to a richer and more constructive life, for the human being is regarded the axis and the core of development. Thus the plan aims to develop the individual's abilities through education and training so as to enable him to be a productive member of this society. It also emphasizes that work should be regarded as the cornerstone and base of the educational process and

that there is a need to orientate the new generation to like, respect and co-operate in their work, (Ministry of Planning, 1977, p. 11).

In fact education in Iraq has many problems which hinder its potential to contribute to national development. Some of these problems have their roots in the country's political history and in its social institutions and values and others caused partially by the lack of proper planning, (Abdul Kaliq, 1973, p. 3).

Little progress toward the attainment of excellence in all aspects of the society will be made unless there is emphasis on continuous planning. A society capable of continuous renewal has to be one that systematically develops its human resources, removes obstacles to individual fulfilment and emphasizes education, lifelong learning and self discovery. Towards these ends the emerging emphasis on planning should accept the concept : there is a vast differen between a planned society and a planning society, (Morphet & Jesser & Ludka, 1972, p. 15).

The significance of educational planning in relation to national development was not seriously realized until the early 1960's. Education planning has become imperative in response to various kinds of pressures. Among them were the population explosion, the awareness of the role of education in socio-economic development and most importantly, the imbalance between educational development and economic needs, (Akrawi and El Koussy, 1971, vol. 17, pp. 181-194).

The national development plan for 1976 - 1980 gives education a prominent position to achieve intellectual aspects and to expand the net work of schools all over the country. The political report said:

> "The next five years must focus comprehensively on the building of an education system in harmony with the principles and aims of the revolution. Time will not be on the side of the revolution if we maintain the pace in education of the last five years".
>
> (Political Report, 1979, p. 256)

The main targets of each educational level are mentioned in general within the GNDP, while the details are dealt with separately in the educational plan:

> "It planned to build 1,247 kindergartens including 1 10% new ones while 138 replace old ones. In elementary education 29,223 schools are to be built, among which 25,021 will be totally new and 4,202 will replace old ones. The number of secondary schools is expected to reach 14,236 in 1980 and 225 vocational schools will be built during this period including 121 industrial, 67 agricultural and 37 commercial and administrative schools".
>
> (Ministry of Planning, 1977, p. 34)

In the provision of personnel for economic development in terms of skilled manpower, it is expected that 136,678 students will be enrolled increasing to a total enrolment of 304,431 and producing 64,314 vocationally trained persons, during the period 1976 - 1980.

Moreover, the plan aimed to co-ordinate secondary education with primary education as its natural extension. On the other hand the plan hopes to relate secondary education to higher education as two complementary parts in order to meet the social aspects of education as well as the national development needs of human resources, (Ministry of Planning, 1974, p. 13).

Funds for all kinds of education are derived from the central government budget. Allocation for public education has been raised constantly as can be seen in Table 2.6. In 1977 the allocation for

education was 79,900 million ID and by 1980 the allocation increased to 29,800 ID.

The plan for 1976 - 1980 has not been properly integrated with the social and economic development programme as it falls short of full participation and representation of official numbers from the Ministry of Higher Education, Ministry of Education and Local Administration. The policies and activities of all education bodies need to be more fully integrated to ensure an effective and successful plan for education . In turn needs to be in accordance with the comprehensive plan for national development.

2.7 Evaluation of Development Programmes and Plans 1951 - 1980

As early as 1950 the Iraqi government decided to establish the development board as a result of the significant increase in oil revenues. However, since the development board started to operate by the end of 1950 the development planning in Iraq has passed through three distinct stages.

The first stage covered the development board period (1951 - 1958) and the second stage 1959 - 1969 and the third stage during the period 1970 - 1980.

Under the first stage the development board prepared four investment programmes. These programmes were conceived as a list of economic projects unrelated to overall economic planning and manifested to the government desire to utilize the revenues from oil in public investment projects. private sector was unlikely to be capable of

modernizing the economy, especially as it was very limited in size, and links between the private and the public investment were neglected. The four programmes were continually being revised and even redrafted before they reached the implementation stage. Furthermore the presentation of report by outside experts such as the World Bank Mission in 1952 and Lord Salter and Arthur D. Little in the same year Iraqi planners lacked confidence and experience. As well as the political instability, absence of sustained endeavour lack of imaginative approach to organizational problems requiring urgent solutions and non-observance of the discipline of the plan. Also these investment programmes did not mention such concept as national income growth, employment objectives and other social and development economic policies and targets. There were unbalanced allocation of investment funds. A large amount of money has spent on the methods of increasing agriculture product rather than on increasing productivity. So it is clear from the discussion that there was a misunderstanding between technical and economic efficiency. During the second stage three economic development plans were drawn up by the new regime after abolishing the development board, which by that time had become the object of widespread criticism. The first plan was provisional economic plan covered the period 1959 - 1961. The emphasis was on completing the projects initiated under the previous regime and to give the development board sufficient time to prepare a detailed economic plan.

The second plan (DEP) covered the period 1961 - 1964. It was just the expansion and redistribution of the previous allocations with an aim to double the national income in ten years. Here the planning methods changed less than the planning targets and the approach remained partial rather than comprehensive, employment and the level of production in different sectors were not introduced.

The third plan 1965 - 1969 was much more detailed than any previous one. For the first time it included economic activities in the private sector. For the first time in the Iraq's planning history, consistent and readily quantifiable criteria were used for project appraisal, so that the possible investment undertakings could be ranked in order of priority. Two criteria were used capital output ratios and capital to foreign exchange saving ratios. The plan aimed at increasing the national income at a rate of growth of 8% annually while the actual annual rate of growth achieved was 5.4%. The employment targets in the plan were merely a reflection of anticipated labour need in the light of the projects selected they bore no relation to labour supply availability

The third stage which covered the period 1970 - 1980, two national development plans 1970 -1974 and 1976 1980 market the beginning of effects to comprehensive planning. A number of factors both economic and non-economic underline Iraq's development success: these include the country's abundant natural resource endowment on which to build a development effort of imaginative and far-reaching role played by the government through economic planning, development policies and strategies adopted and implemented, massive infrastructure investments and direct participation in business activities via state enterprises, rich natural resources.

The process of planning in the country still faces major difficulties, especially in the need of skilled manpower and qualified planners to carry out the task of development the contradiction between the educational systems output, or graduates and job opportunities in the labour market, the lack of technically trained personnel and the economic inability to provide productive employment for a rapidly

growing labour force. These of some constraint that continues to are plague the Iraqi economy and that are likely to handicap its rapid expansion and absorptive capacity in the future.

Another problem facing the Iraqi planning is the Iraqi planners have focused on upgrading development performance rather than on trying to prepare a perfect plan. In this way they have been able to maintain opposition of influence and political effectiveness throughout most of the post war years. Watson and Dirlam argued that three of the most serious obstacles to effective planning are the lack of suitable information on which to base planning, a lack of appropriate projects, and a lack of qualified and motivated personnel. They suggest that much more effort in planning needs to be aimed at removing these restraints, to make planners more aware of the need for such changes much more pooling of experience is needed, particularly of unsuccessful experience. (Watson and Birtam, 1965, p. 29).

The major change in the late 1970's planning has not been in methods or strategy but in the machinery for administration of the development effort.

Clearly planning has advanced considerably in Iraq in the period 1970 - 1980. The planned investments were reduced in agricultural sector from 26% of the overall investment allocation in the previous plan of 1965 - 1969 to only 19% as shown in Table 2.10 .We find that the average largest allocation share in this period devoted to industry with an average rate of 29.7% followed by agriculture with an average rate of 19.5%, building and services 17.5%, transportation and communication 17.4% and others 15.9%. It can be noted here that apart from industry.

Investment Programmes and Plans in Iraq 1951 - 1980

SECTOR	1951 - 1958					1959 - 1964					1965 - 1969				
	Planned	%	Actual	%	Rate of Implementation	Planned	%	Actual	%	Rate of Implementation	Planned	%	Actual	%	Rate of Implementation
Agriculture	143.8	34.4	74.1	32.9	51.5	136.0	20.1	51.1	14.7	37.6	173.6	26.0	56.3	15.7	32.4
Industry	52.1	14.8	30.9	13.7	49.8	150.5	22.2	54.1	15.5	35.9	187.2	28.0	103.9	29.0	55.5
Transport and Communication	109.1	26.1	55.1	24.5	50.5	194.0	28.6	89.0	25.5	45.9	110.0	16.5	61.2	17.1	55.6
Building and Services	103.5	24.7	65.0	28.9	62.8	197.4	29.1	154.6	44.3	78.3	134.8	20.2	66.3	18.5	49.2
Miscellaneous	-	-	-	-	-	-	-	-	-	-	62.5	9.3	70.6	19.7	113.0
TOTAL	418.5	100.0	225.1	100.0	53.8	677.9	100.0	348.8	100.0	51.5	668.1	100.0	358.3	100.0	53.6

Cont'd ...

Sectoral Allocations, Actual Expenditure and Rates of Financial Execution of the Different Investment Programmes and Plans in Iraq 1951 - 1980

SECTOR	1976 - 1980 Planned	%	Actual	%	Rate of Implementation	1976 - 1980 Planned	%	TOTAL	%
Agriculture	366.2	19.0	208.0	17.8	56.9	2554	18.7	3373.4	19.5
Industry	391.0	20.2	327.4	28.0	83.7	4360	32.0	5150.8	29.7
Transport and Communication	219.3	11.4	176.9	15.1	80.7	2380	17.5	3012.8	17.4
Building and Services	283.0	14.6	169.2	14.5	59.8	2310	16.9	3028.7	17.5
Miscellaneous	672.6	34.8	288.2	24.5	42.8	2026	14.9	2761.1	15.9
TOTAL	1932.1	100.0	1169.9	100.0	60.6	13630	100.0	17,326.4	100.0

SOURCE: J. Hashim, 1968, p. 210, Al Nassrawi, 1967, p. 13, Ministry of Planning, 1980, p. 3

allocations for different other sector were almost equally distributed and the average rates varied between 19.5% and 19.5%. (See Table 2.10.)

Planning has advanced during the last 30 years in Iraq . Productivity achieved through the application of modern imports and techniques and the degree of modernization of out-look measured in part by extent to which development programmes have gained the support of both the rural and urban as well as per capita income has increased greatly. (See table 2.11)

The planning for education and vocational training has held an important place in development of the planning process. For the first time, planning has been used in the field of science and technology to increase the productivity of labour and capital.

The system of statistics has been developed to ensure that the planners are provided with the indicators and data needed for the planning of the various sectors of the national economy. The use of the computers has also been expended in the region as a means of technological progress in the administration of national economic institutions.

TABLE (2.11)

National Income and Per capita Income For the Years 1978-1982

Year	Per Capita Income ID	National Income Million ID
1978	538.2	6709.9
1979	825.9	10588.5
1980	1157.4	15323.0
1981	653.0	8925.8
1982	874.2	12334.6

Source: Ministry of Planning, 1983, p. 9

CHAPTER THREE

The Analysis of Iraqi Population During the Period 1958 - 1982

3.1 Introduction.

3.2 The Population Growth and the Rate of Natural Increase 1958-1982.

3.3. The Components of Population Change.

3.3.1. Fertility.

3.3.2. Mortality.

3.4. The Structure of Iraqi Population.

3.4.1. The Composition of Age-Sex.

3.4.2. The Composition of Rural-Urban Population.

3.4.3. The Education Composition of Population.

3.5. Conclusion.

3.1 Introduction

The complexities of the socio-economic problems facing modern nations, especially the developing ones, and the determination to develop require, a total mobilization of natural and human resources to alleviate the problem of poverty and other symptoms of under-development. But in the inter-relationship between man and nature man has always taken the initiative to explore and adapt nature to his needs. Man's purposeful activity is therefore crucial to the development of society.

Indeed it is a universally accepted belief that the critical resource upon which economic and social development lies is man. Even more critical is the availability of highly skilled and educated manpower. However, skilled and educated manpower is a product of an educational system which relies on planning to be effective. But planning pre-supposes the awareness of the main variable in society. These include population, economic and social needs etc. This brings us to the subject of this thesis, which is the development and planning of the Iraq educational system.

Before turning to the Iraqi educational system, I think, it is necessary to have a clear understanding about the nature and the structure of her population. Within this frame of reference, this chapter mainly deals with the over-all employment, structure and composition of Iraqi population covering a total period of 24 years starting from 1958 to 1982. In this chapter there are at least three central questions which should be taken into notice. These are as follows:

1. What is the total population of Iraq?
2. What proportion of the population is of working age?
3. What proportion of the population is of school age?

An interpretation of these questions will help us to recognise the educational needs of the country and resources required to satisfy these needs.

It should, however, be realised that Iraq, like other developing societies, is experiencing a high population growth, with a rate of growth of about 3.5% per annum. The implication of this is that the entire population will double in every twenty years and in turn this will no doubt have serious implications for the planning of education in Iraq.

3.2 The population growth and the rate of natural increase in Iraq 1958-1982

The population growth rate is the difference between crude birth rate and crude death rate, plus crude net migration. In most cases, it is reasonably indicated by the rate of natural increase, that is, the crude birth rate minus the crude death rate. (Taylor, 1976, p. 162).

The crude death rate has declined in recent years, due to the decline in infant mortality which was, in turn a result of the improvement in the health services and the advances in medical technology, bolstered by the decline in illiteracy.

However, countries with a high growth or developing countries, such as Iraq, Mexico, Egypt, Pakistan, suffer from high average rates of growth of 3.5%, 2.4%, 2.5%, 3.0%, respectively, as compared with

developed countries, such as the U.K., France, and West Germany, which have low average rates of growth of 0.1%, 0.1%, 0.5%, respectively. (World Development Report, 1984, pp. 254-255).

It can be seen that the average annual rate of growth of developing countries is more than twice the average annual rate of growth of developed countries. Moreover, the time required for the population to double in developing countries is between 20-28 years, while in developed countries it is between 138-639 years.

See Table (3.1)

TABLE 3.1 Population, number of years necessary for the population to double at a give average annual rate of growth in Mexico, Egypt, Pakistan, Iraq, the U.K., France and West Germany.

Country	Population Millions	Average annual Growth of Population %	Time required for the population to double. (years)
Mexico	73	3.0	23.1
Egypt	44	2.5	27.1
Pakistan	87	3.0	23.1
Iraq	14	3.5	19.8
U.K.	56	0.1	639.1
France	54	0.5	138.1
West Germany	62	0.1	639.1

Source: World Development Report, 1984, pp. 254-255

Also, countries with high population growth tend to have relatively large young populations of less than 14 years of age, who are non-productive. This means that the developing countries are faced with the problem of providing education and employment for the growing population of working age. Where the percentage of children of school age is high, this increases the economic dependancy load, as well as the financial burden of providing school buildings and teaching personnel (Stanford, 1972, pp. 106-109).

Iraq, in comparison with most developing countries, is not an over-populated country, but it does have a high average annual rate of growth of 3.2% (See Table 3.2). It also has a young nation. The proportion of children aged 0-14 is around 45% of the total population similarly in 1982, school-aged children 5-14 represented 28.6% of the total, (Ministry of Planning, 1982, p. 34).

TABLE 3.2 Population Growth in Iraq 1947-1983 (in 000's)

Year	Population (in millions)	Absolute increase (in millions)	Percentage increase	Average annual growth rate of population
1947	4.8	-	-	-
1957	6.3	1.5	31.3	2.8
1965	8.1	1.8	28.6	3.2
1970	9.5	1.4	17.3	3.2
1977	12.0	2.5	26.3	3.4
1983	14.5	2.6	21.7	3.2

Source: Iraq, Ministry of Planning, 1983, pp. 32-34

Notes: 1. Censuses of 1947, 1957, 1965, excluding Iraqi's abroad.
2. Figures for the year 1970 and 1983 are estimates not including Iraqi's abroad.

During the period 1947-1983, four population censuses were taken, from which it was found that the population had increased from 4.8 million in 1947 to 6.3 million in 1957, to 8.1 million in 1965 and to 12 million in 1977 (Ministry of Information, 1980, p. 30).

In 1983 the total population of Iraq was estimated at about 14.5 million as shown in Table (3.2).

However, between 1947 and 1983 the growth rate of the Iraq's population between has tended to increase. The average annual rate of growth of the population in Iraq increased from 2.8% per annum for the period 1977-1983 (Ministry of Planning, 1983, p. 33).

The greatest population growth occurred during the period 1970-77, when there was an average annual rate of growth of 3.4%. This high rate due largely to the decline in mortality, especially in infant mortality, as a result of improvements in the health services, the rising standard of living following the nationalisation of oil in 1972, and the dropping illiteracy rate, (Ministry of Information, 1977, p. 29)

3.3 The Components of Population Change

The basic cause of population change has been identified as changed in fertility and mortality. There are only two ways in which population can change, through reproductive change and through net migration. Not only are these the ways by which population changes, but they also affect the country, as a whole, profoundly (Preston, 1978, pp. 2-5).

My main concern in this section is fertility and mortality. What has caused mortality to decline almost everywhere, while fertility has not altered to the same extent?

3.3.1 Fertility

Fertility refers to actual birth performance. It represents the role of birth in population change and human reproduction. This phenomenon has been recognised as a direct antecedant of population growth, since malthus. In most of the countries which suffer from a high growth rate, this is mostly due to the high fertility. The most commonly used measure of fertility is the crude birth rate, which is to say the annual number of births per thousand person-years lived in the

total population. Another measure is the total fertility rate, which is the sum of the birth rates, specific to each age-group of women (Stockwell, 1976, pp. 273-277).

Most developing countries have experienced high population growth, due to the decline in infant mortality, followed by increases in the total fertility rate. (See Table 3.3)

TABLE 3.3 Total Fertility Ratio and Crude Birth Rate in Certain Developing Countries

Country	Crude Birth Rates (000)					Total Fertility Ratio	
	1960	1965	1975	1977	1982	1970	1982
Iraq	48	48	48	47	45	7.1	6.7
Egypt	44	42	35	38	35	6.1	4.6
Kuwait	44	46	44	42	35	7.2	5.7
Jordan	47	48	47	46	45	7.1	7.4
Turkey	43	41	34	n.a.	31	5.9	4.1
Pakistan	48	48	77	n.a.	42	n.a.	n.a.

Source: 1. World Development Report, 1981, pp. 168-169.
2. World Development Report, 1982, pp. 256-257.

Table (3.4) reveals the decline in crude birth rate in some of the developing countries. In 1960, in Egypt, Kuwait and Turkey and rates of birth were 44, 44 and 43 per thousand, respectively. By 1982, these numbers had dropped to 35, 55 and 31 per thousand. In the case of Iraq, the decline in crude birth rate has been small. In 1960 the number was 48 per thousand and this had only dropped to 45 per thousand by 1982. However, despite this decline in crude birth rates and in total fertility ratios, these figures are still high when compared with the developed countries. (See Table 3.4).

TABLE 3.4 Crude birth rates in some developed countries

Country	Crude birth rates (000)		Total Fertility
	1965	1982	1982
France	18	14	1.8
U.K.	18	13	1.8
W. Germany	18	10	1.4
Canada	21	15	1.8
Sweden	16	11	1.7

Source: World Development Report, 1984, pp. (256-257).

There are many factors which affect fertility and cause fluctuations in fertility levels. These include such things as national birth planning programmes. Increases in the number of girls going to school and improvements in women's education tend to defer marriage for girls until they have finished their education. Sometimes this occurs after university, though it may also occur after secondary school.

This deferral of marriage affects the fertility ratio and results in change in the status and role of women. The more women participate in the labour-force, the lower the fertility ratio will be, (Omran, 1980, p. 79).

Another important contributory factor is the decline in religious interest, specially among Muslims and Catholics. This is particularly important since contraception is forbidden to Muslims, as well as Catholics (Malths, Huxley, Oxborn, 1960, p. 106).

My main concern here is the influence of education on fertility. A high birth rate, accompanied by a high fertility rate not only produce many people who must receive the basic necessities of life, but also results in a large percentage of dependant non-producing family members.

The high fertility low income countries, with birth rates of at least 40 per 1,000, have populations with a large proportion of children: accordingly they have proportionately fewer people in the economically productive years, generally defined as ages 15 to 49. Such a population is said to have a high dependancy ratio. In using this definition of dependancy, it has to be recognised that in developing countries, there may be significant child labour against this should be set the low participation of women ages 15-59 in the labour force. It should also be kept in mind that the proportion above 59 years of age would be larger in developed than in developing countries.

In Iraq, in 1982, the dependancy ratio was 107.4%, this figure represents the ratio of the combined child population and aged population to the population of intermediate age in Iraq. Meanwhile the aged child ratio, in Iraq in 1982, was 11.5% (Ministry of Planning, 1982, p. 49).

From the above figures, it can be seen that there is a high proportion of children in the age composition of the Iraqi population as the case of most of the developing countries have so small a proportion of persons 65 and over and so large a proportion of children under 15 (Stockwell, 1976. p. 135).

However, 46.4% of the Iraqi population was under 15 in 1982. This means that more young children were enrolling in primary schools, so the financial burden of providing education is enormous and rapid expansion is in school building. Also, teaching staff had rise at the same rate as enrolment. In the long run the number of secondary and university students will double, leading to even greater costs and an increased need for places and staff. Correspondingly, a decrease in fertility would slow down the growth of the school-age population, and so ease the pressure on the education system. (World Bank Report, 1979, p. 30).

An important point is that more education for women is one of the strongest factors in reducing fertility. (Bowman, 1985, p. 30). The increase in womens knowledge contributes towards their willingness to use birth control and to defer marriage, either because marriage is putoff during schooling, or because educated women are more likely to work or to take time to find suitable husbands. (Williams, 1976, pp. 94-95).

3.3.2 Mortality

Mortality refers to death, which is the permanent disappearance of all evidence of life at any time after birth has taken place. The most important factor affecting mortality are age-sex, marital status and socio-economic status (e.g. occupation, literacy, educational attainment).

There are a great number of measures of mortality but the most common one is the crude death rate, i.e. the number of deaths in a year per 1,000 of mid-year population. The age-specific death rate is also

an important measure of mortality, which is the number of deaths to persons of a given age, divided by the number of person-years lived in that age range.

The partial control of many infections and parasitic diseases, added to improved nutrition and food distribution have greatly contributed to this decline in mortality. Additional factors are the continuing advances in standards of living and the increase in literacy.

Many of the factors affecting fertility rates also affected mortality rates, because they have a generalized effect on population changes. Consequently, the declining illiteracy rate has had a marked effect on the mortality rate, as it has on the fertility rate (Bowman, 1985, p. 35), causing both to fall, (see table 3.5), though the most important factor contributing to the falling mortality rate is undoubtedly due to improved health care provision (Keeley, 1976, pp. 63-64).

TABLE 3.5 Crude death rates for Iraq, Egypt, Kuwait, Pakistan, Jordan, U.K., France

Country	Crude death rates (000)	
	1960	1982
Iraq	20	11
Kuwait	10	3
Egypt	20	23
Jordan	30	8
Turkey	16	9
Pakistan	23	15
U.K.	12	12
France	11	10

Source: (World Development Report, 1984, pp. 256-257)

There has been a decline in infant and pre-school aged child mortality, (Bowman, 1985, p. 35) and an increase in the birth rate, which have both contributed to the higher dependancy ratio in recent years. The Iraqi dependancy ratio for 1960 amounted to 94%, increasing to 97% by 1980(See table 3.6).

TABLE 3.6 Some of the developing countries and their dependancy ratio

Country	Dependancy Ratio %	
	1960	1980
Jordan	94	111
Algeria	91	104
Iraq	94	97
Egypt	83	67
Kuwait	59	79

Sources: (World Development Report, 1984, pp. 262-263)

It need hardly be said that the practical consequence of factors has been to place considerable strain upon over-stretched educational resources. The shortages of teachers, buildings and equipment, quite apart from the financial burden imposed by such changes in the child dependancy ratio.

The decline in infant mortality rate has led to an increase also in life expectancy at birth (i.e. the average number of years lived per person age 0). In 1960 infant mortality rate was 129 per thousand where as in 1982 the number dropped down to 73 per thousand. This rate is still high compared with developed countries such as U.K. and France.

TABLE 3.7 Infant mortality rates for developing countries Iraq, Turkey, Kuwait, Jordan, U.K. and France

Country	Infant Mortality Rate agreed under one year	
	1960	1982
Iraq	139	73
Kuwait	89	32
Jordan	139	65
Pakistan	162	121
Turkey	184	83
U.K.	23	11
France	27	10

Source: World Development Report, 1984, (pp. 262-263)

When a high reproduction rate was rapid child-bearing was an absolute necessity to ensure survival of the species.

As life expectancy increases, so the rate of return on education also increases, as well as the return on all forms of investment in human agents, such as health care, vocational training and migration. Employers who share the cost of and returns on investment in specific training might also be expected to increase their commitments to vocational training in the future for their workers, as the prospects decrease that individual will die or will be unable to work (Schultz, 1981, p. 114).

Table (3.7) shows life expectancy patterns in developed and developing countries for the years 1960 and 1982. During this period, life expectancy in developing countries has improved remarkably. In most countries it has reached 74% overall. Life expectancy is higher among women than among men. In 1960 Iraq had a life expectancy of

47 for males and 50 for females. By 1982, this figure had increased and male life expectancy was 57, while female life expectancy has reached 61 compared with other developing countries, such as Kuwait, Egypt and Algeria, Iraq has done especially well, through the inverse relationship between higher income and educational achievement and the decline of mortality.

TABLE 3.8 Life expectancy in Iraq, Kuwait, Jordan and Egypt

Country	1960		1982	
	Male	Female	Male	Female
Iraq	47	50	57	61
Jordan	46	48	62	65
Kuwait	58	61	69	74
Egypt	46	47	56	59
U.K.	68	74	71	77
France	67	74	71	79

Source: (World Development Report, 1984, pp. 262-263)

3.4 The Structure of the Iraqi Population

The pattern of population structure in Iraq is similar to that observed in most developing countries. there is a high proportion of young people aged 0-14, and a small proportion of elderly people. In this section I shall look at the structure of Iraq's population in terms of age and sex, urban and rural environments and education composition. Thus, it is hoped to gain a clear picture of the proportion of children in the population, since in the end, it is the children who need to be educated, supported by the efforts of a relatively small proportion of the economically active population (Schultz, 1972, p. 404).

Of course education is likely to create problems, not only if there is an excessive number of children to be educated, but also if there is a deficiency in the economically active age-group. (See Table 3.9 and 3.10).

3.4.1 The Composition of Age-Sex

The distribution of population according to age-sex is particularly important from point of view of manpower and educational planning.

In order to determine the size of the labour force and the number of women of child-bearing age, it is necessary to know the size of the age group, 15-64.

Moreover, this knowledge is also necessary to calculate the dependancy ratio which reveals the magnitude of the load of non-active persons (from 0-14 years and 65 years and over) to active persons (15-64), or the labour force. The age composition of the population determines the number of places required for school enrolment, the number of teachers needed and the extent of school facilities.

Added to this, the planning authorities need to know the age composition of the population, in order to determine the present and future trends of population growth. This information is also needed by other state institutions which forecast the nation's specific economic and social needs.

In most developing countries, the distribution of population according to age groups reveals a high proportion of young children

Population Census of 1947, 1957, 1965, 1977, 1980 and Population Density per (Km^2)

DETAILS	1947	1947 %	1957	1957 %	1965	1965 %	1977	1977 %	1980	1980 %	1983	1983 %
Males	22573	46.9	31851	50.2	41331	51	6182898	51.5	6815831	51.4	7504094	51.4
Female	25589	53.1	31548	49.8	39641	49	5817599	48.4	6422847	48.5	7081743	48.5
Total	48162	100	63399	100	80972	100	12000497		13288678	100	14585837	100.0
Urban	17338	36	24853	39	41621	51	7646054	63.7	8783240	66.3	10051794	68.9
Rural	30824	64	38546	61	39351	49	4354443	36.2	4455438	33.6	4534043	31.0
Density	11.9		14.61		18.66		27.0		30.4		33.2	

SOURCE:
1. Ministry of Planning, 1977, p. 3
2. Ministry of Planning, 1978, p. 26
3. Ministry of Planning, 1981, p. 34
4. Ministry of Planning, 1983, p. 50

(in thousands)

AGE GROUP	1947		1957		1965		1977		1980		1982	
	TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
0 - 1	205	4.3	208	3.2	283	3.4	502	4.1	-	-	-	-
1 - 4	617	12.8	1015	15.9	131	16.2	1780	14.8	2318	17.3	2460	17.4
5 - 9	661	13.7	965	15.1	128	15.7	2044	17.0	2097	15.7	2138	15.1
10 - 14	510	10.6	963	10.2	995	12.2	1548	12.9	1798	13.4	1951	13.8
0 - 14	1993	41.4	2237	44.4	1531	47.5	5876	48.7	6213	46.5	6550	46.3
15 - 19	378	7.8	499	7.8	651	8.0	10102	8.3	1433	10.7	1549	11.0
20 - 24	343	7.1	395	6.2	559	6.8	1116	9.3	1147	8.6		
25 - 29	339	7.0	448	7.0	493	6.0	8109	6.7	906	6.7	1279	9.1
30 - 34	331	6.9	401	6.2	475	5.8	6040	5.0	730	5.4	964	6.8
35 - 39	290	6.0	299	4.6	450	5.5	4951	4.0	567	4.2	611	2.1
40 - 44	260	5.4	316	4.9	316	3.8	3800	3.1	473	3.0	428	2.5
45 - 49	232	4.8	223	3.4	280	3.4	4182	3.4	407			
50 - 54	177	3.7	236	3.6	227	2.7	3211	2.6	343	2.5	361	2.5
55 - 59	143	3.0	201	3.1	197	2.3	2443	2.0	276	2.0	299	2.1
15 - 59	2493	51.7	3018	44.8	3648	44.3	5399	44.4	6282	46.6	6803	44.3
60 +	330	6.8	1084	10.8	4293	8.2	733	6.2	745	5.5	767	9.4
TOTAL	4.816	100.0	6339	100.0	9478	100.0	12000	100.0	13338	100.0	14110	100.0

SOURCES: Compiled from Appendix B

(Harrison & Boyse, 1972, pp. 19-20). This includes Iraq, where 45.8% of the population was aged (0-14) in 1983. (Ministry of Planning, 1983, p. 42).

This number represents a decline by comparison with 1977, when 48.5% of the population was in the age group. This high proportion of young people was the result of the decline in infant mortality, added to a high fertility ratio among women aged 15-45. In 1980 in Iraq it was 44.7% (see table 3.10), (Ministry of Planning, 1981, p. 34).

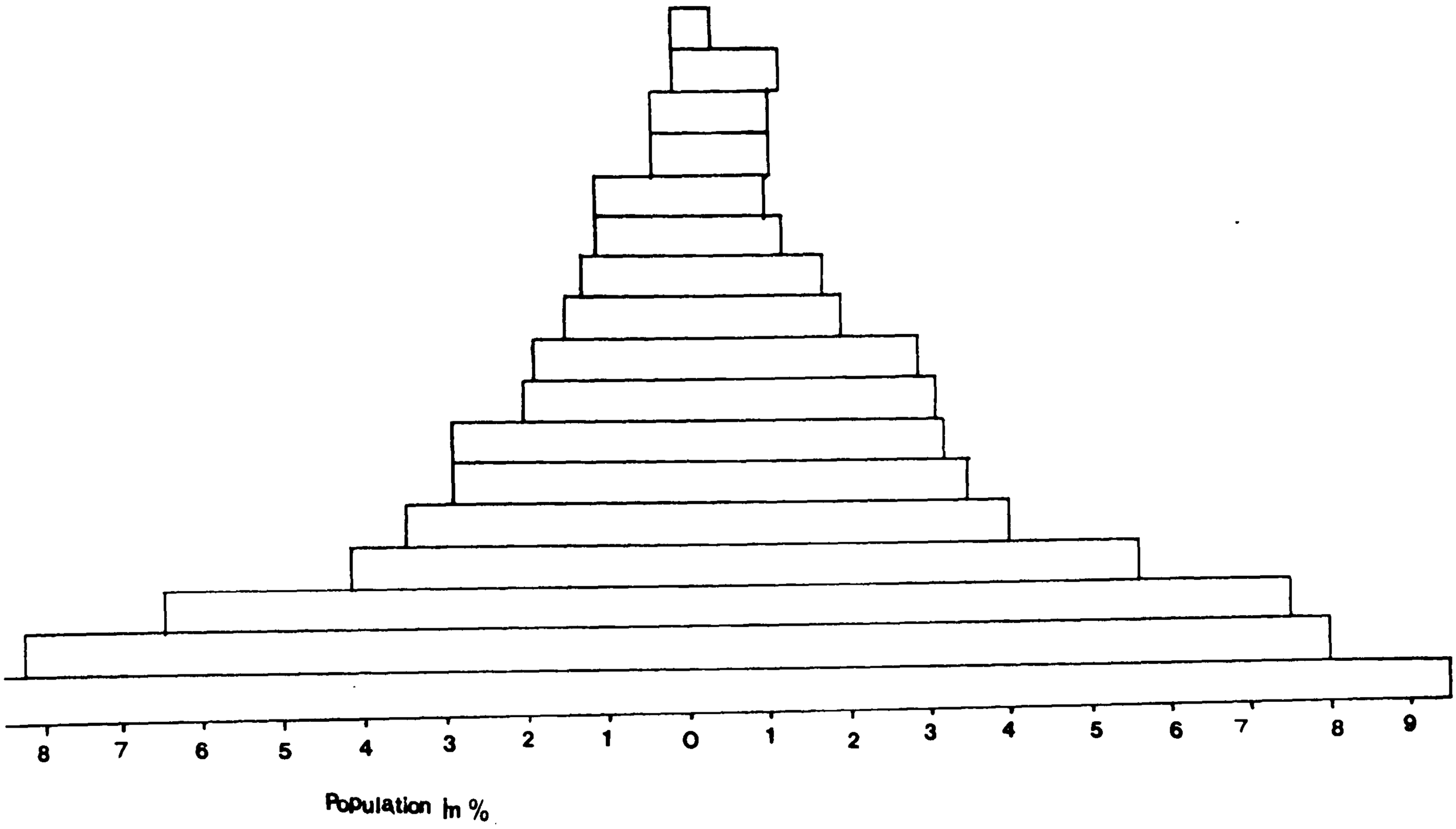
Figures for the age composition of the population in Iraq, as in most other developing countries, show that the size of the population of less than working age is high relative to other groups. This is particularly apparent from table (3.10) reveals a very high proportion of the population in the 0-14 age group, a figure of 45.8%. This compares significantly with the figure for the 15-59 age group, which was 47.9% in 1983. (Ministry of Planning, 1983, p. 50).

One of the common means of illustrating the age structure of population is the pyramid, an effective and a commonly used method of graphically depicting the age-sex composition of the population. The pyramids for the Iraqi population, 1965 and 1983 are shown in Fig (3.1) (Ministry of Planning, 1983, pp. 32-33).

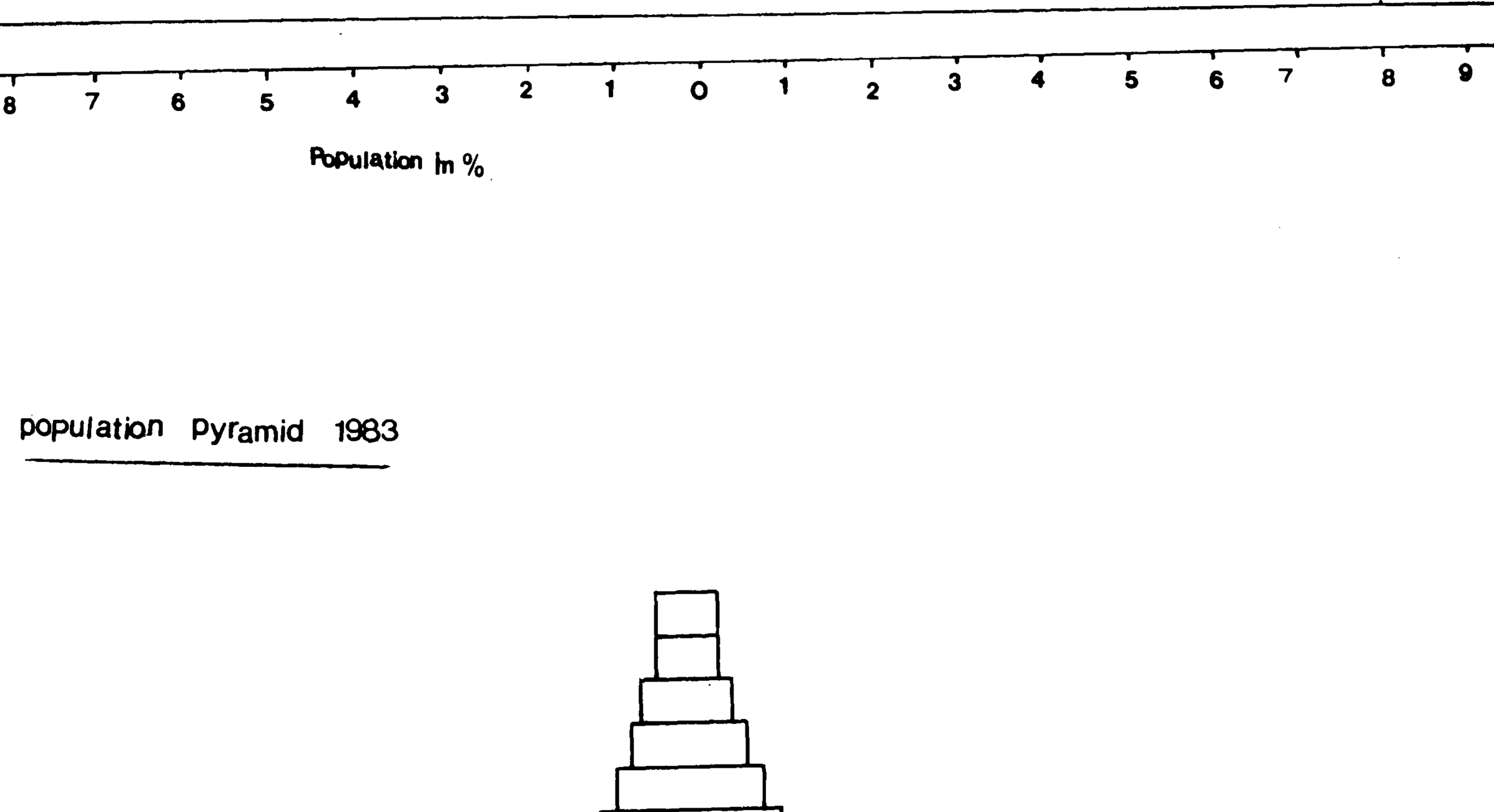
They have very broad bases and narrow tops, showing a very large proportion of children, due to high fertility and a very small proportion of elderly people. The low middle-aged relatively young. The rate of growth is high. The dependancy ratio percentage population is also high too and it could well take several years before a reduction in the birth rate brings about a slowing down of the rate of

IG (3·1)

POPULATION PYRAMID 1965



population Pyramid 1983



population growth (Stanford, 1972, p. 13). Given these facts, the developing countries are faced with the twin problems of creating new jobs and extending educational facilities, if rapid development is to be achieved.

As far as educational planning is concerned, studying the relationship between age and the educational composition of the population is vital to the process of planning, if the needs of various economic and educational services are to be met, (Khalid, 1970, p. 38).

3.4.2 Rural-urban Composition

The terms of rural and urban refer to the population within the municipal areas as urban, while those in non-municipal areas, other than nomads, are considered to be rural.

The geographical distribution of the population between rural and urban locations provides a quantitative view of the distribution of human resources, as shown in table (3.11).

The table shows that the rural population rose from just over half a million in 1867 to more than 4.5 million in 1983. 41% of the population were rural in 1867. This number had increased to 68% by 1930, because of the rapid decline in nomadic population growth, due to their settlement. Meanwhile, urban share remained almost constant.

By 1947, the rural population constituted about 63% of the total population (Hassan, 1958, p. 344). This share has been decreasing at a rapid rate, reaching 61.2, 48.9, 36.7 and 30.8 percent in 1957, 1965,

TABLE 3.11

Changes in Nomadic - Rural - Urban Composition of Population in Iraq

1867 - 1983

(in thousands)

YEAR	NOMADIC		RURAL		URBAN		TOTAL POPULATION OF IRAQ	
		%		%		%		%
1867)	450	35	525	41	310	24	1280	100.0
)								
1890)	433	25	963	50	430	25	1826	100.0
)								
1905)(A)	393	17	1324	59	533	24	2250	100.0
)								
1930)	234	7	2246	68	808	25	3288	100.0
)								
1947)	250	5	2702	57	1884	38	4816	100.0
1957 (B)	66	1	3788	60	2445	39	6299	100.0
1965	-	-	3935	49	4112	51	8047	100.0
1977 (C)	-	-	4354	36	7646	63	12000	100.0
1980 (D)	-	-	4455	33	8783	66	13239	100.0
1983 (E)	-	-	4534	31	10051	68	14585	100.0

SOURCE: Compiled from:

A - Hassan, M. S. 1958, p. 344

B - Iraqi Ministry of Planning, Evaluation of Economic Growth in Iraq, 1950 - 1970 Baghdad, 1972, p. 212

C - Annual Abstract of Statistics - Ministry of Planning -
Central Statistical Organisation, 1977, p. 37
Central Statistical Organisation, 1978, p. 26
Central Statistical Organisation, 1981, p. 34
Central Statistical Organisation, 1983, p. 50

1977, and 1983 respectively. (Ministry of Planning, 1977 and 1983, p. 37 and p. 34).

It is clear from these figures that the major shift of population from rural to urban centres took place during the period 1957-1965. During this period the rural population increased by almost 3 percent, firstly, because of the sharp decrease of the nomadic population at the same period, which 'I shall illustrate later in this section and Secondly, due to the effect of internal migration which reached its peak in Iraq in 1965 (Cooper & Alexander, 1970, p. 325).

Following the overthrow of the country where many poor peasants suffered greatly under the Agrarian reform law 1958. Large numbers left the rural areas and headed towards the city, looking for work discouraged by the semi-fedudlistic pattern of land ownership. The nomadic population has hardly declined and has accounted for 1% (Taylor, 1972, p. 139).

This decline had almost halted by 1965. The decline was mainly due to Iraq's increased security and stability, with consequent decline in tribal warfare. It was also partially due to the nomads, realization that cultivation could be in come cause Nomadic tribes were induced by their sheiks to settle in the rural areas and give up their nomadic life in order to be able to claim ownership of the land they cultivated. (Hassan, 1958, p. 344).

Overall, however, the actual rural population declined during the period 1957-1965, while the urban population almost doubled, from 2.44 million in 1957 to 4.11 million in 1965. The urban population represented 51% of the total population.

During the above period, education did not attract the people, and about 90% of the Iraqi population was illiterate, according to the 1957 census. By 1965, this figure was still high, at 78%, (Ministry of Information, 1977, p. 35).

The urban population started to grow faster after 1957 as a result of capital expenditure and increased employment in urban areas. This was accompanied by a declining rural population, as a result of rural-urban migration, a factor which had an effect on the development of the Agriculture sector (Myint, 1980, pp. 27-28).

By 1970 Agrarian reforms were made in favour of the peasant. (Ministry of Information, 1977, p. 49). Even so some peasants abandoned the idea of going back to their own rural areas, having lived in the cities, where they had become used to the comforts of city life and where their children were enrolled in the schools, one of the most important factors affecting this phenomenon was the nationalization of oil in 1972. A sharp increase in oil prices funded a huge development plan, designed especially to develop the public sector of the Iraqi economy. Which then became very active. The large work-force required encouraged many rural people to leave their land and emigrate to the cities, where they could lead better lives and enjoy better social services, such as the provision of hospitals and good schools. As a result of this, agricultural sector suffered a great deal from shortages in the labour force and low productivity (Bogue, 1959, p. 486).

Another factor which had a great deal to do with this phenomena which seriously affected the rural - urban distribution of population, as well as having a great deal to do with internal migration, and the

uneven distribution of educational facilities, such as universities institutes and vocational schools. (Al Saadi, 1976, p. 163).

Most of them were located in the big cities, primarily in the capital, where there are three universities.other three were shared by the rest of the country, i.e. by seventeen governorate• When the authorities recognized this problem, they to established most of the new agricultural institutes in the countryside, in order to encourage the rural people to stay in their own areas. Moreover, there seems to be a clear association between the level of completed education and the propensity to migrate. When rural students finish their education, they tend to stay in the cities, because that is where most of suitable jobs are to be found, conversely there is nothing for them in the villages. (Ministry of Planning, 1975, p. 240).

Also there is an equitable distribution of industrial development. Most large factories are located in the big cities and these attract their labour forces from the rural areas, so encouraging migration from rural to urban areas and producing an imbalance in the agriculture sector labour force, as more people towards the industrial sector. (Todar, 1981, p. 238).

Another factor in rural-urban migration is the concentration of official and semi-official institutions in the capital which forces people towards the urban centres. Also, there are differences between the different modes of life, especially in the real and fancied attractions of urban and city life. The individual has excellent opportunities, his or her social economic standards in the cities increased wages are a great attraction for migrants. The search for better jobs and more remunerative employment are the most influential

factors in the movement of internal migration from rural to urban centres.

Internal migration in Iraq can be considered as occupational migration, since it represents the search, by agricultural labour, for alternative and more remunerative employment. Urban areas are not an attraction to those who seek for better jobs, but also for those who want to escape from the traditional, tribal style of life. The migrant encourages his fellow tribesmen to join him and settle down in the city. (Al Nawab, 1979, p. 39).

The uneven socio-economic development of various regions in the country seems to have played a major role in sharpening the trend and the course of rural-urban migration over the last few decades. Nevertheless, Iraq, with its capacities, can overcome all these problems and some of them have been solved recently, including the shortages in the agricultural sector labour-force, which was resolved by importing Arab farmers from Egypt and Morocco. A great deal of attention has also been paid to attracting the rural people back to their own areas. More schools and higher educational institutes, especially agricultural institutes have been built in the countryside (rural area) to attract the interest of farmer's children.

All rural areas have been provided with electricity and clean water. A better health service has been introduced and a large plan to develop the agrarian sector has been set in motion. By so doing, it is hoped to overcome uneven socio-economic development which, it is further hoped, will encourage peasants to reject the idea of moving to the city (Ministry of Information, 1980, p. 135).

YEAR	URBAN	RURAL	TOTAL	Percentage of Urban 4 = (1)/(3)	Percentage of Urban 5 = (2)/(3)	Average Annual Rate of Growth Urban (6)	Average Annual Rate of Growth Rural (7)
1947 (A)	1733827	3082358	4816185	36.0	64.0	-	-
1957	2214545	3853519	6298978	38.8	61.2	2.4	2.3
1965	4112291	3935124	804715	51.1	48.9	8.0	0.26
1970	5452435	3987663	9440098	57.8	42.2	5.8	0.26
1975 (B)	7083855	4040398	1112453	63.7	36.3	5.3	0.26
1977 (C)	7646054	4354443	12000497	63.7	36.3	3.8	3.8
1980 (D)	8783240	4455438	13238678	66.4	33.7	4.7	0.7
1981 (E)	9186339	4483350	13669689	67.2	32.7	4.5	0.6
1983 (F)	10051794	4534043	14585837	68.9	31.0	4.6	0.5

SOURCE: Compiled from:

A - Iraqi Ministry of Planning, Evaluation of Economic Growth in Iraq, 1950-1970 Baghdad, 1972, p. 212
B - Annual Abstract of Statistics - Ministry of Planning - Central Statistical Organisation 1977 p.36
C - Annual Abstract of Statistics - Ministry of Planning - Central Statistical Organisation 1978 p.26
D - Annual Abstract of Statistics - Ministry of Planning - Central Statistical Organisation 1981 p.34
E - Annual Abstract of Statistics - Ministry of Planning - Central Statistical Organisation 1981 p.35
F - Annual Abstract of Statistics - Ministry of Planning - Central Statistical Organisation 1983 p.50

In spite of all these factors and the short comings of the rural and urban classifications the rural population continues to have a very low rate of annual growth as shown in Table (3.12) i.e. from 3.8 million in 1957 to 4.5 million in 1983, an annual rate of growth of 0.73 percent. On the other hand, the urban population has increased from 2.4 to 10.0 millions between 1957 and 1983, an annual rate of growth of 10.8 percent.

The statistics in the two tables (3.11, 3.12) reflects two further important facts; firstly, during the 116 years from 1867-1983, the rural population increased in absolute terms from 525 to 4534 per thousand persons, a total increase of 4009 per thousand or 763.6 percent, while the urban population increased in absolute number from 310 to 10051 per thousand, a total increase 9741 per thousand persons, which amounts to 3142.2 percent. (See Figure 3.2).

Secondly, the absolute and percentage increases in urban population and the percentage decline in rural population was the result of "Outmigration" from rural to urban areas.

According to the 1965 census the population of Iraq totalled 8,047,415. At this time, the rural population numbered 3,935,124 approximately 49 percent of the total population. (Ministry of Planning, 1969, p. 30).

The urban population numbered 4,112,291 almost 51 percent of the total population. At the time of the 1977 census, however, the total population was 12,000,497 persons. The rural population accounted for 36.3 percent of these while the urban population comprised about 63.7 percent as shown in Table (3.13). The above figures show an increase in absolute terms of 3,593,082 persons between 1965 and 1977, which

GOVERNORATE	1965				TOTAL POPULATION OF IRAQ		1977				TOTAL POPULATION OF IRAQ	
	RURAL		URBAN				RURAL		URBAN			
	ACTUAL	%	ACTUAL	%	ACTUAL	%	ACTUAL	%	ACTUAL	%	ACTUAL	%
Nineveh	384151	51.7	358616	47.3	742767	100.0	506859	45.8	598812	54.2	1105671	100.0
Salah Al Deen	-	-	-	-	-	100.0	206032	56.6	157782	43.4	363819	100.0
Tammen	241679	51.0	231947	48.9	473626	100.0	147988	29.9	347437	70.1	495425	100.0
Diala	262213	66.0	135150	34.0	397363	100.0	345700	58.8	242054	41.2	587754	100.0
Baghdad	448669	21.9	1596706	78.1	2045375	100.0	269628	8.5	2920072	91.5	3189700	100.0
Anbar	184023	59.9	122989	40.1	307012	100.0	210405	45.1	255654	54.9	466059	100.0
Babylon	283635	63.3	164533	36.7	448168	100.0	303834	51.3	288182	48.7	592016	100.0
Kerbela	89415	26.3	250439	73.7	339854	100.0	99612	36.9	170210	63.1	269822	100.0
Najaf	-	-	-	-	-	100.0	125647	32.3	264033	67.7	389680	100.0
Qadisiya	269529	67.4	130563	32.6	400092	100.0	227387	53.8	195619	46.2	423006	100.0
Muthanna	91839	64.2	51297	35.8	143136	100.0	127823	59.3	87814	40.7	215637	100.0
Thi-Qar	365533	73.3	133317	26.7	498850	100.0	375576	60.3	247403	39.7	622979	100.0
Wasit	231111	69.1	103220	30.9	334331	100.0	231468	55.8	183672	44.2	415140	100.0
Maysan	241335	69.8	104132	30.2	345467	100.0	206793	55.5	165782	44.5	372575	100.0
Basirah	253731	37.9	415748	62.1	669479	100.0	208173	20.6	800453	79.4	1008626	100.0
D'hok	94083	64.5	51751	35.5	145834	100.0	143171	57.1	107404	42.9	250575	100.0
Arbil	222142	62.3	134151	37.7	356293	100.0	253392	46.8	288064	53.2	541456	100.0
Sulaimaniya	272036	68.0	127732	32.0	399768	100.0	364955	52.8	325602	47.2	690557	100.0
					(*)						(**)	
TOTAL	3935124	51.1	4112291	48.9	8047415	100.0	4354443	36.3	7646054	63.7	12000497	100.0

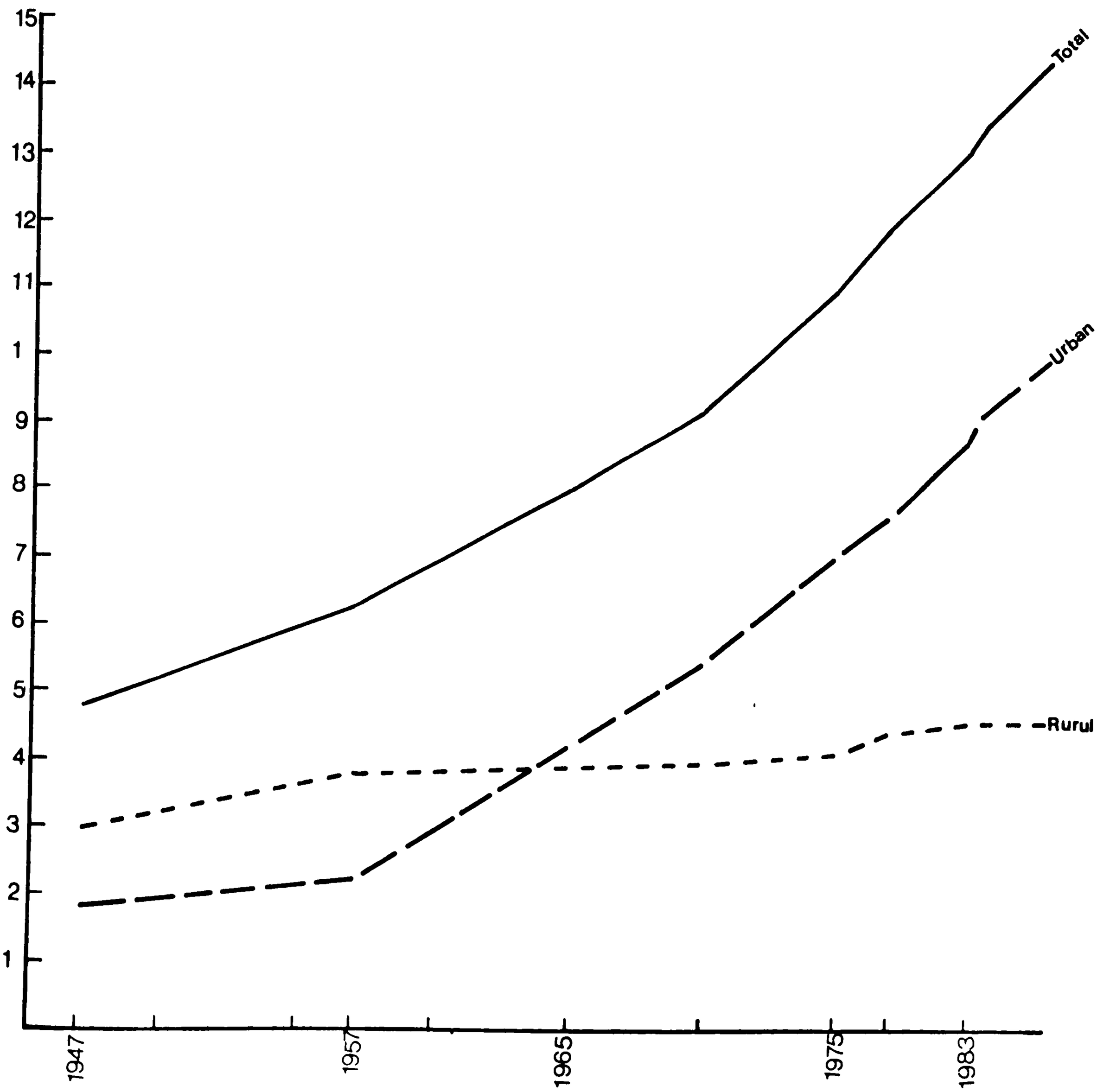
SOURCES: (a) Ministry of Planning, 1978, p. 26
(b) Ministry of Planning, 1971, p. 51

(*) This figure does not include Iraqis abroad: 49815 persons

(**) This figure excludes Iraqis abroad: 129000 persons

Iraq's Population According to Residence in Rural and Urban Areas for

1947 – 1983



represents an annual growth rate of 3.8 percent (Ministry of Planning, 1978, p. 26). From the above table, it can be seen that the largest ratio of the rural population occurs in Thi-Qar province, this being 73.3 percent the lowest ratio being that of 2.19 percent in Baghdad province. The urban population of Baghdad had increased from about 1.5 millions to about 3 million. Meanwhile, in Basrah the urban population increased from 412748 people in 1965 to 800,453 in 1977, whereas the rural population decreased from 253731 to 208173 in the same period. These large population increases are partly consequence of rapid and large inflow of migrants from the rural areas to urban centres. With the rapid growth of the urban population Iraqi cities are experiencing a sharp crisis in the provision of the necessary prerequisites of urban life, in terms of employment, housing, social services and other facilities.

In this context, Baghdad city has probably been the worst hit. The rate of growth of the urban population in Iraq has recorded an increase of 6.7 percent annually for the period 1957-1965. In other words, the urban population was doubling every ten years and this imbalance in population distribution has had adverse effect on the age composition of the rural labour force (Maroof, 1977, p. 20)

3.4.3 The Educational Composition of the Population

Education is an important variable in accounting for population. It was often conceived of as a factor directly influencing the size of the family. As more educated couples simply have greater access to information on birth control and are therefore more likely to efficient family planners (Meleis & El-Sanabary & Beeson, 1979, p. 115).

Also, the more educated wives tend to prefer smaller families, so that they can engage in more activities outside the family, such as profession careers (Andorka, 1978, p. 259). The better educated the mother, and hence the greater her market earning potential, the greater will be the economic sacrifice having more children (Bowman, 1985, p. 33).

This inadequate educational system is another consequence of rapid population growth and this is one of the main characteristics of developing countries. Such a characteristic constitutes a major hindrance to the process of socio-economic developmemt and the planning of the national economy in these countries (Myint, 1980, p. 25).

Among the main requirements for economic development is the full participation of members of the society in the educational process so as to realize more desirable levels of development, side by side with the improved utilisation of all national resources. The many ways in which man affects economic growth and social progress derives from his double role as the basic agent and final goal of all the processes of economic and social development. Thus, the human factor is the most important element in the provision of a sound foundation for the desired structural changes. Such development and structural change cannot be achieved without impressive efforts in the areas of legislation and carefully planned budgetary appropriation.

In Iraq, as in most developing countries, the process of accelerating human resources development encounters a large number of obstacles, particularly in the field of formal education. The weaknesses of education and manpower planning create severe problems and the achievement of the desired development goals is fraught with conflict.

Despite the massive effort that has been made towards extending education to the whole population, the development of human resources, in Iraq as in other developing countries, has been fraught with difficulty.

Another characteristic feature of developing countries is their young populations, 40-65% of which are below 15 years of age, in Iraq, this figure is 46.8% of the population. This leads to a rapid growth in the school-age population (Ministry of Planning, 1982, p. 50). Even so the enrolment of school age students in Iraq is not 100%, despite the compulsory education act of 1978. In 1982-83 the total enrolment of children of school-age in primary schools was 458,509 out of total population of 780,481 children of school age, (Ministry of Planning, 1983, p. 235). But expand schooling enrolment rate are confronted by often severe limitations in teaching resources to accommodate the unprecedented rise in numbers, and also the quality of schooling remain poor or deteriorates, (Bowman, 1985, p. 36).

Table (3.14) shows the enrolment ratios for the different emotional stages, according to age-group in four countries: Iraq, Egypt, Algeria and Kuwait. From this, it can be seen that the ratio of both sexes at all educational levels is increasing. The increase is due to the improvement in the health services and the resulting decline in infant mortality. This is compounded by the increase in the fertility rate the increase in life expectancy at birth and the decline in the illiteracy rate (Alrawi, 1980, p. 89).

Like most other Arab and developing countries, the educational composition of the Iraqi population reveals a high rate of illiteracy.

TABLE 3.14

"Enrolment Ratios for the Primary, Secondary and Tertiary Levels of Education, According to the Corresponding Age Groups in Different Countries"

COUNTRY	YEAR	AGE GROUP	SEX	
			Both Sexes	Female
Iraq	1960	6 - 11	65	35
		12 - 16	19	8
		20 - 24	2.01	0.93
	1972	6 - 11	73	44
		12 - 17	26	15
		20 - 24	6.28	2.68
	1977	6 - 11	100	76
		12 - 17	44	
		20 - 24	9	
	1981	6 - 11	113	109
		12 - 17	59	
		20 - 24	9	
Egypt	1960	6 - 11	66	52
		12 - 17	16	
		20 - 24	5	
	1977	6 - 11	72	56
		12 - 17	46	
		20 - 24	14	
	1981	6 - 11	76	63
		12 - 17	52	15
		20 - 24		
Algeria	1960	6 - 11	46	
		12 - 17	8	
		20 - 24	-	
	1981	6 - 11	94	81
		12 - 17	36	
		20 - 24	5	
Kuwait	1960	6 - 11	117	
		12 - 17	37	
		20 - 24	-	
	1981	6 - 11	94	93
		12 - 17	76	
		20 - 24	14	

SOURCE: World Development Report, 1984, pp. 226-227

Number and Percentage of Illiterates in the Population of Iraqi Between 15-45 Years of Age

1957 - 1977

GOVERNORATE	URBAN			RURAL			TOTAL		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Those between 15-45 years of age	1174836	1293726	2468562	1515072	1502369	3017441	2275658	2140189	4415847
Illiterates between 15-45 years of age	1011824	1212101	2223925	1028804	1326642	2355446	675593	1535937	2212630
% of illiteracy to those between 15-45 years of age	86.1	93.7	89.9	67.9	88.3	78.1	30.58	69.42	50.0

SOURCE: Ministry of Planning, Educational and Social Office, Educational Planning Section, the Eradication of Illiteracy and its Relation to National Development Planning Study No. 1, Baghdad, 1980, p. 3 (Arabic)

This rate is not equally distributed according to sex and age, or between rural and urban centres. (Sousa, 1982, p. 47).

Also the composition of the educational structure of the population shows an unequal distribution of education between males and females, as shown in table (3.15). From this table one can see that although the rate of the illiteracy rate has declined from 89.9% in 1957 to 50% in 1977, which is a decrease of about 30% during this period, the rate among males is lower than that of females. (Ministry of Planning, 1980, p. 3).

The rate of illiteracy among males was 86.1% in 1957. This decreased to 30.58% in 1977. Meanwhile, the rate among females was 93.7%, although this did drop to about 70% in 1977. This would suggest that the high percentage of illiteracy among females and males was a major obstacle confronting the process of socio-economic development and the planning of the national economy.

Moreover, the distribution of education between rural and urban areas was also unequal, as can be seen from table (3.16). This table shows that the difference between the percentage of illiterates in urban and rural areas grew from 27% during the period 1957-1965 to about 37% by 1977.

Furthermore, the comparison between rural and urban population, classified in terms of males and females, reveals that there is a large gap in their respective educational achievements. This is not only the case in Iraq, but is a phenomenon which is widespread among developing countries in general. The number of illiterate males is almost always smaller than the number of illiterate females. The educational

TABLE 3.16

Percentage of Illiterates in the Population of Iraq Classified According to Environment and Sex Between 15-45 Years of Age 1957-77

YEAR	RURAL			URBAN		
	Male	Female	Total	Male	Female	Total
1957 (a)	86.1	98.6	92.5	52.3	79.3	65.3
1965 (b)	94.6	73.5	84.0	43.9	70.8	57.0
1977 (c)	52.0	97.6	76.0	20.4	57.9	37.9

SOURCE: Compiled From:

(a) Iraq Annual Abstract of Statistics, 1969, p. 16
(b) Republic of Iraq, Ministry of Planning, Central Statistical Organisation, General Population Census of 1965, Baghdad 1973, p. 65
(c) Iraq Ministry of Planning, Educational Planning Department, Evaluation and follow up, the Comprehensive National Campaign for Compulsory Eradication of Illiteracy, September 1980, Baghdad (Arabic), p. 26

GOVERNORATE	URBAN			RURAL			TOTAL		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
Baghdad	103491	27562	378553	18577	43043	61620	122068	318105	440175
Salah-Eddine	6808	19630	26438	16400	53934	52334	23208	55564	78772
Nineveh	23917	64010	87927	36529	83661	119190	59446	147671	207117
Duhok	13280	13264	26244	17376	23951	41328	30356	37216	67872
Arbil	24412	37770	62182	30020	46237	76557	54432	84007	138439
Sulaimaniyah	21762	40471	62233	49444	57367	106811	71206	97838	169044
Al-Tamim	25239	37912	63151	12080	26182	38262	37319	64094	101413
Diyala	8792	27358	36150	20469	57057	77526	29261	84415	113676
Al-Anbar	10273	29108	39381	13629	34703	48332	23902	63811	87713
Wasit	7584	20392	27926	17633	40714	58347	25217	61106	86323
Babylon	10496	32372	42868	1952	50215	69736	30017	52587	112604
Kerbela	7702	18394	26096	6662	17327	23989	14364	35821	50085
Najaf	10324	30380	40704	7730	21026	28756	18054	51406	69460
Al-Qadissiya	7418	21506	28924	17261	39370	56631	24679	60876	85555
Al-Merthamna	3165	9204	12369	9872	22814	32686	13037	32018	45055
Thi-Qar	8151	31205	39356	23563	65061	88624	310714	96266	127980
Maysan	6552	17379	23931	18810	34059	54869	25362	51438	76800
Basrah	28492	82312	110804	14259	29486	43745	42751	111978	154549
TOTAL	327858	1135587	1135587	348835	7282043	1077043	676693	1535937	2212630

SOURCE: General Federation of Iraqi Women, with the Co-operation of the Arab Organisation for the Eradication of Illiteracy, Perspective for the Development of the Iraqi Woman, Baghdad, 1981, p. 207

structure for females lags considerably behind that for males and further differences are observed in respect to the rural areas as shown in Table (3.17).

The fact that education provides skills, knowledge and the necessary human potential to achieve increased production and development is therefore as important to social and economic development as the provision of physical capital. Financial capital does not constitute so much of a problem in Iraq, as that of providing the necessary human capital in terms of a skilled labour force and well qualified manpower. (Meleis, El-sanabary, Beeson, 1979, p. 115).

3.5 Conclusion

Clearly, with about 3.5% annual rate of population growth dominated by a high proportion, fewer people in the economically active sector and an increasing rural-urban migration. Iraq reflects the trend in population growth common to most developing countries. This trend in a way was caused, in the main, by a reduction in mortality and crude death rates. These were direct results of the provision of improved health services and decline in illiteracy rate.

But demographics and international economical development agencies have emphasised the relationship between a high rate of population growth and economic development, with the formers helping to perpetuate under-development.

Although the world bank report of 1984 contended that a high rate of population may not always have a negative effect per se, a population trend has been established especially in the third world. The world

bank contended that a high rate of population growth does have a dual effect viz: at the family levels and more at the social level.

At the family level, high fertility reduces quality of life and perpetrates the cycle of poverty. At the social level rapid increase in population makes it difficult for the government to finance investment in education and infrastructure, which are crucial to a sustained economic growth and development.

As printed out in this chapter, increase in population growth in Iraq necessarily strains available educational resources and demand increase in government spending to improve standard level. More negative is the effect of rural urban migrations on the facilities available on the urban areas. Schools are overcrowded and teaching facilities remain insufficient. The overall effect is that government must concentrate on development in the cities in order to cater for the needs of the over-populated urban areas. This takes place at the expense of development of the rural areas.

Indeed the paradox of Iraqi situation is that it is only through rural development that rural-urban migration can be discouraged, although the government has to invest in developing the urban areas to cater for the need of the city dweller.

CHAPTER FOUR

The Labour Force and the Demand for Educated Manpower in Iraq

4.1 Introduction

As noted in previous chapters, Iraq is a developing country with great potential for social and economic development. The country, on the whole, has no surplus population problem. She has a higher per capita income (ID 874.2 in 1982) than other developing countries, and a comfortable level of foreign exchange earnings from the oil industry. The limiting factor in economic development seems to be neither the level of capital formation nor a permanent lack of foreign exchange, but the lack of qualified personnel and skilled manpower to carry out development plans.

As we shall notice in the succeeding chapters that education is an investment in the production of qualified manpower and the need for educated manpower is no less significant than the need for capital or for natural resources in economic and social development because the economy and its rate of growth are dependent on an adequate supply of skilled and trained workers (Blaug, 1983, pp. 28-29).

Besides the shortages of skilled manpower there is a sectorial imbalance in the distribution of labour force. Some sectors like the administration and the services are heavily overcrowded, while other sectors, such as agriculture, suffer shortages in manpower. This problem was created partly by an imbalance in the supply of particular categories of manpower and partly by the social and economic circumstances of the country's development, notably the government's commitment to provide jobs for all the active population.

Hence, the purpose of this chapter is mainly threefold; firstly, to review and analyse the structure of employment and manpower

strategy, to observe secondly, some detailed aspects of the potential size of labour force and its distribution among the economic sectors and lastly, to identify the illiteracy problem as the most formidable obstacle in the path of development and the progress of both individuals and communities, particularly those engaged in productive activities in various sectors.

4.2 Structure of Employment

Educational institutions function as an intermediary in the labour market to balance the demand for the supply of skilled manpower. In this respect, the degree of effectiveness of the educational institutions depends upon two factors: Firstly, the degree of coverage of the educational system, that is, training through educational institutions versus training in work-places. Secondly, the extent to which the existing imbalance in the labour market is due to the structure of the labour market. Here, we make a distinction between two different types of imbalance, the aggregate and the structural, (Hussain, 1976, p. 427). The former is a type of imbalance in which the supply of labour at the aggregate level exceeds the demand for labour. The latter is the one in which the pattern of supply does not match the pattern of demand due to the differences in the place of occurrence of supply of and demand for labour or the requirement of special skills. The educational system may be effective only in the case of structural imbalance and particularly when the imbalance is due to the required skills.

In relation to the first condition, we are concerned with technical training which is directly related to occupation, rather than with the general education. Technical training through the educational

institution in Iraq is insignificant. In this respect, the supply of technical education cannot be the only factor responsible, since the pattern of demand and the traditional work-place training has a significant position. Due to the industrial structure of the Iraqi economy in which the small-scale industries play the dominant role in employment, the demand for school-trained graduates is low. The small-scale industries with an average of three workers traditionally prefers to employ their own trainees. The high share of 10-14 year olds's in the total employed population shows the above tendency. When the structure of the employed population by occupation is considered, the share of 10-14 year old is important for both agricultural and industrial workers. We do not have the number because there is not any statistical published figure as people do not report the number of the 10-14 group because it is against the law to employ them. But we believe there are quite a number. They work particularly in small-scale industries and in agricultural sector. The development of the industrial sector, particularly the small-scale industries and the Agrarian reform have been the main factor for the rapid increase in the share of young workers.

However, the low demand for school-trained graduates from the small-scale industries is not due only to the low level of training in the educational institutions, but it is also a resistance against education. The industrialists who fear that education would lead to disclosure of the secrets of their business, which has given them a privilege, prefer to employ their own trainees. Technical and vocational school graduates are related to the large scale-industries and because of the bad performance of technical schools at the level of secondary education has led the large industries to choose university graduates to perform the job rather than the school graduates.

The above pattern of demand shows that technical training cannot be attractive to students, partially because of the limited demand for school graduates either due to the bad technical training, and partially because of better prospects for higher education graduates, both due to the higher demand for them and the higher income earnings. The low demand for technical training in secondary schools explains the rational reaction of educational institutions to the demand for technical education under the existing conditions. In this respect, the rapid expansion of service education indicates the reaction to the demand for service occupations which can be observed clearly from the high share of the service sector in the GNP and its rapid expansion. Therefore, the pattern of development of the industrial and service sectors has determined the pattern of demand for skilled manpower.

The above also explains the high demand for higher education, but the question is whether or not the Iraqi economy is able to absorb the graduates for higher education. In actual fact the Iraqi economy is capable of absorbing the number of higher education graduates because of the huge development programme. Iraq is in need of a highly educated manpower. But the attitude of middle class toward the blue collar job. (Blaug, 1975, pp. 237-239). The students, resistance against manual work is strongly backed by the middle class families who are able to support their children until they find a place in higher education institutions or find a clerical occupation.

It can be expected that the importance of social status attached to white collar jobs will decrease when an adjustment in the wage levels is made. As far as the effects of education on employment is concerned, it can be said the education has been a privilege for the middle classes. This will be explained in Chapter Six later. The high

percentage of illiterates in the total population has affected the labour force particularly in the rural areas . We are going to discuss this in the next section.

When the source of demand for skilled manpower is considered, the rational reaction of the educational system with regard to the high percentage of demand for secondary school graduates and higher education comes from the government. The number of university graduates has increased from.

In short, the distribution of qualifications in the labour force has been a response to the structure of occupation in Iraq, and to this extent has been effective and the solution to the problem of employment should be sought at the aggregate level and the structure of the economy on the one hand and in the wage differential on the other.

4.3 Manpower Strategy

The Iraqi government desires to accelerate economic development to meet the needs of a rapidly expanding population and to satisfy the rising expectations of the people. The problem of disguised unemployment and overcrowding in the administration and services sector is one to which all official reports of government and the party point, stressing the need to find an efficient solution to the problem and minimise its effects on national development efforts. Certainly, the continuation of this phenomenon would have negative effects on the future development of the national economy. In addition to the imbalance it creates within the occupational distribution of the labour force, it also encourages imbalance in the output of graduates from the

educational system. All of this means that strategies have to be devised to provide a well-conceived national plan, and the requisite manpower to meet development needs. The preparation of such a plan is comparatively simple and Iraq has one, but the problem lies in its successful implementation. The crux of the problem, in this respect, lies in the provision of adequately trained, educated and dedicated staff, whose minds are effectively orientated to the nation as a whole. Then, avenues for development must be opened and opportunities created. The question is one of upgrading existing human resources. This is especially needful for the implementation phase of Iraq programmes.

The above constitute the basic ingredients of manpower strategy, but it should be remembered that no manpower plan can function in isolation, for it must be conscious of its environment and must be integrated to economic policy. It follows that there must, therefore be close co-ordination between economic development planning, investments in education, and manpower planning.

The secondary schools, the technical institutes and the agricultural colleges, together with the universities, have an important role to play in the rapid accumulation of educated human resources. On the public and private business the industrial establishments fall the important duty of developing the skills they require, both for the present and for the future, with a view to developing well-deployed manpower in the public sector, and to training new recruits. The development administration unit is compiling data on the availability of existing training establishments additional units, the types of training that will be necessary and staff training centres.

Harbison and Myers believe that the design and implementation of a strategy of human resource development within the framework of these imperatives is no easy task. In the face of the competing demands of other urgent development, the resources available for education are limited and the same is true of foreign and technical assistance. However, a strategy implies a choice of major objectives and choice is difficult when many projects are mandatory (Harbison & Mayers, 1964, p. 95). If despite these difficulties, a balanced strategy is to be developed, one must take into consideration the level of human resources, development already attained, and the appropriate considerations of demand and supply.

Owing to the large expansion in investment projects in Iraq and as a consequence of insufficient local national cadres to cope with this expansion, there has been a substantial increase in recent years in the number of highly qualified and skilled people from abroad. Hence the need to train national cadres to carry on these projects, which are expected to be handed over for use in the future, which could be regarded as one of the most urgent requirements of socio-economic development in the country, though, as yet, the level of human resource development has not reached a satisfactory standard. I would argue in fact that Iraq has developed an educational system that produces a structure which does not meet the requirement of the national economy for different specialists. Furthermore, the process of absorbing the available supply of high level manpower is, for the most part, carried out with little consideration for the efficient utilization of such human resources.

Iraq spent on education increased from 155.1 million U.S. dollars in 1969-1970 to 933.3 million U.S. dollars in 1979-1980 as shown in Table 4.1.

TABLE 4.1

Educational Expenditures Million U.S. $

YEAR	EDUCATIONAL EXPENDITURE	% OF TOTAL EXPENDITURE ORDINARY GOVERNMENT
1969-1970	155.1	19.3
1970-1971	167.8	18.7
1972-1973	242.1	20.7
1974-1975	422.0	13.6
1975-1976	576.7	11.5
1979-1980	933.3	11.9

SOURCE: League of Arab States, Arab Organisation for Education Culture and Science, Department of Information and Documentation, 1980, p. 17-82.

Among the elements of an appropriate strategy, the expansion and reform of secondary and tertiary education remains the most urgent. There are weaknesses in the secondary education system, but drastic reconstruction is now taking place. The primary objective of secondary schools should be to help students develop qualities of self-reliance and self-confidence. It should also equip them with the knowledge and skills which will help them to select, with the minimum of effort, particularlized vocational or professional training in specialized or higher education.

Education plays a vital in any national development plan (See Chapter Two). It provides educated staff and a qualified labour force and constitutes the most important part of the human capital side of the national economy. Consequently, the backwardness of the Iraqi educational system and the concentration upon quantitative targets were

apt of much help to the manpower planners. Moreover, many of those who graduated from intermediate and secondary schools did not possess adequate skills or qualifications to enter the productive sectors, so they usually joined those employed in administration.

The recent national development plan revealed massive shortages within specific categories of the labour force. Therefore, much emphasis was placed on redirecting the educational system to contribute efficiently to national development efforts and considerable importance was attached to meeting the country's requirements for different categories of labour. Thus the present capacity for training centres was expanded and new centres were built in order to meet the required targets.

Finally, the question of re-deployment must be given careful consideration. In order to meet immediate, high-level manpower needs, both the public and private sectors must make a serious attempt to identify the existing stock of skilled manpower and to see where the nation can get more out of what it already has by shifting existing stock from one place to another.

4.4 The Labour Force and Employment in Iraq

The extent to which economic growth in Iraq has created new job opportunities is crucial to any evaluation of the country's growth and ability to utilize oil revenue for the betterment of the people. This is a key issue, because Iraq's high rate of population increase has meant that a high percentage of new workers are joining the labour force each year. The size of the labour force was 1631100, 23.69% of

TABLE 4.2

Population, Labour Force and Activity Rates 1960-1980

Year	Population	Labour Force	Activity Rate *	Rate of Growth	
				Population	Labour Force
1960	6885200	61631100	23.7	-	-
1965	8047400	2148000	26.6	3.1	5.6
1970	9440000	2664900	28.2	3.2	4.4
1975	11124300	3181500	28.6	3.3	3.6
1980	13238678	3510000	26.5	3.5	1.9

Source: 1. Ministry of Planning, 1960-1970, p. 27
2. Ministry of Planning, 1973, p. 238
3. Ministry of Planning, 1976-1980, p. 18

* Activity Rate = $\frac{\text{Labour Force}}{\text{Population}} \times 100$

TABLE 4.3

The Percentages of the Labour Force in the Agricultural, Industrial and Commercial Sectors

Year	Percentage of Labour Force in Agricultural Sector				
	Syria	Iraq	Kuwait	Algeria	Jordan
1960	54	53	1	67	44
1978	49	42	2	30	27
1979	32	43	2	32	21
1980	33	42	61	25	20

Year	Percentage of Labour Force in Industrial Sector				
	Syria	Iraq	Kuwait	Algeria	Jordan
1960	19	18	34	12	26
1978	22	25	35	25	39
1979	31	26	34	24	19
1980	31	26	34	25	20

Year	Percentage of Labour Force in Services Sector				
	Syria	Iraq	Kuwait	Algeria	Jordan
1960	27	29	65	21	30
1978	29	33	63	45	34
1979	37	31	64	44	60
1980	36	32	64	50	60

Source: World Development Report, 1980, 1981, 1982, 1983, 1984 pp. 146-147, pp. 170-171, pp. 146-147, pp. 188-189, pp. 258-259

TABLE 4.4

Average Annual Growth of Labour Force Percentage

YEAR	SYRIA	IRAQ	KUWAIT	ALGIRA	JORDAN
1960-1970	2.1	2.9	7.0	0.5	2.8
1970-1982	3.3	3.1	4.8	3.5	2.5

SOURCE: World Development Report 1980, 1981, 1982, 1983, 1984 pp. 146-147, pp. 170-171, pp. 146-147, pp. 188-189.

which were active in 1960. By 1975, the number had increased to 3181500, of which 28.6% were active. In 1980, the number reached 3510000, of which 26.5% were active(See Table 4.2).

The distribution of employment by broad sectors of economic activity has shown a number of distinctive trends. A steady decline has taken place in the agricultural sectors (See Table 4.2), which has resulted in a shift in the labour force. Between 1978-1980 most of the workers leaving agriculture were absorbed by the industrial sector. The percentage of workers in the industrial sector had increased from 18% in 1960 to 26% by 1980. If one compares this with other developing countries, a similar increase is seen in both industrial and service sectors (See Table 4.3).

An increasing change has occurred in the oil industry, which in spite of its impact on national income and supply of foreign exchange, has never absorbed a higher proportion of the labour force because this sector requires highly skilled and qualified workers.

The following table gives a general idea of labour force distribution amongst the various economic activities of five oil countries during the period 1960-1980. Table(4.4)also reveals that the average annual growth of the labour force, as a percentage for the year 1970-1982 was 3.1%.

However, a large imbalance exists in distribution of the labour force in the Iraqi economy. This can be illustrated by the case of the Social Services which fall mostly into the hands of the government. A staggering 47.7% of the total work force in the public sector employed in the services sector.

4.5 The Potential Size of the Labour Force

The labour force can be defined as "all persons of either sex who furnish the supply of labour available for the production of economic goods and services" (U.N., 1965, p. 28).

This broad definition allows for a wide range of variation in the potential size of the labour force. Variation in the lower and upper age limits can alter the potential size of the labour force of the same population remarkably, so the age structure of a population which is undergoing demographic transition, as in the case of Iraq, would lead to a situation in which the increments to the labour force are not proportional to the increase in the total population. In a population with a stable age structure, it is convenient to assume that the annual growth rate in the labour force, excluding exogenous changes caused by migration, is equal to the natural growth rate. Another factor which affects the supply of labour is the proportion of that part of the economically active population which stands ready to supply labour under the prevailing social and economic conditions. This rate is usually not the same for both sexes, especially in developing countries where social norms and customs impose a variety of restriction. Table 4.5 represents the relevant figures in this regard for a selected year in Iraq.

It is clear from the table that the inclusion of the youth age group 10-19 within the economically active population is bound to inflate the size of the potential labour force, un-necessarily. The table also shows how the size of potential labour force is affected by the age range of the population. In situations comparable to these which characterize the general conditions of Iraq's natural resources,

Distribution of Population by Selected Age Groups

ar	Total Population (1)	Population in Age Groups						Ratio of Age Group Population to Total Population					
		10-59 Years (2)	10-64 Years (3)	15-59 Years (4)	15-64 Years (5)	20-59 Years (6)	20-64 Years (7)	2:1	3:1	4:1	5:1	6:1	7:1
57	6298976	3724335	3859718	22983553	3118936	2347736	2483199	59	61	47	50	37	39
65	8047415	4469936	4631200	3469194	3548474	2777380	2938644	56	58	43	44	35	37
70	9440098	5610034	5782170	4398388	4576524	3414753	3586889	59	61	47	48	36	38
1975	11124253	6679723	6882513	5212719	5145509	4020453	4223243	60	62	47	79	36	38
1977	12000497	6939532	7160959	4894573	5116000	3354614	3576041	57	59	40	42	27	29
1980	13238678	6774522	6948337	4992493	5166308	4849108	5022923	51	52	37	39	36	37

Sources:
1. Ministry of Planning, 1971, p. 57
2. Ministry of Planning, 1973, p. 358
3. Ministry of Planning, 1976, p. 29
4. Ministry of Planning, 1978, p. 13
5. Ministry of Planning, 1982, p. 33

appropriate estimation of the labour supply, depending on social and demographic parameters, could provide the policy makers and planners with realistic assessments of this relatively scarce resource.

Accurate estimates and projections of labour supply would help policy makers to avoid setting over-ambitious targets for this development plan. As I mentioned in the second chapter, this point is worth emphasizing because in none of the development plans in Iraq since 1951 including the current one (1976-1980) is there any mention of labour supply and demand. Such neglect of an important factor of economic growth, even in aggregate, can lead to unaccountable bottlenecks in the supply of even unskilled workers. A small, developing country with relatively favoured natural resources, such as Iraq, may not face grave bottlenecks in the labour supply during the early stages of economic development planning, but this problem should certainly be taken into consideration at later stages.

The potential supply of the labour force is governed by many factors, social values and norms may affect the supply of labour, in the degree to which these norms and values compel individuals to be financially independent of their parents. Within the working age group, however, defined, one might find a large number of individuals who are dependent upon their relatives, parents or brothers and this cultural factor affects the activity rate, which is to say, the ratio of active people in the working age group to the total population in this age group.

A country's national development status also has a determining influence upon activity rates. The more industrially advanced a country becomes the higher the activity rate is likely to be.

4.6 The Distribution of the Labour Force Among the Economic Sectors 1960-1980

Iraq is a developing country with great resources for social and economic development. The country has more economic advantages compared with most other developing countries with similar patterns of population and age structure. In addition the proportion of the population in working age is small compared to the same category within the overall total population in other developing countries. But like other developing countries it lacks the qualified personnel to carry out the development programmes. Among other problems we can note the sectorial imbalance in the distribution of the labour force. Some sectors, like the agriculture suffer shortages in manpower while other sectors such as the services sector and the administration sectors, are heavily overcrowded. This problem was partly created by the social and economic circumstances of the country's development and partly by the imbalance in the supply of particular categories of manpower graduates. Also the internal migration and the concentration of labour force in some major cities. As well as the policy of the Iraqi government to find employment for all the Iraq active population. There has been a concentration of the labour force in some sectors of the national economy while other sectors, which needed specialised categories of manpower, are suffering from considerable shortages. Large numbers of people have moved into the industrial sector leaving the agriculture sector because of the better working conditions and wages are higher also. A large number of people have moved from other sector to administrative sector preferring white collar jobs than blue collar jobs. (Mohammed, 1980, p. 19). Also the problem of imbalance in the output of graduates from the education system and the required occupational categories in the labour force.

As we are going to discuss in the Chapter Six, education in Iraq has remained , for a long time, a matter of privilege rather than a right in rural areas. The fate of education was even worse and most of the families prefer to send their children to a work place rather than a school because of the cost of education at that time. For a peasant family which lives at subsistance level, the present consumption is necessary for perpetuation of the family's life and the cost of education is high enough to accept, a direct training in work place for his child. A similar condition exists for a working class family. But when the government took charge of educational institutions and tried to spread education, emphasis was put on the quantitative side with no consideration given to the future employment needs either of the students or of the national economy. A substantial number of students graduated every year with only general education, social sciences and sciences had to be employed in sectors which were already overcrowded. The number of students who graduated from universities and technical institutes has almost doubled from 9,998 students in 1971 to 24,071 in 1982, that is an increased of 45.0%. The number of female graduates was 44.0% while that of male graduates was 47% (Ministry of Planning, 1982, p. 242).

Table (4.6) shows a large imbalance in the distribution of the labour force in the Iraqi economy. Since the social services are mostly in the hands of the government, it is the second largest employment sector with its share in employment increasing from 15.3% to 20.9% during the period 1960-1980. This result is attributed to the expansion of government activities and the rapid pace of urbanization.

The relative share of agriculture in employment increased in percentage from 45.9% to 56.2% in the period 1960-1975. Agriculture has in absolute number employed more than double as an employer.

The population of labour force to population has increased from about 24% to 27% from 1960 to 1980. Thus, the average annual rate of growth of the labour force during the above period was about 3.9%, compared with 3.3% of the total population, in all the number of workers employed in the services sector is increasing. This imbalance has a major negative effect on economic development as seen in the under utilisation of the labour force, disguised unemployment and a waste of skills as many workers are not working in the jobs within their specialisation which leads to inefficiency and incompetence.

4.7 The Participation of Women in the Labour Force

Arab women were the victims of a complex system of oppression. They suffered poverty, backwardness, discrimination of a feudal kind and illiteracy, as well as being treated like domestic slaves. Women constitute only 9 percent of the total working population throughout the Arab world; one of the lowest rates among the developing countries (Omran, 1980, p. 74).

One of the main factor which hinders women's participation in labour is the religion (Islam), or more correctly perhap the understanding of Islam is an important variable that influences female labour force participation in this part of the world. Islam is an all-embracing normative system, a total institution which favours given female behavioural norms. Unfortunately, the past Islamic drift

TABLE 4.6

Labour Force and Employment in Iraq According to the Economic Sector 1960-1980

(in thousands)

	Agriculture		Mining		Manufacturing		Electricity, Gas & Water		Trad		Transport		Services		Construction		Other		Total Employment		Total Employment		Total Labour Force		Total Popul-ation	Average Annual Rate of Growth		
	Absolute	% of Total Empl.	Absolute	% of Total Empl.	Absolute	% of Total Empl.	Absolute	% of Total Empl.	Absolute	% of Total Empl.	Absolute	% of Total Empl.	Absolute	% of Total Empl.	Absolute	% of Total Empl.	Absolute	% of Total Empl.	Absolute	% of Total Empl.	Absolute	% of Total Empl.	Absolute	% of Total Empl.	Absolute	Year	Employ-ment	Labour Force	Popul-ation
1960	733.9	45.9	11.0	0.7	130.0	8.1	11.8	0.7	100.0	6.3	110.0	6.9	245.0	15.3	58.0	3.6	200.0	12.5	1599.7	100.0	31.4	1.9	1631.1	23.7	6885.2	1960-65	4.4	5.6	3.1
1965	1009.6	50.9	13.5	0.7	135.0	6.8	12.2	0.6	125.0	6.3	129.0	6.5	270.0	13.6	610.0	3.0	230.0	11.6	1985.3	100.0	162.7	7.6	2148.9	26.7	8047.4	1965-70	4.7	4.4	3.2
1970	1385.7	55.3	16.0	0.6	150.0	6.0	13.0	0.5	150.0	6.0	150.0	6.0	300.0	11.9	67.0	2.7	275.0	11.0	2506.7	100.0	158.2	5.9	2664.9	28.2	9440.1	1970-75	3.2	3.6	3.3
1975	1654.4	56.2	20.0	0.7	185.0	6.3	15.0	0.5	170.0	5.8	170.0	5.8	350.0	11.9	77.0	2.6	300.0	10.2	2941.4	100.0	240.1	7.6	3181.5	28.6	11124.3	1975-80	3.8	1.9	3.5
1980	1751.0	44.7	981.0	-	514.2	14.65	36.1	-	26.90	-	18.48	-	732.0	20.8	113.0	6.35	550.0	15.5	3548.3	100.0	393.0	11.2	3510.0	26.5	13238.0	1980-80	4.0	3.9	3.3

Source: Ministry Of Planning, 1972, P.32
Ministry Of Planning, 1973, P.358
Ministry Of Planning, 1982, P.53
Derived From Ta

towards conservatism has debarred women from some of the rights bestowed on them by Islam.

Another factor which hinders women's participation in labour is high birth rate and early marriages; marriage at 12 is still considered a normal event in various place especially in the villages.

Fertility rates are generally quite high in the Arab world and, in spite of certain family planning programmes they remain high due to people's resistance to accept them. (See Chapter Three).

Fertility is inversely related to educational attainment and to female labour force participation. Educated women tend to have fewer children so as to get a longer portion of their span and to dedicate themselves to their work.

The situation justifies the low participation of the Arab women in the labour market and this is one of the more important structural constraints in the Iraqi labour force which has contributed directly to the lowering of the total labour force.

In fact large numbers of women work in the agricultural sector. They play an important role in the production process. They were a more productive tool. They work in the family farms as part of their contribution and their household responsibilities and to as a non-wage earning statistic and the potential lack of accuracy of the low female participation rate. In other words many women work in agriculture and handicrafts but work of this type is not even included in the labour force figures as their work is carried out within the home and is unpaid, which explains the low female participation rates.

The first generation of working women were mainly employed in teaching. It was the most socially accepted job because it involves minimum contact between the sexes, especially at the lower levels. Also nursing and office work another favour job Despite the civil service law which completely banned any discrimination against the participation of women in employment, working women represented only 14 percent of the total number of women at working age during 1960's. This can be attributed to the prevalence of traditional social prejudices regarding the female sex and the limited number of educated women (Alsharqi, 1982, p. 76).

During the early 1960's an increasing number of women sought and found employment as clerks, teachers, store keeper and factory workers. Nevertheless, according to an estimate by labour experts, made in 1962, not more than about 50,000 women worked full or part-time and these were mostly in agriculture, light industries such as tobacco processing and textiles, the retail trade and in service industries (Smith, 1971, p. 282).

In 1968 the new government attitudes on the question of women as just one part of its winder ideology. At that time only 6.1% of women worked in the cities and 29.4% of women worked in rural areas (GFIE, 1980, p. 12). The political report of the Baath party stated that:

> "We must make sure that education and employment are widely available to women and must grant them legal equality with men. We must expose reactionary and retrograde ideas which debase women by looking at them from a one-sided view-point concepts and practices derived from out-dated principles must emancipate women so that they can take their proper place in society".
>
> (Political Report, 1979, p. 173)

A rapid increase in girl's and women's education occurred as a result of the free education, the compulsory education law, the rise of the individual income, the spread of social enlightenment and the availability of wider employment opportunities for women. Table (4.7) shows the increase in the number of females in higher education during 1970-1980.

TABLE 4.7

The Development of the Number and Percentage of Females in Higher Education in Iraq During 1970-1980

BRANCH	NO. OF FEMALES		% OF FEMALES	
	1970/71	1979/80	1970/71	1970/80
Medicine	939	2809	28%	44%
Engineering	198	3418	7%	22%
Agronomy and Veterinary	87	1461	5%	20%
Abstract Sciences	2046	2792	30%	39%
Education	-	4452	-	36%
Management and Economics	868	5441	17%	38%
Literature	2816	2918	31%	45%
Social Sciences	1820	980	22%	14%
Institutes	353	4376	19%	28%
TOTAL	9127	28647	23%	31%

SOURCE: (GFIW, 1980, p. 13)

A country-wide anti-illiteracy campaign was started in 1978 and the significance attached to the participation of women in the production process began to give women more financial independence. The employment of women has, moreover, become a necessity for Iraq in view of the urgent need for manpower in a country with no more than 14 million people and a gigantic development plan, legislation was introduced to ensure that Iraqi women enjoyed equal opportunity of employment, equal pay, equal chances of promotion in all fields of work without exception (Alsharqi, 1982, p. 82).

The available data indicates that the percentage of women in the total non-agricultural work force rose from 7 percent in 1968 to 19 percent in 1980 and that the annual percentage rise in the number of working women is currently estimated at 11.6 percent (Alsharqi, 1982, p. 83).

All these achievements were the aim of Baath party, whose ideology is concerned to stress that women are half of Iraqi society. Iraqi women have also increased their participation in society as a whole. They account for 46 percent of teachers, 29 percent of doctors, 46 percent, 70 percent of pharmacists, 15 percent of accountants, 14 percent of factory workers and 16 percent of civil servants and 37 percent in oil projects, as well as being active in political life. There were 19 women members in the National Assembly of 1980 (GFOW, 1981, p. 19) and during the last six years, while at war with Iran large numbers of Iraqi women have entered every field including Army where they have fought on equal footing with men. Also, many jobs normally carried out by men, who are now engaged in the war, are being carried out by women(See Appendix C_2)

4.8 Illiteracy in Iraq

4.8.1 Literacy and Development

The phenomenon of illiteracy is a universal problem, rather than a problem of individual nations and it is a concept which has been developed over a period of time. UNESCO describes the literate as those, "who can with understanding, both read and write a short simple statement on his every day life". (Graff, 1979, p. 3) ,However, a

suitable development of literacy definition contained in a document, "world campaign for universal literacy", submitted by UNESCO to the United Nation Assembly at its sixteenth meeting of 1963 says:

> "A person is literate when he has acquired the essential knowledge and skills which enable him to engage in all those activities in which literacy is required for effective functioning in his group and community, and whose attainments in reading, writing and arithmetic make it possible for him to continue to use these skills towards his own and the community's development and for active participation in life in his country.
>
> (Keeves & Burkes, 1977, pp. 20-21)

In most developing countries, the level of literacy is relatively low compared to that of developed countries. This factor motivates the developing nations to emphasize massive primary education for their population, in view of the fact that they may soon join the labour force. Access to education is regarded as a human right but the implementation of this right must be contingent upon a country's resources or laws stipulating compulsory education.

Cipolla pointed out that in an advanced industrial society, a person with less than ten or twelve years of schooling in functionally illiterate (Cipolla, 1969, p. 104).

An important point in the arguments concerning literacy and development is whether the stress should be placed on adult literacy or on school education. Blaug stated on the assumption that the main objective of educational planning is to promote economic development that in the short term an adult literacy programme is of greater economic benefit. In the long term however, he stated that a school education programme showed the best economic benefit (Blaug, 1966, pp. 397-298). Here are some considerations stated by Blaug which

support the adult literacy programme. The adult already possesses a skill, however simple and crude which is improved by knowledge,whereas the child is acquiring no specific skill whatever, (Blaug, 1966, p. 395).

Carol and Lars Berggren argued that the school education contribution to the country's economic development would only be felt in five, ten or twenty years, whereas the attitude of adults could make its effects felt immediately (Carol and Lars Berggen, 1975, p. 13).

Some other considerations which support school education. Blaug says it seems reasonable to support that the impact of school education on the development is greater than that of adult literacy, e.g. a child in a developing country who leaves school at the age of thirteen can generally expect to look forward to a productive life of thirty-five years, where as the average adult who has attended literacy classes will have no more than fifteen - twenty years to enjoy the benefits of literacy. Thus, the productive life span of an educated child is typically twice that of a literate adult and, for that reason alone, school education would appear to promise a greater yield (Blaug, 1966, p. 394).

Carol and Lars Berggren argued that it depends on the individual country, its level of economic development and how the investment is made. In a country with level of economic development it may be more profitable to allocate funds to mechanization of agriculture than to make a comparable investment in the education sector (Carol and Berggren, 1966, p. 14).

Fig (4·1) World Map Of Illiteracy–1980

TABLE 4.8

Illiteracy in the World in 1980, for the Ages 15+ Excluding The Arabs in the Age Group 15-45

Area	Male (1) %	Female (2) %	Total (1)+(2) / 2
Arab Countries	30.8	57.3	44.1
Africa	48.0	72.8	60.6
Latin America	24.8	31.3	28.1
North America	0.5	0.5	0.5
Soviet Union	0.5	0.5	0.5
Western Europe	0.5	0.5	0.5
Eastern Europe	1.2	3.1	2.2
Developed World	1.2	2.3	1.8
Under-Developed World	37.2	58.3	47.8

Source: Alrawi, 1980, p. 3

Economists have tended to dominate in the debat about the relationship between education and development. One of the best known findings is that of Bowman and Anderson which reveals that all the countries with less than 40 percent literacy were the poorest countries (less than $300 per capita income) and all those with over 90 percent in the richest countries (over $500 per capita income), but for the countries in between the two variables (One of the authors Anderson, 1965). Later used the notion of a 40 percent threshold, the idea that sustained economic growth does not begin until 40 percent of a population are literate, in this sense one can say that the world map of illiteracy does, of course, correspond rather closely with the world map of poverty. (Blaug, 1966, p. 399) See Figure 4.

The following Table(4.8)shows the amount of illiteracy in the world. In the Arab countries, Africa and Latin America, the percentages for male illiteracy was 30.8, 48.9 and 24.8 respectively. The percentages for women was 57.3, 72.8 and 31.3 respectively. In North America, Soviet Union, Western Europe and Eastern Europe, the percentages for men was 0.5, 0.5, 0.5 and 1.2 respectively, and for women 0.5, 0.5, 0.5 and 1.3 respectively. The percentag of illiteracy in the developed world was 1.2 for men and 2.3 for women, whilst in developing countries the percentage of illiterate men was 37.2 and of women 58.3. The above numbers clearly reveal the enormous educational gap between developed countries and the developing countries.

We may conclude that education, formal and non-formal, is that aspect of human investment which provides the development of the required manpower. Thus every development is fundamentally the product of human effort and that the real wealth of a country lies in its ability to develop its human resources. (El Ganam, 1976, p. 1).

Every country, no matter how devastated, which has reached a high level of education, organization and discipline produced an economic miracle. West Germany is a case in question. Although it lost its economic power during the last war, yet it possessed potential power for development in human resources. In fact soon after the war it rapidly developed and today it is one of the western economic powers. This is why emphasis should be placed on education in the developing countries since the man is not only the means but also the aim of development.

It can be said that capital investment was more important for economic growth in earlier decades, but unlike the earlier historical situation, where the intermediate technology participated in the history of economic development, i.e. the developed countries attained a fair level of general wealth long before the Industrial Revolution. They did this without electricity, steel, cement, computer, or an elaborate infrastructure (Schumacher, 1971, pp. 355-359).

However, it may now be necessary to have a relatively high level of skill and much more knowledge to take advantage of the more complex equipment and techniques that may be obtained from advanced countries (Meirer, 1971, p. 601).

So education and training, and labourer it do increase the productivity of a factory (Abdul Talib, 1972, p. 36).

4.8.2 Illiteracy in Iraq Prior to 1968

Prior to the dawn of Islam, learning was restricted to a small minority. The Koran encouraged the spread of knowledge, stressing the importance of people achieving social change and improvement by their own efforts. The first verse in the Koran is related to knowledge; the Angel (Gabriel) appeared to Mohammed and said:

> "Read in the name of the Lord who created man of congealed blood, read, thou for thy Lord is the most beneificent who hath taught the use of the pen, who taught man that which he knoweth not".
>
> (Darwish, 1974, p. 7)

The Koran regards knowledge as being of paramount importance and distinguishes between the person who is educated and the person who is not. It is also stated in the Koran.

> "Those who do not know are not equal to those who know".
>
> (Saber, 1979, pp. 6-9)

Learning, for Muslims, began with the dawn of Islam. The prophet Mohammed placed great importance on learning and taught his followers in a house called Par-Al-Irkam (Abood, 1977, p. 35).

The spread of education was terminated by the Ottomans. They paid no attention to education, and the country suffered a great deal from the problem of illiteracy. Only 1% of the people were literate. Literacy among women of the age group 15-45 was eradicated due to family and religious prejudices.

Even under the monarchial regime literacy education was one of the most neglected national resources in Iraq. By 1958, the republican regime extended its programme of fundamental education throughout the country and to the rural areas in particular.

At that time, the number of illiterates was 81/7%, ranging from 91.5% in rural areas to 63.3% in urban areas. Among women, illiteracy was often as high as 91%, whilst among men it was 72.4% (Sousa, 1982, pp. 2-3). The government established educational centres, but in 1965, less than one fifth of the Iraqi population, was still unable to read and write (Smith, 1971, p. 115).

4.8.3 Illiteracy in Iraq After 1968

After the revolution in Iraq the task of combating illiteracy was considered a major revolutionary objective. The Arab Baath socils party had reiterated that illiteracy was not an educational, social, or economic problem but a central political issue of far reaching implications (Sousa, 1982, p. 3).

At the eight regional conference of the Baath party in 1974, it was decided that the eradication of illiteracy required a major campaign, to be led by the party with the participation of popular organizations, the armed forces, competent government systems and all other forces available. A time limit was to be set for reaching the target and all the material resources required were to be made available.

TABLE 4.9

The Number and Percentage of Illiterates to Population

Age 15-44

AGE GROUP	SEX	1957	1965	1973	1975	1976
Population 15 - 44 Age Group	Male	1174836	1515072	2001542	2153406	2236000
	Female	1293726	1502369	1963643	2106714	2184000
	Total	2468562	3017441	3965185	4260120	4420000
Illiterates 15 - 44 Age Group	Male	1011824	1028804	1102146	743610	684116
	Female	1212101	1326642	1565210	1553890	1521425
	Total	223925	2355446	2667356	2297605	2205541
Percentage of Illiterates 15 - 44 Age Group	Male	86.1	67.9	55.0	35.0	30.0
	Female	93.7	88.3	79.7	73.0	70.0
	Total	90.1	78.1	70.2	54.0	50.0

SOURCE: Ministry of Planning, 1980, p. 3

TABLE 4.10

Distribution of Illiterates of the Age Group 15-44 Years Old by Governorates in Iraq in 1977

GOVERNORATE	POPULATION	NO. OF ILLITERATES	PERCENTAGE
Arbil	189783	138439	72.9
Sulaimaniya	232727	169044	72.6
Duhok	94975	67872	71.5
Sulah Eddine	133442	78772	59.0
Al Tamim	173658	101413	58.4
Al Muthanna	77348	45055	58.2
Baghdad	803321	440173	54.8
Kerbala	95018	50085	52.1
Najaf	133538	69460	52.0
Babylon	231452	112604	48.7
Al Anbar	181702	87713	48.3
Basrah	326208	154549	48.3
Thi-Quar	273980	127980	46.7
Nineveh	445692	207117	46.5
Al Qadissiya	184744	85555	46.3
Wasit	197312	86323	43.8
Diyala	275606	113676	41.2
Maysam	267250	76800	28.7
TOTAL	4317756	2212630	51.24

SOURCE: General Federation of Iraqi Women, 1981, p. 204

Several measures were taken to encourage illiterates to enrol at illiteracy eradication centres. Among these measures were the making of literacy a condition for employment and promotion in government departments, by explaining to the worker that the difference between the educated and illiterate was not merely a difference in the ability to read and write but also constitute a difference in a man's capacity to think and in what he can offer to his society.

Nevertheless, according to the 1977 census, the number of illiterates within the age group 15-45 was 2,212,630 millions, out of which 30% were male and 70% were female, although the number of illiterates had dropped compared with previous years (Ministry of Planning, 1978, p. 235). (See Table 4.9). In addition to this and in the same year of 1977 there were considerable differences in the role of illiterates between governorates. Table (4.10) shows that in the governorates of Arbil, Sulaimaniyah and Duhck, that the rate of illiteracy was as high as 72.9%, 72.6% and 71.5% respectively, while the rate in each of the other thirteen governorates was some where between 40% and 60%. The reason for the high percentages in these three governorates was largely due to a language problem, in that most people living in these governorates were Kurds, who did not speak or write the Arabic language.

By 1978 the government had initiated its comprehensive national campaign. Compulsory literacy legislation was promulgated, marking the eradication of illiteracy a national aim (GFIW, 1981, p. 18). According to Law No. 92 of 1978, all Iraqis, irrespective of their sex, within the 15-45 age group had to attend illiteracy eradication centres. Anyone who did not do so was liable to a fine or imprisonment. Considerable efforts were concentrated upon solving the

problem of illiteracy in Iraq and by 1981, the number of illiteracy centres was 1024, which accounts an increase of about 25% during the above period. This was mainly due to the concern of the 1968 government to achieve a high level of national economic development, by solving the obstacles to educational development, such as illiteracy, because the higher the proportion of population at all education levels, the higher the level of economic development of the country (Collins, 1977, pp. 1005 - 1006).

From the foregoing discussion, one can see that paradoxical consequences of Iraq's fight against illiteracy and for educational development was to widen the already existing gap between the rural and urban populations and between male and females as a part of the labour force in terms of educational attainment.

4.9 Conclusion

The labour force of a country is that part of the population of working age group and comprising the total employed persons (including employers, persons working on their own account, salaried employees and wage earners, and so far as data is available, unpaid family workers) and unemployed persons who are looking for work (Peterson, 1947, p. 28. embers of the armed forces are considered part of the labour force. Thus, the labour force includes two main parts, the civilian labour force and armed labour forces.

The term labour force reserve indicates all persons of working age who do not participate, in some way or other, in economic activities (for social, cultural and economic reasons). This group comprises

students who are not working women occupied solely in domestic duties, retired persons who are not seeking work, prisoners, and all able persons of working age who are looking for work. The total labour force and the reserve labour force represents the economically active population, while the population outside the economic activity comprises the population under and over working age, as well as persons who are considered as outside the labour force. The latter includes all persons of working age who are unable to work, such as institutionalized persons, incapacitated persons, and all persons who are prevented from working by law (Hashim, 1968, pp. 53-54).

Like most developing countries, Iraq has inherited a tradition of male domination which led to the seclusion of women and the restriction of their lives to the home. This discrimination is most conspicuously discernible in Islamic countries, rather than in other developing countries. (Ganji, 1975, p. 81).

Moreover, the participation of Iraq women in past years in the various social and economic activities revealed an underlying lack of progress by comparison with other developing countries. (Bosorap, 1970, pp. 27-28). Also the high rate of illiteracy among women and among labour force in general was a major factor in this retardation.

In the educational terms, the features of under developed have retarded the achievement of the various goals of socio-economic development in the country. However, despite the increase in the labour force participation rate in Iraq, such a rate still lags behind that observed in most developing countries, particularly for women. This largely due to the poor educational structure of the labour force

in Iraq which still leaves a large proportion of the population illiterate particularly in the rural areas and among the female labour force. The absorptive capacity of the different economic sectors has been restricted and increasing efforts are required in the process of liquidating unemployment. Altogether, the educational structure of the labour force could be considered as one of the main factors retarding socio-economic development in Iraq along with a number of other developing countries has begun to recognize that the most relevant goal of development is the making of improvements in the people's quality of life and that increasing national output of goods and services should be a means of achieving development goals, rather than being a goal in itself. Nevertheless, improving the quality of people is also an important necessity of educational reform. The intention is to encourage technical education and vocational training, in order to meet the requirements of the labour force, in terms of skills, numbers and qualifications.

CHAPTER FIVE

Survey of Literature Concerning the Economics of Education

5.1 Introduction.

5.2 The Residual Factor Approach.

5.3. The Manpower Requirements Approach.

5.3.1. The Survey Method.

5.3.2. The Econometric Method.

5.3.3. Forecasting Manpower Requirements Based Upon Productivity.

5.4. The Mediterranean Regional Project.

5.5. Human Capital Approach.

5.5.1. Rate of Return to Education Approach.

5.5.2. Screening Hypothesis and the Return to Education.

5.1 Introduction

Although it is not a new thought that education is essential to the development of the society and the individual its contribution to the well-being of both is a fact which has been recognised and heavily emphasized at all stages and at different historical periods in the development of the human being and society.

To a large extent, education, is of course, an aim in itself; people would attend school to increase their knowledge independently of whether this can be of use. But education is definitely more than this. It has been shown that it is one of the most important means to any process of economic development. There is at present a huge amount of literature concerning the subject of education but in complying with this objective of present research, I would like to limit the scope of this chapter to the economic approaches of education. Hence, we have selected four major approaches namely, The Residual Factor approach, The Manpower Requirement approach, The Mediterranean Regional approach and Human Capital approach. The analysis and interpo lation of these approaches will assist us in understanding the importance of education and training for economic development as well as to highlight the problems and prospects for their applications in the context of Iraq.

5.2 The Residual Factor Approach

The essence of this approach is to compare increases in inputs of labour and capital with the expansion of gross national product over a long period.

A number of economists have attempted to assess the value of the residual factor which is due to education. J. Kendrik, R. Solow and E.F. Denison have used different methods and have come up with various values for the residual factor in the U.S. economy (Bowen, 1968, p. 70). Since education and advances in knowledge are usually held responsible for most of unspecified input, this approach is regarded as capable of shedding some light on the assessment of the contribution of education to the total increase in economic growth.

The residual approach suggests that the returns on investment in education are extremely high; probably higher than in any other major sector. We can therefore assume that it is virtually impossible to spend too much on education, provided it is efficiently programmed, so as to assure an optional allocation of educational standards are maintained or improved while opportunities for technological advance in education are seized.

Each country starts with a given demographic situation and with a given stock of educational facilities in the form of teachers, teacher-training capacity, classroom spaces, text book production, and the like. Educational planning, starting from this date, can determine how much is possible in the way of expansion of educational output, within the limits set by the human and material education resources that will be forthcoming over the planning period.

A number of problems will still arise such as the difficulty of defining the residual factor. Bowman has argued that it embodies the results of certain secular improvements in the quality of capital assets. It also encompasses changes in output attributable to economies of scale, to improvements in the health of the labour force, to informal as well as formal education, to changes in the product mix and to reorganisation of the economic order (Blaug, 1968, p. 77).

These problems and others surely minimise the reliability of this approach and cast doubts on its usefulness.

When this approach is made to meet the requirements of educational planning, it is certainly not sufficient because educational planning requires some operative measures to predict the future output of educated people as classified the of their skills, not simply a general assessment of the contribution of education as a whole of economic growth.

5.3 The Manpower Requirements Approach

This approach is based on the fact that the main link of education with economic development is the knowledge and skills it produces in the labour force, i.e. its manpower effects. To the extent that the educational system produces qualified people in the right numbers and places, the major part of the economic and social contribution of educational planning is achieved (Bowen, 1968, pp. 96 - 98).

In this context, the manpower requirements approach, with its various methods, may be the most adequate way of responding to the

methodological needs of manpower planning in less developed economies and it is usually the dominant approach in developing countries. This is confirmed by Blaug who notes that training programmes that international organizations nowadays run for education administrators from under developed countries are completely dominated by the manpower requirements approach (Blaug, 1968, p. 138).

So in forecasting the requirements for manpower, many methods can be adopted as tools for making better estimates of future requirements and for arranging the data and the conclusions, so that better judgements can be made, though the approach adopted in a given country depends on many factors, such as the data available for analysis, the scope and period to be covered, the resources for research available to the organizations engaged in making estimates, the economic circumstances and the extent of the co-operation of other agencies and organizations concerned in this process.

The planner has to choose from among various methods and to adopt an approach best suited to his needs within the available technical and statistical possibilities and data. It is advisable to utilise many parallel methods, so as to take advantage of the strengths of each method and to use the results of the differing methods as a check against each other.

5.3.1 The Survey Method

This method is the simplest. It includes directing questionnaires to employers in order to ascertain the forecast of their requirements for manpower. The data and information that are included in the

inquiries depend on the nature and the scope of the process of estimation, which may cover a single industry or occupation, or the activities of the whole economy.

Questionnaires using such methods normally include questions about current employment by occupation, level of education, sex and age, replacement of withdrawn labour and occupational mobility for a stated period in the future, ranging from 2 or 4 and 5 years (Ahmed & Blaug, 1973, pp. 19-20).

This method has some advantages. It distributes the burden of estimating future requirements among the employers themselves who are easily able to estimate their future requirements, depending on direct knowledge of needs for the changes in their activities. It has been used in developed countries such as the U.S.A., the U.K., France and a number of developing countries. It can be used for short term, medium term or long term employment forecasting for highly qualified manpower (F. Harbison & C. Myers, 1964, pp. 145-196).

The main difficulties with use of this method is that the opinions given by the employers can be an unrealistic assessment, even when used for short term forecasting. Another difficulty is that many employers are unwilling to give such information. Establishments which may have been in existence for a long period may not be at all the same as the present ones. More over it is quite difficult to get a long range forecast using this method, though it is a simple way of making short-terms, or, at the very most, medium-terms estimates. (Blaug, 1976, pp. 267-287).

5.3.2 The Econometric Method

This method relates the stock of educated people and the flow of children and students completing education at different levels directly to the national output of goods and services, without passing through the intervening stage of making manpower forecasts. It is possible to set up a series of linear equations which relate the stock of persons who have completed a given level of education, and the number of students at each level, to the aggregate volume of production. These equations predict how the structure of the educational system should change with different growth rates of the economy. One difficulty in this method is that assumptions have to be made about teacher/student ratios and about the adequacy of the relation of the educational mix to the product mix at the base from which the projection is made. If these assumptions are incorrectly made, they will invalidate the conclusion. Further more, productivity, needs to be included, while the range of assumptions as to the technical coefficients is very wide. Nonetheless, this method, used with informed judgement, is a useful exercise along side the other approaches.

A further difficulty common to both the manpower planning and inter-output approach is the assumption that a given output requires a fixed volume of manpower with fixed amounts of education and training. Another major limitation of input-output tables as an instrument of planning is the shortage and inadequacy of data for the required analysis and refinement. This method calls for information concerning final demand, production, employment, occupational structure, and its distribution among economic activities. Data concerning those factors shapes the size and composition of these variables, which can produce

sound inter-industry flows and input ratios. Other technical coefficients, such as demand elasticity, production elasticity, income elasticity, skill coefficients, wages and prices levels, and so on, are required to shape the inter-relationships between all variables affecting final demand, production, and employment. Moreover, this method calls for a large team of experts and analysts, as well as, empirical studies.

Generally, forecasting the requirements for manpower by this method depends, in the long term, on the stability of each activity's coefficient and whether or not production methods are changing. Nevertheless, input-output tables can be kept up to date by periodic revision and refinement in the light of changes and empirical studies.

5.3.3 Forecasting Manpower Requirements Based Upon Productivity

One simple method of making this kind of forecast is to utilize a time series of data of past trends, covering at least ten years of past productivity (output per labour hour multiplies by the average working hours in a year) in a given sector and at the level of the whole economy. It is also necessary to formulate a time series of data about past trends in the distribution of employment among various economic sectors and various occupations, according to the occupational structure which has been chosen (Strom, 1970, pp. 12-16)

The difficulties and limitations of this method, as a technique for forecasting manpower requirements, outweighs its merits. The shortage of the necessary data concerning productivity and its components, and of a relevant and stable occupational structure,

constitutes the main obstacles to realizing adequate forecasting and results, particularly in developing countries (Parnes, 1962, pp. 31-34).

This method assumes, also, that factors which affected productivity and the structure of occupation in the past will affect future changes in the same manner, though it is evident that technological progress and other technical and organizational factors, have a deep influence on the level of productivity. These factors comprise:

a. Production techniques and the utilization of machinery and equipment.
b. Improvements in production methods.
c. Work organization and management.
d. The level of labour qualification.
e. Willingness to work.
f. The compensation system and incentives.
g. Other factors such as unions and legislations.

When forecasting the requirements for manpower and occupations by this method, allowances have to be made for factors affecting productivity and the structure of occupations, especially in the long run.

Nevertheless, this method links the requirements for manpower and occupations to productivity. The latter is one of the main handsticks to economic efficiency. On the other hand, this method is not so useful for forecasting the requirements for such occupations as public

health, government activities and other kinds of services, because of the difficulty of measuring productivity (Harbison & Myers, 1964, pp. 196-199).

5.4 The Mediterranean Regional Project (MRP)

This method is considered as the most general of all the manpower requirement approach techniques. The method appears under a variety of titles but the most common is that of OECD's Mediterranean regional project (MRP), which was initiated by bilateral agreements between OECD and the government of six Southern European countries, namely: Greece, Italy, Portugal, Spain, Turkey and Yugoslavia. The main need for such a method was the rapid rates of growth in these countries in the 1950's, which soon resulted in recognition of the need to increase the supply of scientific, technical and other qualified manpower to keep pace with the rapid rise in capital investment (Sobel, 1978, p. 289).

The purpose of the MRP method was to forecast long term manpower needs in the six OECD countries within a common conceptual framework and to project manpower and resultant educational changes in each country.

The MPR study took as its starting point the pre-existing national economic growth targets for each country and then proceeded in stages from an initial projection of target GNP in certain future years, oxogenously determined to an economic plan to supply the educated manpower required to achieve the targets in the major industry sectors. The stages are as follows:

1. Estimates of the sectorial and total out-puts of the economy. The need for these estimates is justified, on the other hands by the logic of the manpower requirement approach, which links the targets of the educational system to those of the economic system and on the other hand, by the predicted change in the structures in the economy and levels of activity which are likely to have effects on manpower and therefore on educational requirements. Hence, there is a need for the target GNP to be broken down by major sectors which may be further subdivided by industries.

2. Estimates of inverse sectorial labour productivity in order to link the level and structure of out-put to the labour force, an average labour out-put coefficient, the reciprocal of the familiar concept of the average productivity of labour is applied to the average or industrial GNP targets, yielding a forecast of labour requirements by sector or industry (Blaug, 1976, p. 151).

3. Estimates of total and sectorial occupational distribution. Since different types of labour are expected to have different types of educational backgrounds, it is necessary to estimate the number of workers required according to occupation. These estimates are obtained from the occupational distribution of the labour force in each sector. Next, the number of individuals in a given occupation in each sector are added up for all sectors. This enables the planners to obtain an estimate of the total number of workers in that occupation, in order to reach the targets of total output.

4. Estimates of the education associated with occupation and the total education stock. The occupational estimates are converted into target estimates of the educational stock in the labour force. This conversion is obtained by applying a standard measure of the levels of formal education which are to be associated with each occupation.

5. Estimates of the increment of manpower by education and the total graduate flow: the estimates of target educational stock are converted into flow estimates of target education stock by subtracting those already in the labour force from the target stock number. The final estimates of the required total flow of graduates over the period of the plan is obtained by multiplying the estimates of the inverse of labour force participation rates of the graduates by the increment of manpower by education category.

The entire method is neatly summed up in the identity involving the multiplication of scalar (1) by a raw sector of fractions of GNP originating in different industries (2) by a column Vector of labour output coefficients (3) by an industry occupation matrix (4) by an occupation education matrix (5):

$$(X) \quad \begin{pmatrix} Xj \\ \hline X \end{pmatrix} \quad \begin{pmatrix} Lj \\ \hline Xj \end{pmatrix} \quad \begin{pmatrix} Lk \\ \hline Lj \end{pmatrix} \quad \begin{pmatrix} Li \\ \hline Lk \end{pmatrix}$$

(1) (2) (3) (4) (5)

Workers of education (i) in occupation (k) each industry, where

X = GNP

Xj = GNP originating in each industry (j=1,....,n)

Lj = The labour force in each industry,

Lk = The labour force in each occupation (k=i,....,m)

Li = The labour force with each level of education (i=i,....,t)

$$\sum_{j=1}^{n} \sum_{k=1}^{m} \sum^{t} L_{jki} \leqslant L$$

The MRP studies which were appendiced by a summary of a methodological and conceptual monograph by Parnes were published in all six OECD countries. Within a few years after Parnes's work appeared in 1962 the technique was applied in a large numbner of developing economics many of which were able to link fixed coefficient manpower planning and educational technique to their economic plans (Sobel, 1978, p. 291) Ian Tinberg, Hector Correa and H.C. Bos were the first who attempted to develop systematic mathematical model similar to that of Parnes (Sobel, 1978, pp. 291-291).

Like many other techniques and methods in planning the MRP faces a number of difficulties (OECD, 1967, p. 31). One of the main problems in the use of this method in difficulty which usually faces planners in estimating future productivity levels. This, as Hollister recognized, is one of the most serious are perfectly familiar with

the problems involving forecasting, the productivity of labour which is usually inaccurate and quite irregular, both in terms of time and economic sector. Alternative devices to overcome these problems, either adopt the ratio observed in more advanced countries or take the dominant ratio in the most advanced sectors of the economy (Blaug, 1970, p. 82)

5.5 The Human Capital Approach

The concept of human capital has been devised through analogy with physical capital and has not played a significant role in the writing of most economists. Classical economists treated labour as a homogenous factor in their production functions, due to the fact they assumed a perfect competition, including perfect mobility of the factors of production within a country. In real life, however, the labour force is not homogenous and perfect competition simply does not exist, because the labour force contains workers with different skills. In addition, some members of the labour force may reject the idea of moving to another area for another job, even at higher pay. There are various reasons for this, one of which is their attachment to their native homes. (Al-Shaikhly)

Up to the present, most economists have explored investment in physical capital as a means of promoting output and obtaining full-time employment economy. With every few exceptions, most economis in the past have not paid serious attention or consideration to the concept of education as capital investment in human beings. (Al-Shaikhly)

Karl Marx and Alfred Marshall gave some consideration to this concept and list attacked the competitive model of the classical school. Marx, though severly criticizing the writings of the classical school, nevertheless emphasized the importance of the materialistic aspect of physical capital in the production of goods and service. Marx followed the Ricardian doctrine, with the slight modification, that the value of the commodity is determined by the number of socially necessary units of labour that are needed to produce it. Marx recognized that human capital is productive, but he believed that no one in the world capitalist economy invested in human capital, because no one could appropriate the benefits from it. He also stressed that the capitalist entrepreneurs snatched the labourer's "surplus value". Since, according to Marx, subsistence levels determined labourers' wages, labour could not gain by increasing its human capital and any increase in the productivity of labour would be appropriated by the capitalists. However, Marx did not foresee that strong labour unions would emerge to demand higher wages for their members.

Alfred Marshall believed that training industrial labour influenced a workers' earnings. In Marshall's view, the education of workers might lead to an increase in their efficiency, and hence result in higher marginal productivity for their work effort, which in turn could help them to earn higher money wages. Marshall, however, had little consideration for the social welfare of the labour force. His treatment of labour was comparable to the way in which physical equipment is treated in the production process.(Al-Shaikhly)

5.5.1 The Rate of Return of Education Approach

The rate of return to education approach is based on the comparison of the life time earnings of individuals in contrast to the differences in their education, or as a way of studying the economic consequences of education with the life time earnings of those who have had more education with the life time earnings of those who have less education. The difference in life time earnings can then be expressed as an annual percentage of rate of return of the costs involved in obtaining education. (Bowen, 1968, p. 77).

Unlike manpower forecasts the rate of return to education approach does not provide any form of target figures for demand or supply. It simply gives some indication of how demand and supply are related, and provides indicators of what is desirable in terms of the levels of types of education likely to be profitable.

Extra education has been used as a criterion to distinguish between the lifetime earnings of different people of different levels of education.

The rate of return to investment in education can be calculated as a discount rate that equates the present value of the extra lifetime earnings, due to a certain amount of extra education, to the present value of the cost of that additional education.

The education planner can use two types of rate of return, the social and the private. Though each one has its own value and use for purpose related to educational planning, it is the social rate of return rather than the private rate that seems to be directly relevant and, hence, is the one which is taken into account. Social rate of return is calculated on the basis of the comparison of lifetime earnings differentials before tax with the social or total resource costs of that extra education.

While this approach is a useful device for measuring returns to education, it is subject to major technical returns to education, it is subject to major technical difficulties and it can only be applied under certain conditions and in certain circumstances. Among the major weaknesses of the approach is the abstract assumptions on which it is based. It ignores the non-economic benefits of education and catches only direct but not indirect economic returns. The age-earning profile for example is also assumed to remain constant and labour materials are assumed to be competitive. In this case, the approach seems to be relevant only in countries with free markets and even in this type of market, the competitive nature of the market can be open to doubts. Another related assumption is that earning differentials are supposed to reflect differences in the net advantages and disadvantages of different occupations and this is not always the case. Furthermore, this approach tends, in particular, to neglect the complementarity factor that one man's productivity depend on other people's education, as well as his own. In any case, the data needed to use it is not yet available in most developing countries. Other factors than can also be regarded as weaknesses in the rate of return to education approach is that it ignores the ability, motivation, and family status that are correlated with schooling. In addition the rate of return approach does not incorporate a systematic assessment of linkage between educational and economic developments over-time. In the over-all assessment of this approach we can also note that the consumption benefits of education are not considered by this approach when the rate of return of investment in education is calculated.

Despite the enthusiasm of the many proponents of this approach, it has not escaped major criticism and the efforts made minimize its main weaknesses have to date, yielded, satisfactory measures in differentials in earnings.

Now, let us review some of the difficulties that may be encountered by the application of this approach in developing economies. There are main features of developing countries which can pose major obstacles to the application of this approach. Firstly, the market structures of these countries are not conducive to competitiveness and, secondly education is almost entirely provided by the government as a public good that is produced to meet a social need.

Investment in education in the developing countries is rather limited and, to a large extent, determined by the social and economic circumstances of these countries. For instance, any structural change in these countries. For instance, any structural change in these countries as a result of development efforts is likely to instigate or lead to structural changes in occupations and, consequently, lead to changes almost every year. Given the lack of information about the process of change in these countries, it is rather difficult to measure or assess the extent of these differences. On the other hand, to assume that present differentials in earning will remain the same in the future is invalid in the case of the developing countries.

Another major obstacle facing the application of the rate of return to education approach is that in Iraq and many developing countries (as we shall see in Chapter Seven) there is very often no relation between productivity in the public sector and earnings.

In fact, there are social considerations which control the scale of earnings.

Now let us turn to investigate a more specific analysis within the sphere of the human capital approach, that of the screening hypothesis and the returns to education.

5.5.2 The Screening Hypothesis and the Returns to Education

The causal explanations which have been offered to explain the correlation between education and earnings are several but the diversity of the explanations reflects both a variety of judgements as to the underlying objectives of education, and the paucity of data with which alternative theories can be rigorously tested. However, the explanations can be crudely divided into two categories: these which stress the productivity - increasing effects of education and those which deny such efforts. The latter stress the function of education as a selective mechanism or process. The former theories stress the notion that education is, in part, an investment in human capital which yields an element of its subsequent return in the form of higher incomes. These higher incomes, to a large extent, reflect the scarcity value of the vocationally useful skills imparted by the educative process. These skills may be cognitive, affective and social, e.g. the capacity to collaborate with other, to be regular and punctual and to efer to authority.

Some critics who accept the idea that education is a useful economic investment would argue that its importance cannot readily be measured in practice because they deny that earnings reflect

productivity. This judgement can be advanced on several levels. Labour markets are imperfect because some groups of people acquire a monopoly of income by restricting entry to their profession. Adjustments of supply and demand, so that lags and dynamic effects will always prevent actual wages from reflecting marginal product. A large part of employment, particularly of the high'y educated, is in the government sectors, which is not trying to maximise profits. It is time that the government's wage structure is strongly influenced by market decisions in the private sector, by many of the best educated people in the private sector work for large corporations which reward on quas:- bureaucratic principles - critics also point to these factors relate to patronage systems, and that these interfere with the assessment and evaluation of marginal productivity.

The alternative theories attribute the positive association between education and income to the fact that education serves as a selective device. It does not add useful skills but merely picks out people with innate ability and identifies them by giving them paper certificates. Thus, education, according to this view, is a screening or filtering device. If the more extreme forms of the screening hypothesis were correct, much of the conventional wisdom about the social benefits of education is mistaken.

In its more extreme form, the screening argument implies that education per se has little or no economic value to society, it is of course economic value to individuals. The process of education provides individuals with labels or certificates, which enable them to enter better jobs than would otherwise not be open to them. The extreme screening model suggests that the content of education

contributes in no way to better economic performance. Rather, the process and associated certification serves simply as an elaborate sorting device. The good (well-paid) jobs go to the well-credentialled, because employers, in a world of highly imperfect information, know at any rate, that it is a good bet that the well-credentialled are also more able. They will also probably be less expensive to train in the skills necessary for the jobs they are offering (Thurow, 1970, p. 31).

The damage such a hypothesis, if true, does to much contemporary belief about the social benefits of education is considerable. Education remains undeniably of private benefit to those, who acquire, but there may be much cheaper, little explored ways of performing the function of sorting. According to the hypothesis, possibly the most important cost of education is the economics imposed on the rest of the population by the more educated people stealing their jobs. The private benefits of education may simply be balanced by other private losses (Karabel, and Halsey, 1977 p. 12).

The implication would be that much expenditure on education has simply been wasted. Thus, it should be said, is counterbalanced by the magnitude of the consumption benefits of education, any positive net external effects involved, and the fact that the sorting function is undoubtedly of some social value. Under the pressure of its own logic, the screening argument claims that individuals indulge, because of the high private returns of doing so, in a pernicious race for credentials. Many of these credentials are held to be in no sense necessary for the satisfactory performance of jobs available, but rather act as entry-tickets for the limited number of well paid jobs available.

Attempts to Test the Screening Hypothesis

Clearly, the screening argument, particularly in its less extreme forms, has a certain immediate plausibility. A strong claim that much of the American work-force is already over-educated for the tasks performed has been made and documented by Berg. Berg's approach is to compare the changing educational requirements of particular occupations. Berg showed how on such a comparison, over the period 1950-1960, the educational distribution of the labour force was considerably more than could be warranted by the changing job content of most jobs (Arrow, 1972, pp. 193-195).

However, superficially persuasive Berg's analysis, under proper examination it fails to establish the screening hypothesis. The central reason for its failure is that nothing is said about the possibility that over time and growth of the proportion of well educated individuals within particular jobs may indeed have resulted in a greater output. What may, however, be true is that the better educated individuals have displaced the less well credentialled, particularly at the point of entry into the labour force. Even so, there may well have been a net gain in productivity.

One problem that Berg faces is a fundamental one, which has long hampered educational planning and manpower analysis. The question is how to identify the precise skills necessary for particular jobs, and how to match these with optimal educational and training requirements. In most countries, occupational classifications are based more on the socio-economic status of a worker than on a careful assessment of the requirements of the work done. For occupational classifications to be devoid of subjective elements, occupations must

be defined in terms of the character of the jobs carried out without reference to the attributes of the individuals performing the jobs.

If Berg's attack on some of the central notions underlying the human capital interpretation of education fails to convince, there remains a number of other ways in which the significance of screening has been analysed. A world in which employers placed a great deal of value on certificates in their hiring decisions would imply that rates of return to drop-outs would be less than to those who completed their courses and received their credentials. This implied outcome of the screening hypothesis has been termed the sheepskin effect. The evidence that exists concerning this effect seems to lend little support, however, to the screening hypothesis.

In their very ingenious analysis, Taubman and Wales found that mental ability, education and other background factors were important determinants at earnings at a number of points in the individuals' life-cycle. They confirmed that the private returns exceeded the returns to society and that they declined with increasing levels of education (Psacharopoules, 1972, p. 985). They concluded, however, that these private returns do, in fact, reflect in part the use of education as a cheap screening device by employers. Without the privately advantageous screening effect, the authors considered that private returns could be as much as 50 percent less. It should be said that Taubman & Wales' pioneering analysis and results have been subject to very heavy criticism by layard and psacharopoulos and their particular figure of a 50% reduction in private returns should be treated with great caution. It would be extremely rash to generalize about other countries on the basis of this figure.

Taubman and Wales however are not alone in being unable conclusively to prove or disprove the screening hypothesis (Bowman & Anderson, 1974, p. 32). No body has yet done so and such a situation seems likely to persist for some time. Nobody claims that all the earnings diffentials associated with different educational levels are due to screening phenomena.

CHAPTER SIX

The Development of the Educational Policy in Iraq

6.1 Introduction

In the preceding chapter I have tried to analyse and explain four main approaches of education with thier merits and demerits. This chapter will be entirely devoted to the development of educational policy in Iraq which seems to be the product of its cultures, ideology, beliefs and history. For the sake of clarity I would like to divide this chapter into certain different phases starting from its historical evolution of the Babylonian area through the Ottoman Colonial period, the British occupation period and the Mandate period down to the present Administration. I have two main objectives. Firstly, I will find out how the educational structure to date have changed and benefitly to what extent they have been beneficial to the education of the Iraqi people. Further more, in order to evaluate contemporary provision, it is necessary to consider the evolution of the educational policy within the emergence of Iraqi nation.

With this later purpose in mind, it seems worth while exercise to examine the kind of educational provision which prevailed in the period prior to the emergence of the present Iraqi state. The aim will be to find out whether this provision was beneficial to mass education in general. Also, if we are able to examine the type of schools in contemporary Iraq, it is important to examine the types of schools and curriculums, which have contributed so little to the development of the country and which has resulted in the lack of qualified cadres in most sectors of the economy at the present time. This has resulted in the failure of the Iraqi educational system, which government policies not been able to rectify.

6.2 Educational Development During the Babylonian Era

Iraq has a long cultural history, which goes back to 4000 B.C. Mesopotamian cultural history can be divided into two main periods, the first of which is the period prior to 539 B.C. The two great states of Babylonia and Assyria date from this era. The second period, subsequent to 539 B.C., was marked by the rule of a regular succession of foreign conquerors who established themselves in Iraq (Contenau, 1954, p. 18).

The days of Hammurabi (King of Babylonia) made Babylon into a mighty city, renowned for learning, commerce and the progress of justice. Hammurabi was Babylonia's most important ruler and it was he who modified all the laws in current usage in Cirea 2000 B.C. (P. Rossi, 1980, p. 46). He established the first school and during its intervals of pearle Babylon was widely known as a seat of learning, religion and philosophy.

Assyrian rule lasted until the advent of Islam and in a round 1000 B.C. Nebuchandnessar became King of Babylon. Assyrian achievemens were such that it would be a superhuman task to make a detailed account of the Mesopotamian civilization at this time (Smith, 1924, p. 50).

The library of the palace of Sennacherib in Nineveh, with its 30,000 baked clay tables, was one of the treasures of human civilization. Moreover, the Mesopotamian civilization was widely celebrated, for it truly was universal in so many respects. Metaphsics, science, astronomy and mathematics all developed at the highest level, (Young, 1980, pp. 74-78). The arts, industry and the

applied sciences developed to such a scale that they would influence the whole of subsequent European culture in the Mediterranean area.

6.3 Educational Development During the Islamic Era

Islam, more than any other factor, has given the Middle East its distinctive identity. Late in the sixth century A.D., the founder of Islam, the prophet Mohammed was born in Mecca and by 628 A.D. Mohammed had much to expand the influence of Islam (Mahdi, 1964, p. 43).

With the emergence of the Islamic doctrine, the frame-work of an urban civilization began to develop. Permanent settlement of the tribes began to take place and the institution of centralized government emerged, slavery was abolished and Islam encouraged agriculture as well as commerce and trade. All jobs were blessed, as long as they were productive and profitable.

Inevitably, the already existing socio-economic background greatly influenced the Islamic view of education. Even so, Islam played a major role in the development of the educational system in the Middle East. Education under Islam has its own perculiar character, which distinguishes it from other types of educational theory or practice. This distinguishing feature is due to the educational ethos, derived from the Quran (Tibawi, 1979, p. 23).

The Quran is the immutable source of the fundamental tentets of Islam of its principles, ethics and culture. In other words, the Quran is the basis of both moral and general aspects of Islam education.

The purpose of a muslim education is not merely to acquire knowledge and skills in order to benefit to enter one career or another. It is particularly significant that the Quran is the first book in which mankind is exhorted to attain perfection by acquiring knowledge through reading and writing. The frequent mention of writing, reading and the pen in the Quran and particularly in the very first revelation of the prophet is extraordinary and was centarly an innovation in educational and religious terms.

The teaching of the Quran as well as the Hadith (the sayings of the prophet, Mohammed) were two important tools for the development of the education system at that time. It is clear that Muslims could not have drawn any inspiration from the pre-Islamic Arabs, in the development of a tradition of systematic education, because the level of cultural and economic development of the nomad population during the pre-Islamic time was, as it has always been, too low to support any literary effort. (Rosenthal, 1952, p. 16).

The prophets' devotion to knowledge was immense and he encouraged his people to become learned in the various branches of knowledge. One Hadith said: seeking after knowledge is obligatory for every Muslim. Seeking knowledge even though in China. One can confer on his children nothing more valuable than the gift of education. It is better that a man should secure a good education for his children than he should leave a treasure of gold and silver for them. The prophet not only inculcated the necessity for and value of knowledge, but also urged the cultivation of the scientific spirit of reasoned enquiry and investigation. The prophet Mohammed was arguably the greatest teacher the world has ever seen.

The house of Argam was the foremost seat of Islamic learning for the education of the companions, and after the migration to Al-Madina the prophet built a mosque, which was as well as a place of prayer.

From the early days of the Islamic educational system, a division existed between pre-school education and primary and higher education. A Muslim child begins his education by learning how to read before going on to the other facets of the curriculum. The whole of his education is based upon the acknowledgement of the Quran as its core.

Pre-school education started in Iraq during the first century of the Islamic period. The Kuttab was the first state in Islamic formal education, and was run by a Mullah. It would be located either in a room in a mosque or in a private house. Male and female children enrolled in the Kuttab at the age of six. Usually, they would bring them a copy of Quran. The students would sit in the room, according to seniority, the beginners usually sat at the back, though in the Kuttab there was no grading system and the students progressed at their own rate. Those who were advanced in their studies sat at the front near the Mullah. They regarded themselves as assistants to the Mulla and it was their duty to supervise the new comers (Al-Hillali, 1959, p. 49). Complete memorization of the Quran was the highest honour that a child could dream of achieving Kuttabs functioned in nearly every village in Iraq, operating as the only form of education until about the mid-nineteenth century, when the Turkish rulers introduced the first secular public schools (Smith, 1969, p. 117).

The Primary Stage

Students were admitted to this stage of education at the age of twelve. By this time the students had memorized the entire Koran and passed an examination in Arabic, dictation and arithmetic. The student enrolled in the primary section after having studied in the Kuttak
The primary stage constituted a four year programme which included the study of Muslim law, monotheistic divinity, the life the prophet and his disciples, intonation of the Koran, Arabic reading, grammar and morphology, arithmetic, geometry, algebra, hygienie and drawing. On completion of this stage, the student received the certificate of primary studies.

The Secondary Stage

This stage of education consisted of a five year programme, offering the following studies Muslim laws, commentaries on the Koran, tradition, monotheistic divinity, Arabic grammar and morphology. The graduate was granted the certificate of secondary studies. These original primary and second stages of Islamic education remained virtually unchanged until the Otthman period beginning in 1938 A.D. under the Turks. Modifications gradually developed. So after that the conditions of education followed an invading pattern that exploited the weak and the labour of the Muslim people both directly and indirectly. Colonialism and backwardness were both determining factors which introduced observations into Muslim educational systems.

Higher Education

Undergraduate work continued for four years and led to a higher diploma. The educational institutions of Islam were public ones that gave a Muslim training in and understanding of all various disciplines which were of relevance to this world and profitable to his society. These were also institutions for specialization after proper general education had been assimilated.

The Mosque was the university of Islam in the great days of the Muslim era. The system of liberal education, as imparted in the Mosque, was also followed in the separate institutions, called Madrasah. These did not come into being until 350 A.D. in the numerous Madrasahs which filled Baghdad, Nisapur, Nizamiy and Al Mustansiriya, theological subjects were taught as the basis of the curriculum, but faculties of medicine, philosophy, applied sciences, and so on, were also established. These separate institutions, which came to be established alongside and outside the mosques, were no doubt different from those of modern time, but they were enlightened institutions that led the world in learning and research, and the great professors of these universities were the teachers of Modern Europe (Nutting, 1964, pp. 33-47).

During the Abbasid dynasty 750-1258 Iraq reached its peak of civilization. This was Islam's golden age of luxurious living and of cultural achievements. It's educational activities inquired into every branch of human knowledge. Baghdad became the centre of intellectual activity. In Baghdad alone, there were more than eight hundred doctors. A state medical service was developed and the first hospital was built by Haroun Al Rashid, the caliph of Baghdad, rapidly followed

by more than thirty other in different parts of the caliphate, each equipped with its own dispensary and, in some cases, with medical libraries and teaching abilities, for student, doctors. Celebrated practicioners included: Jaber Ibn Hayyan, Abu Bankeralrazi and Jeber. Jeber hailed from Kufa in Iraq he has been called the father of Arab alchemy. He developed Greek and Egyptian chemical theories. Ibn Sina was the greatest of the philosophers and it was he who helped to harmonize Aristotle. Yakub Ibn Ishak Al-Kindi, born in Kufa a century before Ibn Sina, proved to be more than a philosopher. Delving into astrology, geometry, alchemy, ophthalmology and music. He wrote over two hundred books, many of which were translated into Latin. His celebrated geometrical theories were based on Greek mathematical systems. The scholar Al Farabi, wrote books on medicine, music and mathematics. Alkh Watizmi, the greatest of contemporary mathematicians as well as a leading astronomer, is credited with having written the oldest known works on arithmetic and algebra (Ess, 1943, p. 28).

These works were used in Europe as the standard text books in their field until the sixteenth century, and through them Europe acquired both the system of Arabic numerals and the science of Algebra.

At the beginning of the fourteenth century, the most effective reformer was the philosopher Ibn Kaldum. He was born in Tunisia on 2nd May, 1332 and died in 1405, and was one of the strongest personalities of Arab Muslim culture during the period of its decline. He is generally regarded as an historian, sociologist, educator and economist. It was he who classified science into natural, rational, legal, transmitted or positive sciences, based on the divine law philosophic sciences.

According to Szyliowicz, by the eight century a civilization far superior to that of Western Europe was flourishing in the Middle East and did so until 1258 A.D. when Hulagu invaded Baghdad and the great siege of Baghdad brought an end to the Abbasid caliphate. The city was reduced to a thread-bare provincialism, from which it is only now emerging indisputably the event was a turning point in the destiny of Iraq. After the city had surrendered to his forces it was plundered and burned, and its people massacred, scarcely a building was left standing, as the pagan hordes set fire to the great libraries and schools that had given Baghdad the cultural leadership of the world (Szyliowicz, 1973, p. 57).

The Mongol invasion reduced the Iraqi nation to historical insignificance, from where it quickly degenerated into a semi-tribal state (Akrawi, 1942, p. 18). Until in 1638 A.D. Baghdad was besieged and sacked by the Turkish conqueror, sultan Murad (Nutting, 1964, p. 89).

6.4 Educational Development Under the Ottoman Empire

In 1534 A.D. the Ottoman (Turks), led by Sulayman the Magnificent, invaded Iraq and the country became a Turkish possession. During the period when Iraq was subjected to Ottoman Empire, the educational system improved little. The Turkish system of education was superimposed on the traditional Mosque schools (Mullh), which were typical of Muslim education. However, some improvements were indirectly attempted. It has been argued by Al-Ittilalis that educational conditions in Iraq sank to their worst level during the declining years of the Ottoman Empire. Nevertheless, Iraq had it share

of educational reforms, introduced by the Turks (Al-Hilali, 1959, p.141).

During this time, the Ottoman rulers established a few primary and post-primary schools to educate the indigenous people. These schools were either religious or military and in both types, Turkish was the language of instruction. The object of religious schools was to teach the Koran and principles of religion to the young and the studies of Sharia, linguistics and religion to the adults (Unesco, 1974, p.2).

The military schools were first established in Iraq by the Ottomans, since it recognised a weakness in their military organization (Al Hilali, 1959, p.162). They aimed to train soldiers and officials for the Ottoman administration (Nutting, 1964, p.215).

A naval college was also established at the end of the nineteenth century, followed by a military college. (Al Rubaiy, 1972, p.74). Students who had completed the Mullah school had the right to enter either the military or the naval colleges, but it was found that the standards of Mullah schools was not sufficient to prepare students for a military education. Therefore, in an attempt to bridge the gap between the Mull schools and the colleges, an Idodi Askari (Military preparatory) school was opened as an intermediate school. (For the purpose of higher military education) (Al Hilali, 1959, p.154). The Al-Rashid Askari (upper elementary) school was founded. Finally, the educational ladder was completed by opening a Ibtidai (elementary) school to replace the Mulla schools.

The development on the military side of education was paralleled by a similar development in civil instruction. Idadi Mulki (civil preparatory) Rushdi (upper elementary) and Ibtidai (elementary) schools were founded to provide civil instruction. Three years were elementary, three years upper elementary and four years preparatory. The educational structure below the higher military and civil levels consisted of a two track school system, military and civil, of ten years as shown in Fig(6.1)

FIGURE 6.1

School Structure in Iraq During the Late Nineteenth Century.

Military		Civil
	Higher Education	
	↑	↑
4 Years		4 Years
	Preparatory (Idadi)	
	↑	↑
3 Years		3 Years
	Upper Elementary (Rushdi)	
	↑	↑
	Elementary (Ibtidai)	
3 Years	Same for both	

SOURCE: Akrawi, 1942 pp. 126-127
Al Rubaiy 1972, pp. 73-74

Education continued to develop slowly until the rule of Madhat Pasha, the Governor of Iraq, when (1869-1872) here was a move to establish a number of new schools. The first trade school was founded in Baghdad in 1870 by Madhat Pasha and was mostly attended by orphans.

The government's military school offered curriculum similar to that of the upper preparatory school. Those who graduated from this school were sent to the military college in Constantinople.

Summing up, Akrawi states that it can be safely said that the schools and their influences did not penetrate into the fabric of Iraqi life, but remained more or less foreign to it, or at least, only loosely connected (Akrawi, 1942, p. 130). The Turks insisted that the instruction should be Turkish, a language that was totally foreign to the Iraqi people and culture. However, a more important disruptive factors was the psychology of learning as conceived by the Turks. That is to say, learning was not valued in its own right and education was geared towards the running of an empire.

After the progressive impulse given to education by Madhat Pasha, some Christian schools were founded in large towns. A boy's secondary school was founded in Baghdad in 1870 and a girls primary in 1898 (Longrigy, 1925, p. 316). The first Iraqi kindergarten was founded (Al Hilali, 1975, p. 158) as late as 1875.

In 1871, the government established the first industrial school. By 1900, the number of primary schools had increased to 17 and the number of students was 1218, with 50 teachers.

At the end of 1900 there were three teacher training schools for primary teachers in Baghdad, Basrah and Mosul, respectively.

Al Hilali reports that about 300 elementary schools existed in 1908. For the most part, the Mullh schools continued to prepare pupils for primary school (Al Hilali, 1959, p. 61). Following the revolution of liberation in Turkey, the military elementary and primary school formed the basis for higher military institutions. Also, the civilian preparatory school was followed by additional years of study, is known as the Sultani school, which was patterned after the early of the French Iycées (Akrawi, 1942, p. 130).

Further information concerning the number of schools in Iraq at that time is scarce, but it is known that by 1913, total enrollment in elementary and primary schools was 7988. There were 402 teachers and 168 schools (See 6.1 following table).

TABLE 6.1

Number of Schools, Students and Teachers 1913 - 1914

	Primary	Secondary	Primary Teacher Training	Law	Total
No. of Schools	160 (13) School for Girls	4	3	1	168
No. of Students	6606 (756) girls	818	170	244	7838
No. of Teachers	321	49	22	22	414

During Ottoman rule the predominant form of education available to Iraqi's focused mainly upon military education as the basis of the educational system. Meanwhile, civil education was very poor in quality and centred mainly around primary and elementary schools. Little secondary or higher education was available (Peretz, 1971, pp. 154 - 156).

All in all, education was made to serve the purposes of the Ottoman rulers, serving as a means of social control through the training of selected Iraqi's as clergymen, officials and soldiers, so strengthening the Ottoman domination. Education also became vehicle for undermining the interests of the indigenous population.

Officially Turkish was the national language, since it was feared that education might awaken nationalist tendencies. Nevertheless, the educational system imposed by the Turks collapsed and they never were able to understand the Iraqi s and their culture.

Only a minority of Iraqi s did not learn anything from an Ottoman education, mainly because Turkish, rather than Arabic was the medium of instruction. Educational conditions in Iraq sank to their worst level during the declining years of the Ottoman Empire.

During the five years after 1909, the Ottoman Empire began to decline and the Turks withdrew from Iraq, due to the decay of their empire and to political instability.

At the same time, western interest in Iraq increased enormously. British troops moved in 1914 and occupied Iraq (Akrawi, 1942, p. 131).

6.5 Educational Development Under the British Administration

Following World War I, drastic changes in the political conditions of the Middle East led Iraq into a new era under British control and influence. A natural result of the fall of the Ottoman Empire and the collapse of its educational institutions was the unavailable necessity

of developing an appropriate educational system in Iraq that would meet the desires of the British rulers, as well as suit the socio-cultural environment of Iraq (Bonne, 1955, p. 350).

The British tempered by their experience in India, were extremely cautious in initiating a new educational system in Iraq. Their officials repeatedly cautioned that educational development should be slow and deliberate since the question was not mainly one of quantitative expansion but of qualitative measures; nevertheless, the urgent necessity of preparing natives for government services was the main factor that pressured British rulers into providing education during their early years of their administration. Between 1917 and 1930, the development of the Iraqi educational system was strongly influenced by British officials who served as directors or commissioners from 1917 -1922 and as advisers on educational affairs from 1923 - 1930.

In fact, when the British occupied the Southern Province of Iraq in 1914 an attempt was made to establish some foundations for an educational system. As a starting point, two elementary schools were opened in 1915. In Basra, an agreement was reached with the principle of the American school to undertake the general supervision of the schools in that city in return for an annual grant.

After the occupation of Baghdad in March 1917, a number of Iraqi's demanded that some form of national education be initiated in that city. Therefore, there was a genuine desire for more native education in this formative period. Despite financial difficulties, these attitudes encouraged the establishment of more schools. By 1918 the number of primary schools had expanded to 75 with a full six grades and

an enrolment of 6317 pupils. By 1920 the number of students had increased to 6743 pupils and there were 84 schools.

In practice, the new educational structure was determined by the British themselves. They envisaged two types of primary schools: an elementary school of four grades in to cities, where it would not be possible to establish a full primary school, and a full primary school of six grades in populated locales. Moreover, Al Hurari, a prominent educational leader of that period, states that there was a great similarity between the developing Iraqi educational system and that of Egypt. Consequently, he argued with the British authorities for the necessity of building an indigenous educational system. Despite the force of his arguments, in 1918, the responsibility for directing the schools was assigned to a separate department of education, headed by a British officer imported from Egypt.

The educational developments at the elementary stage eventually led to the re-establishment of secondary education during the British occupation. At first secondary classes were started in Baghdad and Mosul which formed the nuclei from which the full secondary system later evolved in both provinces. The curriculum of these secondary schools consisted of an extension of the subjects taught at the primary level, but the subjects were dealt with in more detail. It is clear that the educational developments during the British occupation were monumental. Akrawi argues that the importance of educational work done by the British from 1915 to 1921 lies in the fact that they laid the foundations of the present system of education in Iraq. They also reached decisions upon certain important points of educational policy which have an important bearing on the educational policies which

followed. Some have survived with little modification to the present time. (Akrawi, 1942, p. 18).

The British military administration paid increasing attention to education and the civil services. Education in particular underwent rapid expansion. In the school year 1919-1920 the total number of schools was 75. The number of elementary schools rose from 88 to 336. Secondary schools rose from 3 to 22, and the education budget more than doubled in 1920-21, the number of schools, pupils and teachers increased see table(6.2) Gradually schools diffused and were adopted throughout the country, though as (Harby, 1965, p. 15), stresses until the termination of the British mandate over Iraq in 1930. British officials exerted a strong influence over education in the country. These officials were first called commissioners of education 1917-1932 and then Advisers 1923-1930. They did not consider themselves as outsiders, imposing an educational system on a colony, but as builders of a new system. British officials wisely abstained from imposing their own language in the schools.

A crucial precedent set during British rule was the change in the language of instruction from Turkish to Arabic. During this period, schools spread and were adopted by most areas of the country. A large number of private and foreign schools were established at this time (Mathews and Akrawi, 1949, p. 209).

However, Miss Bell, who played a significant role in the development of education and female education in particular, critisized the government for neglecting female education. She asked for more attention to be paid to this field and more training to be given to Iraqi, especially to women. Early in December of 1920

TABLE 6.2

Schools in Iraq During 1920-1921

DISTRICT	NO. OF SCHOOLS	NO. OF PUPILS	NO. OF TEACHERS
1.			
Secondary Schools			
Baghdad	2	106	13
Basrah	1	16	1
Mosul	1	47	4
TOTAL	4	169	18
2.			
Primary Schools			
Baghdad	43	2906	165
Basrah	13	1507	90
Mosul	32	2536	172
TOTAL	88	6949	427
3.			
Public Schools for Girls	5	480	25
4.			
Islamic Private Schools	7	1067	51
5.			
Christian Private Schools	25	2522	129
6.			
Private Christian Schools			
For Girls	19	3202	100
7.			
Jewish Schools			
For Boys	10	5399	108
For Girls	2	1114	36

SOURCE: (Al Mosul Newspaper, 17 November 1920, p. 35)

pointed out the need to train Iraqi for government service (Bowman, 1942, p. 19).

Schools divided into the following five types:

1. Kindergartens
2. Element: four years course, primary: six year course
3. Secondary: three year course, intermediate course, two years Secondary course
4. Institutes for teacher training
5. Colleges and universities

In the early post-war period the Iraqi government continued to pay more attention to the development of education in the country. They tried to introduce extended services and changes in this important sector, and increased the education budget. The Ministry of Education provided schools with increased facilities and equipment, and organised the schools curriculum and school activities.

In theory, primary education in Iraq was universal and compulsory. In practice, it was limited by a shortage of facilities in the villages. Table 6.4 gives a picture of the different types of schools in the country between 1920 and 1945 and the number of pupils and teachers attending them.

6.6 Education Development During the Mandate Period

The educational system entered a new and changing phase of rapid expansion during the eleven years following the establishment of the national government in 1921.

Some of the educational programmes first introduced by the British after World War I developed significantly during the brief period of the mandate.

Elementary Education

By comparison with 1918 there were quantitative changes in the number of schools, as well as in enrollment figures during the mandate period, as can be seen in table 6.3. In 1918, only 75 primary schools were recorded. This number expanded from 88 schools, with 8000 pupils and 486 teachers, in 1921, to 376, in 1932, with 43,316 pupils and 1594 teachers. The most dramatic growth in the number of students was registered between the school years 1920-1921 and 1921-1922. Gradual growth continued until 1932-1933 when another great effort was made to increase the number of schools.

However, of the 376 schools existing at the end of the mandate period, only 106 had the complete six grades. The 43316 students taught by 1594 teachers, made for a pupil, teacher ratio of about 27 which was not insignificant for a developing country. This can be easily explained in view of the emphasis placed upon the quality rather than quantity of education. (Al Rubyiay, 1972, p. 83).

The expansion of the primary schools at this state was not exclusively directed towards boy's schools. The education of girls also expanded. The number of schools for girls the enrollment figures for 1920-1921 are not known exactly, but there could not have been more than a dozen (Akrawi, 1942, p. 136). Table 6.4 shows that some quantitative progress was made in female education, although, generally speaking, the rate of increase in the number of schools for girls was

TABLE 6.3

Increase in the Number of Primary Schools, Pupils and Teachers

1920-1933

YEAR	SCHOOLS		PUPILS		TEACHER	
	NO.	% INCREASE	NO.	% INCREASE	NO.	% INCREASE
1920-21	88	-	8001	-	486	-
1921-22	151	17.6	15275	90.9	663	36.4
1922-23	173	14.8	17232	12.8	681	2.7
1923-24	198	14.5	18558	11.4	734	7.8
1924-25	221	11.6	20654	7.2	800	9.0
1925-26	228	3.2	22712	10.2	874	9.3
1926-27	249	9.2	24170	9.1	959	9.7
1927-28	268	7.6	26706	10.5	1051	9.6
1928-29	271	1.1	28103	5.2	1040	3.7
1929-30	291	7.4	30888	9.9	1196	9.7
1930-31	315	8.2	34764	12.6	1309	8.6
1931-32	326	5.1	37591	8.2	1422	8.0
1932-33	376	15.3	43316	15.2	1594	10.8

SOURCE: Ministry of Education Annual Report, 1955-56, p. 212

1920-45

AND OF OL	PRIMARY SCHOOLS INCL. KINDERGARTENS			SECONDARY SCHOOLS (Intermediate & Preparatory)			VOCATIONAL AND SPECIAL SCHOOLS			HIGHER INSTITUTIONS		
	NO.	NO. OF TEACHERS	NO. ENROLLMENT	NO.	NO. OF TEACHERS	NO. ENROLLMENT	NO.	NO. OF TEACHERS	NO. ENROLLMENT	NO.	NO. OF TEACHERS	NO. ENROLLMENT
SCHOOLS												
21	88	486	8001	3	34	110	1	-	80	1	-	65
31	316	1325	34513	19	129	2082	1	-	140	4	-	99
41	735	3525	90794	56	472	13969	4	58	464	4	37	907
1941 - 42	761	3752	88864	58	435	12926	4	56	612	4	32	883
1942 - 43	788	3979	87445	60	471	11191	6	63	804	5	40	898
1943 - 44	861	4340	89558	67	490	11128	9	82	1163	5	45	1635
1944 - 45	878	4491	97636	71	539	11309	7	76	948	5	50	1790
PRIVATE SCHOOLS												
1944 - 45	81	607	19887	49	322	6818	-	-	-	-	-	-
TOTAL												
1944 - 45	959	5098	116902	120	861	18127	7	76	948	5	50	1790

URCE: M. Akrawi, 1942, p. 140

not as rapid in the early of the twentieth In fact, there were too fewer schools in 1923-1924 than in the proceeding year, although the number of pupils had actually increased by 27. beginning with the year 1928-1929. However, the female enrollment in the schools proceeded at a steady rate, reaching its highest level in the 1932-1933 school year.

At this early stage of the country's development, the degree to which a sense of national awareness and concern for educational growth was being accepted is best illustrated by the many important educational enactments appearing during this period. With respect to educational development this period was not only characterized by legislation and proposals for action, but by an actual attack on illiteracy in general. The need for mass literacy had been recognized.

Significant qualitative curricular changes can also be discerned during the mandate period. When the curriculum of this period compared to that used during the Turkish period a measure of improvement can be detected, especially in manageability, diversity and structure. Moreover, the history of geography of the Arab region rather than that of the Turkish Empire, was studied (Al Hussary, 1968, pp. 105-108).

Secondary Education

The development of secondary education was delayed due to the British attitude towards the importance of first building a sound primary level. Therefore, they felt it was neither desirable nor practicable to provide widespread secondary education in this early

stage of development. Although this was the policy and practice even in England at the time, it was interpreted by the Iraqi nationalists as deliberate attempt to block the country's progress in order to maintain indefinitely British attitude in Iraq.

Though secondary schools were founded before this period, no complete secondary school with a four year course of study existed in the two leading provinces of Baghdad and Mosul until 1923 (Akrawi, 1942, p. 136). The expansion of the four year secondary school led to it division into an intermediate and a senior section of two years each. Ministerial public examinations were given at the end of each two year period. Public secondary school regulations were first issued in 1930, raising the intermediate section to three years, thus extending the entire secondary course to five years (Mathews & Akrawi, 1949, pp. 162-80).

By 1931, there was an intermediate school for boys in each of the fourteen provinces, intermediate schools for girls were not far behind by the expansion. Thus, by the time the mandate period was terminated, there were 17 intermediate schools and one secondary school for boys. By 1932 there were 26 secondary schools.

During the mandate period qualitative features of curricular development, both in the primary and secondary stages, suffered from a number of inadequacies. The primary grades were overloaded with too many subjects. The existence of this tendency in curriculum development brought on severe criticisms. As was the case in primary schools, the range of material used on the secondary level was too

comprehensive to be adequately treated in the four years. However education during the mandate period was not used to produce a substantial social interaction between religious, racial and cultural groups.

6.7 Educational Development Under the National Government 1958-68

The republican regime which was established after the overthrow of the monarchy in 1958 was more dedicated to nationalist principles and therefore to national development. Educational reform came at the forefront of its preoccupations and was characterised by its emphasis on Arabic and nationalist culture. Education was recognised as the right of every Iraqi citizen. New schools were established and attempts were made to reform the educational system and to develop the teaching curriculum (Qubain, 1958, p. 213).

In the second year of the revolution the higher committee for the celebration of the revolution of the 14th July stated that Education was to be common and available to all.

The general characteristics of educational policy were based on the Arabic heritage of civilization and culture, as well as the need to acquire different kinds of culture and welcome the breeze of liberty and science, regardless of the country of origin.

In order to put its ambitious policies of education into practice, the republican regime established for the first time, in 1963, a supreme council for education (Al Bazzaz, 1978, pp. 32-44). The

first task of the council was to draw up new policies and goals for education its main responsibilities were as follows:-

1. to determine the philosophy of education
2. to define the educational goals for different educational stages
3. to draw up plans and provide for the achievement of their objectives
4. to create several committees from within the council to deal with different questions and issues concerning education (Al Bazzaz, 1978, pp. 32-44).

The supreme council and its various committees achieved considerable progress in their tasks, as for example, in the preparation of teachers, the organisation of the educational system into various stages, the preparation of research laboratories, social services for education and so on, but the political instability in the country and rapid political changes of that period were to put an end to the councils activities and programmes.

In 1965-1966, the council for educational planning and social development was established as a suitable for the dissolved council of 1963. It was entrusted with constructing plans for the development of education and the planning of manpower within the framework of a parallel and complementary plan to the national development plan. In addition, the council was also in charge of planning the general policy of education and determining the methods of the execution of these plans, suggesting laws and regulations and, finally, drawing up its own budget.

Education continued to be a primary responsibility of the government and after the promulagation of the compulsory education law (7-11 year old), major efforts were devoted to the expansion of education in all parts of the country. It was organised as a three stage system. The government recognised the right of all school age children to education.

Fundamental education was to be provided for adults and vocational and technical education were to be instituted, as they were related to national development (Ministry of Information, 1982, p. 282). But despite this government emphasis on the purely nationalist characters of education, western influence continued to be noticeable in both structural organisations and curricular content. Even so, the primary aim of the republican regime continued to stress the expansion of education rather than its ideological orientation. It could be said that the regime partially succeeded.

In this respect, given that primary school enrollment was more than doubled during the first decade of the republican era; the number of teachers was more than trippled and the number of schools more than doubled in the same period (Ministry of Information, 1982, p. 289). In rural areas because of the shortage of available schools, the system of double shifts was adopted, in order to accommodate the largest possible number of children.

The republican regime emphasised the need to proved full and compulsory attendance for all Iraqi boys by 1970 and for all Iraqi girls by 1975. The aims of the government were surely very ambitious and the financing was very generous, but the general instability in the country was a severe handicap especially as only half the number of

children aged between 7-11 were in full attendance in 1967. The regime made every effort to promote education and extend it to the largest possible number of people.

The following data can be taken as evidence for these achievements: the government increased the budget of education by one third and doubled it in the second year; by the end of the first decade of its rule the republican regime had increased the budget for education to 25 per cent of the national budget.

Secondary education recorded a dramatic growth constituting some 15.4 per cent of the total number of students at all levels of education in 1960-61. By the end of the first decade school enrollment had increased by about five times. This positive increase in enrollment was matched by a similar increase in the number of schools and teachers. For example, by 1966-1967 the number of teachers had reached the impressive number of almost 8000, which represents more than a 200 per cent growth rate in about ten years. In higher education, the university recorded a considerable increase in the number of students, from 5979 in 1957 to 34926 in 1967-1968. In addition, a number of centres for the eradication of illiteracy were established in different parts of the country. About 50000 men, women and children in 74 villages enrolled in these centres between 1961-1965.

The emphasis on the quantitative expansion of education was surely a major success for the republican regime, as compared to the monarchial era, but to give more opportunities to the largest number of people had obstructed the emphasis on the quality of that education, hence students were permitted to leave school passing examinations. This was especially evident in the case of students who attended the

university of Baghdad during the first decade of the republican regime, as the selection procedures for admission to higher educational institutions which had been in use prior to the overthrow of the monarchy were abandoned.

Apparently, this was done as a means of bringing the revolution closer to the people, in an effort to gain popular support, and partly to eliminate the prevailing educational system, which favoured the privileged, though this could not justify the promotion of poor quality students.

6.8 Educational Development Under the Baiath Party 1968 - 1982

The Baiath party's accession to power in 1968 had a great impact on the general policies of the country. A major priority was to put an end to tribal rivalries, ideological hostilities and political instability which had devastated the country for a decade and caused un necessary delay in the achievement for a social and economic development, political stability, rational social and economic planning, nationalization of the country's richest resour...These factors were at the forefront of the party's policy pr occupations.

Much like its predecessors, the new regime emphasised the need to expand education, reform the educational system, introduce new teaching methods and techniques, and to improve the curriculum. Government efforts to provide both human resources and materials constituted a major turning point in the development of education in Iraq.

The new philosophy of education, as contained in the ideology of the party, was based on the party's principles of pan-Arabism, freedom and socialism. Their policy was based upon both liberal and socialist theories of education, hence, the party's philosophy in education was characterised by the following principles:

1. The emancipation of educational thinking from the sectorian, absolutist and abstract framework which dominated the educational system in previous decades. The alternative in this respect was that education was to be based on a universal point of view, based on scientific and objective analysis of the realities of Arab society and the phases of its future development.

2. Emancipation from the cultural and educational alienation which consisted a new and bewildering factor in Arab educational and political thinking.

3. To overtake the narrow and limited conception in education which emphasises particular aspects in the educational process.

4. Emancipation from educational abstractionism, imitation, dependency and isolation of the educational system from national issues.

In order to apply this new philosophy of education and achieve the politics based on it principles, the new leaders of Iraq proceeded to initiate major reforms of the educational system. The first steps in this process were taken with establishment of the supreme committee for educational planning, under the chairmanship of the minister of education. The Committee membership consisted of the minister for higher

education and scientific research and a number of educational experts and general directors, in addition to the president of the UNESCO committee of experts. The committee had several sub-committees which prepared a large number of reports on primary, secondary and vocational education, the preparation of teachers, inspectors and educational supervisors.

The main responsibilities of the committee were:

1. To re-elaborate the philosophy of education and the general objectives of the educational system in Iraq.

2. To draw up objectives for the different educational stages.

3. To study and analyse the realities of education in Iraq.

4. To draw up long and short term plans, taking into account the existing educational system in Iraq and the available resources.

The Ba'ath party accession to power represented a new phase in educational development. It was characterised by a strong commitment to universal eradication of illiteracy and the elimination of regional desparity in education. National culture - Arab - Islamic heritage and public education were given an even greater importance in the national development of the country. The right of every Iraqi to education was strongly affirmed. One of the main principles of the Ba'ath party regarding formal education was:

> "Expansion of the right in education and its dissemination in accordance with the principle of legal opportunities among the citizens, work at attaining compulsory education in the primary stage and to gradually applying this system throughout stages up to the end of secondary stage" (Ministry of Information, 1982, p. 137).

The aim of the educational system under the Ba´ath party was to fulfill the following principles:

1. The laying down the foundations of an educational system in harmony with national and socialist aims, promote sufficiency whether in programmes, methods or means, raise the efficiency of those working in the field of education.

2. To eliminate the distinctions between male and female in education, increase female participation in teaching (through the development of the Iraqi family), the elimination of antiquated values and practices which degrade women especially. Those in rural areas, concentrate on rural illiteracy, enforce compulsory education and find a balanced equation between theoretical and practical studies.

3. To adopt the Arab and Islamic heritage and civilization, benefit from this heritage in disseminating national culture and showing due care for the cultural rights of minorities within the national unity.

4. To develop and expand all branches of vocational education, increase instructional experiences and provide the necessary requirements for workshops, farms, laboratories etc.

5. To give due care to the cadre of teachers, by establishing a new format for their training and development, by improving teaching practices and facilitating the means of promoting their personal culture.

6. Giving due care to school building so that their designs are compatible with modern education in terms of laboratories, sport, art and studios, etc.

7. Employing modern pedagogical techniques such as video and T.V.

8. Developing individuals drive to work to cover all scholastic stages with due emphasis on the new social values (Ministry of Information, 1982, pp. 136-137).

At the ideological level the party emphasised the principles of the belief in democracy and the achievement of equality before the law, belief in human rights and social justice. Despite the party's ideological emphasis on socialism as the expression of this social justice, complete secularisation in education has not yet been achieved. Religious values and religious education are emphasised, in so far as the Islamic heritage remains an integral part of the national culture.

The Baiath party believed in the right to every citizen to obtain education and placed great importance upon compulsory, education. Eradication of adult illiteracy and vocational and technical education constitute the cornerstones of the party's ideology, as means for national development, progress and prosperity. In order to implement these policies, the Baiath regime enacted several laws and made various regulations (Political Report, 1974, p. 112).

In a general sense considerable efforts have been devoted to the promotion of education in the last nineteen years and the results have been encouraging. Enrollment in primary education for both sexes (boys and girls, aged between 6-11 years old) increased by 31% in just over 6 years (from 68% in 1970-1971 to 140% in 1983-1984). In a little over fourteen years an average rate of educational growth of 10% was achieved. As for the curriculum the objectives of every subject taught, as well as lessons, were laid down in text books. New subjects were added to the existing text books at primary level, all curricula were revised and science, technical education, socialist economics and political orientation were added to the syllabus.

So far as examinations were concerned the government abolished the competitive examination for entry into state intermediate schools in 1982, leaving all intermediate schools open to free entry by any boy or girl, but by 1983, this law had been abolished by the Ministry of Education and a public examination for entry into intermediate schools was re-introduced, with an element of continuous assessment. 50% of the marks depend upon the public examination and 50% the school, taking into account the students progress throughout the school year.

At the end of the intermediate stage school graduates were distributed according to their marks in the public examination. If they obtain 70%, they can go to secondary school, if they obtain less, they have a choice, either to go to vocational school or on to teacher training institutes. This law came into effect in 1983. As the authorities had noticed in the past, it was a waste of time, money and effort for those students who did not have the academic ability to finish this secondary school . In my opinion this seems to be a reasonable decision.

6.9 Conclusion

This juncture of the analysis, one could say that Iraqi educational policies seem to be attractive and relevant to Iraq and its people but their implementation was and is still far from being satisfactory. The lack of implementation could be due to many factors such as: The emphasis in educational policy upon political issues, rather than upon economic issues. This would seem to suggest that some governments might have been more interested in the indoctrination of potential supporters, rather than in creating individuals who work for themselves, their society and the stage. Although the educational policy has always demanded the education of all children, as well as striving to link education and curricula to the jobs market and economic planning, the efforts of the government to do so have been small and largely inefficient. This leads one to speculate that the governments have not always been sincere or enthusiastic towards such policies.

Educational policies seemed to be general and suggestive rather than explicit and practical, i.e. there was little attempt to break down these policies into clear, well defined practical and manageable components, which were easy to implement. This is manifested in the five year plans which were somewhat ambitious and unrealistic, and showed little grasp of how their goals could be achieved. The preparation and implementation of educational policy was always built on sex-blind, as well as regional-blind bases, i.e. the implementation of the policy failed to consider that some regions, mostly rural, were less developed than others and that women, especially rural women, were and still are, less advantaged than men and urban women.

A continuous and dramatic political change was one of the major problems which hindered the implementation of the educational policy. Wilson argued that the lack of continuity was demonstrated by the ambitious development plans that were adopted by each incoming regime, only to be scrapped or changed out of all recognition by succeeding governments (Wilson, 1982, p. 101).

However, the educational system aims towards the creation of an Arab nationalist and socialist generation characterized by scientific thinking, attached to its history and homeland, proud of its heritage, full of willingness and enthusiasm to struggle for the realization of the aims of its nation, in unity, freedom and socialism, and to serve the progress of humanity. It should be noted that although this constitution reflected Ba'ath policy and ideology to a large extent, it remained like the previous one, highly general, political and superficial.

CHAPTER SEVEN

The Organisational Structure of the Educational System in Iraq

7.1 Introduction

7.2 Educational Ladder

7.3 Pre-Primary Education

7.4 Primary Education

7.5 Intermediate Education

7.6 Secondary Education

7.7 Vocational Education

7.7.1 Agricultural Education

7.7.2 Industrial Education

7.7.3 Commercial Education

7.8 Teacher Training Education

7.9 Conclusion

7.1 Introduction

In this chapter I shall examine the organisational structure of the educational system in Iraq. The objective of this chapter is to observe the expansion of education of primary, secondary and vocational schools in the light of the planning attempts adopted by the government in its efforts to relieve the increasing pressure of educational needs and to meet the country's developing demands. As this chapter is devoted to various levels of education in Iraq, so, it will serve as a background for the next chapter where the system of Iraqi technical education will be analysed in relation to the development and planning of human resources in the country.

Since its independence the educational system in Iraq has been under the control of the Ministry of Education which was established on 10th September 1921, and the responsibility for administering the educational system is shared between the central government on the one hand and the local administration on the other. The Minister of Education, a cabinet member, is the supreme head of the Ministry. All orders, decisions and instructions are issued in his name and executed under his supervision and control.

After 1930 the function of the British adviser was to render an opinion on questions referred to him by the Minister and to make recommendations for the improvement of the work of the Ministry. The post of the advisor was abolished in 1946 (Matthew and Akrawi, 1949, pp. 121 - 122).

The Minister also serves as president of the Advisory Council on Education, a body created by the regulation of 1943 and consisting of

the Minister, the Director General of Education, the Technical Adviser, the Director General of Antiquities, the Deans of the Law Colleges and of the Higher Teachers' Training College and four permanent members appointed one each by the Minister of Finance, Communications and Works, Social Affairs and Economics. All these persons meet together to elect four private citizens known for their experience and interest in education to supplement their membership. The Council meets at least twice a year, and makes recommendations to the Minister of Education (Al Nassir, 1976, pp. 2 - 6).

Although radical changes occurred in government forms and political attitudes following the Iraqi revolution of July 14th 1958, the concept of centralized governmental control of the nation's affairs continued to prevail as a necessity for the state to protect public interest and individual rights and to achieve national unity.

Throughout the republican regime has placed special emphasis upon cultural matters and the extension of educational services to all sections of the country. Education continued to be a governmental responsibility, consisting of a centrally organised three stage system and western influences continued to be noticeable in both structural organization and curricular content. The revolution recognized the right of education for all citizens. Thus, compulsory universal primary education was to be provided for all school age children (Al Rubaiy, 1972, p. 152).

Currently, the educational responsibilities in Iraq are split between two central ministries: the old Ministry of Education and the Ministry of Higher Education and Scientific Research which was established in 1970. The Ministry of Education has been restricted to

elementary education, general and vocational secondary education (Ministry of Education, 1978, p. 42) and literacy education. Although some operational and supervisory functions have been delegated to local authorities the Ministry of Education nevertheless plans and administers every aspect of education in the country See Figure 7.1.

7.2 The Educational Ladder

Children normally start the pre-primary (kindergarten) at the age of 4 and attend for 2 years. This is followed by primary school for six years from the age of six onwards. The primary cycle is followed by three years of intermediate school and secondary school which used to be attended for two years (before 1965) but is attended for three years at the present time. All students are entitled to sit for public examination after the intermediate stage. If they passed with a good grade they have the chance to go to secondary school. If they have lower grades, they have the choice of going either to vocational schools or teacher training. The vocational schools include agricultural, commercial and industrial education, students of both types of secondary schools or vocational schools sit for the public secondary education examination. Those who pass the examination are entitled to pursue their education in institutes or go to colleges to study for four to six years at university. This depends on the type of colleges. Also there are numerous technical institutes which were available in the country or they have the choice to join the army college or the police college (See Figure 7.2).

FIGURE 7.1

ORGANISATION CHART

Ministry of Education

- Minister of Education
  - Minister's Secretariat
  - Council of Education
  - Iraqi Sc. Academy
  - Educational Planning Commission
  - Foundation for Vocational Education
  - Minister's Secretariat
  - Under-Secretary for Administravie Affairs
    - Scott
    - Director - General for
      - Administration and Financial Affairs
      - Physical Education
      - Primary Education
      - Secondary Education
      - Division of Organisation and Methods
      - Director of Education in Governorates (19)
  - Technical Adviser
    - Scott
  - Under-Secretary for Technical Affairs
    - Scott
    - IDENTI
    - IFA
    - HC/CETA
    - Director - General for
      - 5 Educational Planning
      - 6 Curriculum & Teaching Aids
      - 7 Cultural Relations
      - 8 Evaluation & Examinations
      - 9 Educational Supervision
      - 10 Kurdish Studies
      - Directorate/Primary Teacher Training
      - Education Project Unit (Loan IRQ/846)

Cont'd ....

Directorates Under Their Respective Directors-General

1.1 Headquarters; 1.2 Personnel; 1.3 Legal Affairs; 1.4 Accounts;

1.5 Supplies; 1.6 Production Workshop; 1.7 Printing Press.

2.1 Physical Education (boys); 2.2 Physical Education (girls)

2.3 Boy Scouts & Girl Guides; 2.4 Youth Training in Schools.

3.1 Primary Education; 3.2 Kindergartens; 3.3 Special Education

3.4 Pilot Project (Education for Rural Development).

4.1 Secondary Education; 4.2 School Activities.

5.1 Educational Planning; 5.2 Follow-up & Evaluation; 5.3 Statistics;

5.4 School Buildings; 5.5 Studies and Documentation.

6.1 Curriculum & Textbooks; 6.2 Teaching Aids; 6.3 Educational Television;

6.4 Laboratories; 6.5 Libraries; 6.6 Kurdish Studies; 6.7 Turkoman Studies.

7.1 Cultural Exchanges; 7.2 Information; 7.3 Unesco Affairs & Other International Organisations; 7.4 Cultural Counsellors Abroad (8).

8.1 Evaluation & Educational Guidance; 8.2 Examinations; 8.3 Certification;

8.4 High Com. for Public Examinations.

9.1 Supervision (Sec. Educ.); 9.2 Supervision (Primary Education);

9.3 In-Service Training (Sec. Teachers); 9.4 In-Service Training (Pr. Teachers);

9.5 Central Institute for In-Service Training of Educational Workers.

10.1 Statistics & Follow-up; 10.2 Curriculum & Textbooks;

10.3 Audio-Visual Aids; 10.4 Supplies.

Abbreviations Used: IFA - Institute of Fine Arts

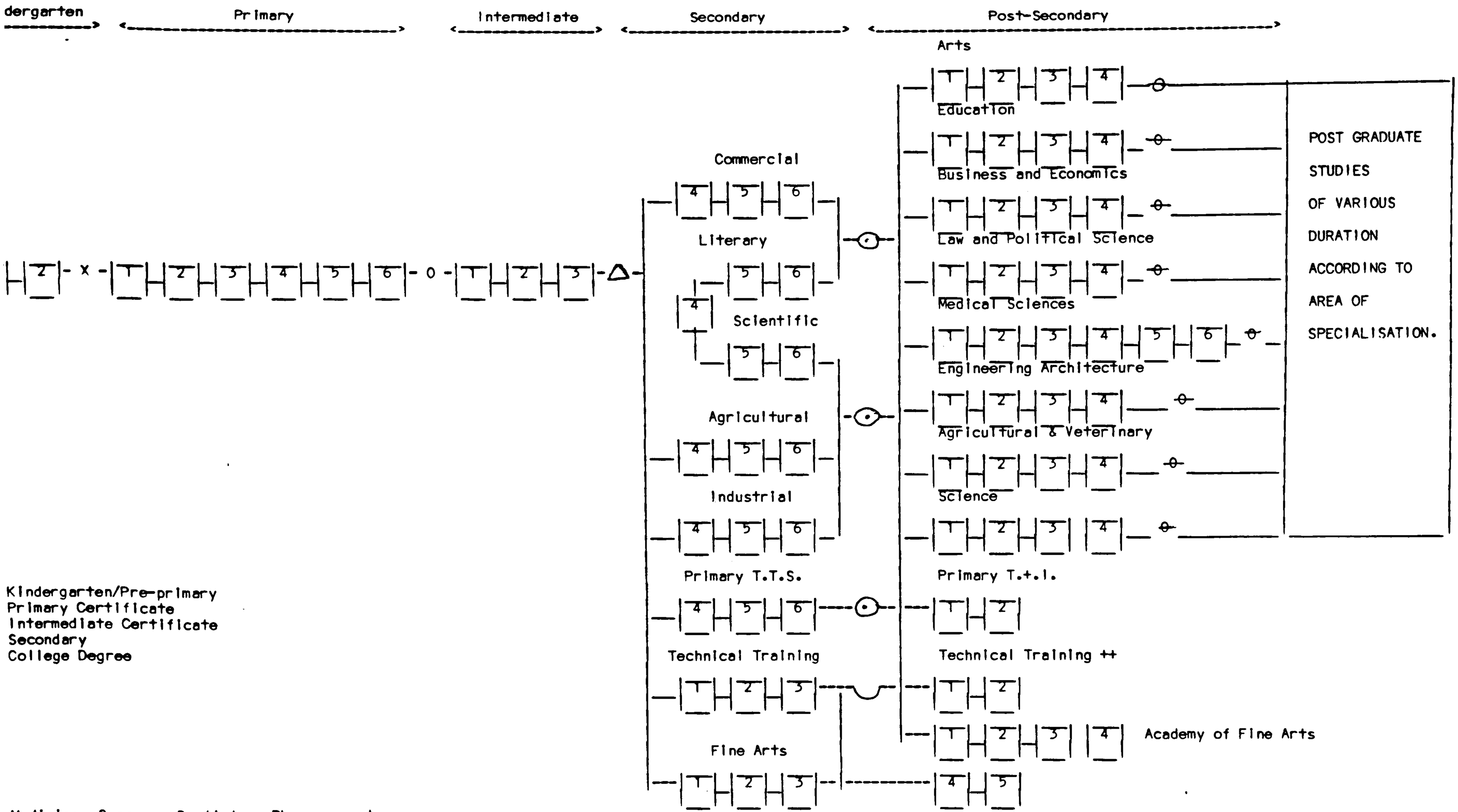
IDELTI = Institute for the Development of English Language Teaching in Iraq

HC/CETA = High Committee for the Development of Curriculum, Examinations and Teaching Aids.

SOURCE: Ministry of Education, 1977, p. 49

E 7.2

Structure of the Iraqi Educational System



X Kindergarten/Pre-primary
O Primary Certificate
Δ Intermediate Certificate
⊙ Secondary
⊖ College Degree

\+ Medicine, Surgery, Dentistry, Pharmacy, etc.
++ Institutes of Technology, Agriculture, Forrestry, Lab Tech, Business
Source: Ministry of Education, 1977, p. 51

7.3 Pre-Primary Education

Pre-primary education is considered an important phase of the educational process, as well as a crucial stage in the life of the individual. Pre-primary education is given in nursery schools and kindergarten s, and is for children from 4 to 6 years of age. During the past ten years the government has scored major achievements in this field of education, which has expanded and developed rapidly, from kindergartens, up to university and free education was extended to all citizens (Matthews and Akrawi, 1949, p. 175).

As a result the number of children attending kindergarten rose from 12830 in 1962 - 1963 to 155838 in 1972 - 1973, a rate of growth of 1.5% per annum, then by 1974 - 1984 the number of children shot up from 15583 to 76663, a rate of growth of 16.3% per annum. Meanwhile, the number of teachers has risen from a 7% rate of growth during 1962 - 1972 to 17% by 1974 - 1984. (See Table 7.1 and 7.2).

TABLE 7.1

Number of Children, Kindergarden, Teachers From 1960-1984

Year	Number of Children	Number of Kindergardens	Number of Teachers
1960-1961	11595	110	271
1961-1962	11538	110	305
1962-1963	12830	107	326
1963-1964	12633	103	338
1964-1965	13514	112	372
1965-1966	15307	124	479
1966-1967	15222	114	474
1967-1968	15533	128	505
1968-1969	14530	125	551
1969-1970	15697	130	619
1970-1971	13462	124	762
1971-1972	14024	134	614
1972-1973	15583	137	665

Cont'd ....

TABLE 7.1 Continued

Number of Children, Kindergarden, Teachers From 1960-1984

Year	Number of Children	Number of Kindergardens	Number of Teachers
1973-1974	16874	149	865
1974-1975	35367	203	1391
1975-1976	44413	245	1913
1976-1977	51840	276	2291
1977-1978	56265	306	2603
1978-1979	67265	333	2862
1979-1980	70418	358	3079
1980-1981	76507	387	3235
1981-1982	81449	437	3696
1982-1983	79456	507	4175
1983-1984	76663	523	4244

Source: 1. Ministry of Planning, (1960-1970) pp. 232-233
2. Ministry of Planning, 1983, p. 208

TABLE 7.2

Average Rate of Growth: Children, Teachers, Kindergartens

1963 - 1984

YEAR	NUMBER OF CHILDREN	NUMBER OF TEACHERS	NUMBER OF KINDERGARTENS
1963 - 1973	1.5	5	7.3
1974 - 1984	16.3	13.3	17.2

SOURCE: Derived from Table 7.1

As a result of the nationalization of oil in 1972 the increase number of working women and the issue of the free education law, the demand for kindergartens increased especially after 1974 - 1975. However, despite the big increase in the number of the kindergartens (which needed 523 in 1984) in the number of children attending kindergartens this fact does not represent the ambition of the government which seeks to provide enough kindergartens to assimilate the majority of children of this age (Political Report, 1983, p. 97).

7.4 Primary Education

Free primary education is comprised of six grades which are offered to every Iraqi child who has reached the age of six years. Primary education has been assigned a high priority in the educational system (Matthews and Akrawi, 1949, p. 146). Officially, this is the first level of the educational ladder and from 1958 until the present day there has been few changes in primary level education.

The purpose of this level was to provide children with basic education and culture which would make them good citizens, sound in body, mind and conduct, and to discover their capabilities and aptitudes so as to guide them accordingly in their work.

Education is compulsory according to Law No. 118, 1976. This law came into full force in 1979, in the sense that every child of primary school age must attend school and may continue at school until he or she reaches 16 years old (Ministry of Education, 1979, p. 106). The school year extends from 15th September to the end of May, although one weeks vacation is often given at mid-year, while the schools enjoy the same holidays as do government offices. School begins during the second week of September and ends during the last week of May, with a mid-year break of one week in late December. Classes begin at 8.00 a.m. and meet for five hours a day, six days a week; normally from Saturday through to Thursday.

Iraqi primary education used to segregate boys from girls, boys being taught by men in boy s schools by women in girl s schools. However, the Ministry of Education has made considerable progress in overcoming this problem and a significant fact needs to be noted. The

growth of co-educational primary schools from a mere handful in the early fifties they have grown in 1982-1983 to a larger number.

In the larger towns almost all girl s schools are taught by women teachers where the majority of children are girls. The government officially favours co-education at the primary level. The number of co-educational schools increased from 425 in 1956 to more than 1,700 in 1965, but in most towns there were some primary schools for girls only. Virtually all rural primary schools, however, are co-educational in at least some of these schools' traditional attitudes towards female education have tended to keep the number of girl students low (Smith, 1971, p. 120).

The expansion of the primary school system can be considered in terms of the increase of students. Table(7.3)shows the number in selected years before 1950. When the number of students increased sharply. The number reached 181,000 students (Ibrahim, 1983, p. 133). Significantly the percentage of boys was higher than the percentage of girls because of the traditional belief that girls do not need to go to school, since their future was to marry and raise families.

TABLE 7.3

The Quantitative Growth in the Number of Pupils, Teachers, Schools in Public Primary Education in Iraq 1920 - 1950

YEAR	NO. OF TEACHERS	NO. OF STUDENTS	NO. OF STUDENTS				
			MALE	FEMALE	TOTAL	% M	% F
1920 - 1921(1)	485	88	7500	500	8001	93.0	7.0
1930 - 1931	1325	316	27467	7046	34513	79.5	20.4
1940 - 1941	3525	735	64112	26682	90794	70.6	29.3
1950 - 1951(2)	6509	1150	139000	42000	181000(3)	76.7	23.2

SOURCE: 1. Clark, 1951, p. 23 2. Al Nassir, 1973, p. 216
3. Ibrahim, 1983, p. 133

So the uneven distribution of primary education this period between the rural and urban areas and between the sexes continued. The towns had about 60 percent of the primary schools, although more than 70 percent of the population lived in rural areas and by the end of the fifties, a faster rate of progress in enrolment was seen in the education of city girls (Qubain, 1958, pp. 210 - 212).

During the period from 1959 - 1960 to 1969 - 1970 the number of primary school pupils increased from 623820 to 1039942 over the period as a whole. Thus, the increase was 416122, which is a relative increase of 67% representing an average annual rate of growth of 5.0%. (See Table 7.4). The increase occurred as a result of the overthrow of the monarch in 1958, after which education was recognised as the right of every Iraqi citizen 2013 new schools were established, which amounts to a relative increase of 63%, representing an average annual rate of 5.0%.

Attempts were also made to reform the educational system and to develop the teaching curriculum. The number of teachers was 19419 by 1959/1960 and this figure had increased to 47848 by 1969/1970 with an annual rate of growth of 9.2% per annum (Ministry of Education, 1969 - 1970, p. 59).

Thus, it may be clearly seen that the access of the Baath party to power in 1968, had an immense impact on the general policies of the country. The new regime emphasized the need to expand education, reform the educational system, introduce new teaching methods and techniques and improve the curriculum.

TABLE 7.4

Number of Schools, Teachers, Pupils, in Primary Education for the Period 1956-1970

Year	No. Schools	No. Teachers	No. of Students				
			M	%	F	%	Total
1956-1957	1861	11607	-	-	-	-	378384
1957-1958	2613	12165	315.400	-	101200	-	412761
1958-1959	2343	13420	-	-	-	-	500506
1959-1960	3260	19419	-	-	-	-	623820
1960-1961	3559	25130	556442	73.2	204021	26.8	760463
1961-1962	4030	27292	595232	72.9	220990	27.1	816222
1962-1963	4020	29325	610.191	71.8	239491	28.2	849682
1963-1964	3996	31390	615109	70.9	252174	29.1	867283
1964-1965	4438	36871	657414	71.0	268529	29.0	925943
1965-1966	4538	44028	678819	70.4	285508	29.6	964327
1966-1967	4773	42278	692049	70.8	285533	19.1	977582
1967-1968	5035	45201	698320	70.5	292398	29.5	990718
1968-1969	5137	47058	718461	70.6	298589	29.4	1017050
1969-1970	5173	47848	737998	70.7	304954	29.3	1039942

Source:
1. Ministry of Planning, 1969, pp. 5-10
2. A. Rasheed, 1971, p. 24
3. A. Allrubaiy, 1972, p. 154
4. Ministry of Planning Pocket Book, 1975, p. 53

TABLE 7.5

Evaluation of the Number of Schools, Teachers and Pupils in Primary Education for the Period 1970 - 1971 to 1983 - 1984

YEAR	PRIMARY EDUCATION						TOTAL
	SCHOOLS	TEACHER	STUDENTS				
			MALE	%	FEMALE	%	
1970-71	5617	49656	794761	70.9	325452	29.1	1120213
1971-72	5918	54016	852652	71.1	347392	28.9	1200044
1972-73	6269	54979	916620	70.6	381136	29.4	1297756
1973-74	6731	58430	983311	69.8	424508	30.2	1407819
1974-75	6170	57490	1030387	67.8	491217	32.2	1521604
1975-76	7602	69224	1178048	66.6	58937	33.4	1767585
1976-77	8157	70799	1259962	64.7	687220	35.3	1947182
1977-78	8387	78060	1283494	62.6	765072	37.4	2048566
1978-79	10560	87148	1401175	57.0	1058695	43.0	2459870
1979-80	11316	92644	1434067	55.0	1174866	45.0	2608933
1980-81	11280	93917	1400018	54.0	1212314	46.0	2612332
1981-82	16816	98422	1397575	53.0	1239448	47.0	2637023
1982-83	10223	107364	1400517	53.6	1214410	46.4	2614927
1983-84	10138	112428	1465483	54.3	1233059	45.7	2698542

SOURCE:
1. Ministry of Planning, 1978, p. 214
2. Ministry of Planning, 1980, p. 55
3. Ministry of Planning, 1981, p. 216
4. Ministry of Planning, 1982, p. 211
5. Ministry of Planning, 1983, p. 210

Enrolment in primary education for both sexes (boys and girls), went up by 140%, an average annual rate of growth of 10% in just over 14 years. The enrolment of girls increased from 29% in 1970 - 1971 to 45.7% in 1983 - 1984, which 278%, or an average annual rate of 11%, while boys' enrolments increased from 794761 in 1970 - 1971 to 1465483 in 1983 -1984, with annual rate of growth of about 5%.

Moreover, the numbers of schools and teachers more than doubled. The number of schools increased over this period from 5617 in 1970 - 1971 to 10138 in 1983 - 1984. Meanwhile, the number of teachers increased from 49565 to 112428 over the same period. Despite these quantitative achievements, the Baath party seemed far from satisfied. Their political report stated that:

> "The effort made and the resources allocated have brought notable progress in extending education throughout the country by overcoming shortages of schools and equipment
>
> (Political Report, 1982, p. 113)

The curriculum Table 7.6 overleaf describes the various subjects taught at this level during the years 1958 - 1980, during which time there were no changes in the programmes. The primary school curriculum remained unified for all schools, urban and rural, which was not desirable, since the students in rural areas needed to study subjects more directly related to their lives (Ministry of Education, 1978, p.21).

In fact, rural children find many of the subjects difficult to grasp and relate to their lives because of the primary academic orientation of the curriculum. Moreover, the emphasis in primary instruction on rote learning, group recitation and rigid classroom

TABLE 7.6

Primary School Curriculum

SUBJECT	PERIOD PER WEEK/GRADE					
	1ST GRADE	2ND GRADE	3RD GRADE	4TH GRADE	5TH GRADE	6TH GRADE
Religious Education	2	2	2	2	2	2
Arabic Language	11	11	11	11	7	7
English Language	-	-	-	-	4	4
Modern Mathematics	6	6	6	6	5	5
Social & National Ed.	4	4	4	3	5	5
Science & Health Ed.	-	-	-	3	3	3
Practical Subjects	4	4	4	4	3	3
Physical Education	2	2	2	2	2	2
Music	1	1	1	1	1	1
TOTAL	30	30	30	32	32	32

SOURCE: Ministry of Education, 1978, p. 53

discipline has tended to discourage students with the materials at hand. In some of the urban schools teaching methods are more flexible (Smith, 1971, p.121).

This curriculum is planned by the Ministry of Education, via the Educational Council (comprised of the Minister of Education and Senior Officials) which prepares a general curriculum to be followed by all schools. Table 7.6 indicates that the curriculum is heavily orientated towards the teaching of the Arabic language and penmanship. These skills are considered absolutely vital for active participation in the life of national students also learn the Koran and receive religious instruction concerning the life and they are taught ethical principles (Matthew and Akrawi, 1949, pp. 149 - 152).

The study of the Arabic language includes reading, oral and written composition, dictation, grammar and handwriting. The course in English language is used as a means to an end. English language instructors are usually graduates of primary teacher's training institutions, and receive their entire education in Iraq where the spoken language is Arabic. Arithmetic and measurement includes the study of the fundamentals of addition, subtraction, division and some elements of geometry. Other subject such as history, geography and moral and civic duties are centered mostly on Arab and Iraqi history and experience. So the primary school curriculum during the 1970 -1982 period continued to consist of a highly demanding range of academic subjects (Schmide, 1983, p.35).

With regard to promotion and examination at this level, there were major changes in 1977. The competitive examination at the end of the primary level for entrance to intermediate state schools was abolished

and new regulations for promotion from one grade to another were introduced. The reason for this was because the public examination at the end of the primary level was the only evidence of assessment and evaluation.

7.5 Intermediate Level (Lower Secondary Level)

Modern intermediate education was initiated and developed very slowly after World War I. School buildings was first built in three major Iraqi cities: Baghdad, Mosul, Basrah. By 1939 there were a stage of the intermediate of three years and two years for the secondary stage later the stage of secondary has presently been extended to a three year with each stage of education being concluded by a public examination.

All students successfully completing primary school are currently eligible to enter intermediate school and attend at no cost. The number of enrolled students has increased from 236268 in 1968 - 1969 to 716379 in 1982 - 194 an increase of 203% with annual rate of growth at 7.6% during this 15 years (See Table 7.7).

This curricula of intermediate schools are also similar to those of primary schools, but they are wider and of a higher level and include scientific subjects. Table 7.8 shows the subjects taught at this level in each grade and the number of periods per week for teaching.

Like the primary curriculum, the intermediate school is uniform all over the country. There is no difference between urban and rural areas, though some subjects are slightly biased toward one sex or the other. For

TABLE 7.7

Growth in The Intermediate School Enrollment 1968-1984

Year	Boys	Girls	Total
1968-1969	178233	58035	236268
1969-1970	165457	65943	231400
1970-1971	160444	64978	225422
1971-1972	159543	64302	223845
1972-1973	177802	70976	248778
1973-1974	196028	78417	274445
1974-1975	237224	91226	328450
1975-1976	265521	104173	369694
1976-1977	291392	122685	414077
1977-1978	344592	147084	491676
1978-1979			447504
1979-1980			501463
1980-1981	646478	303664	950142
1981-1982	510107	260153	770260
1982-1983	472706	261752	734458
1983-1984	463395	252984	76379

Source:
1. Ministry of Education, 1978, p. 207
2. Ministry of Planning, 1981, p. 215
3. Ministry of Planning, 1982, pp. 205-206
4. Ministry of Planning, 1983, pp. 211-112

TABLE 7.8

Curriculum: Intermediate Schools

SUBJECT	1ST GRADE	2ND GRADE	3RD GRADE
Religion	1	1	1
Arabic	6	6	6
English	6	5	5
Social Studies:			
History	2	2	2
Geography	2	2	2
National Education	1	1	1
Mathematics	5	-	-
Algibra	-	2	2
Geometric	-	3	3
General Science	3	-	-
Chemistry	-	2	2
Natural Science	-	2	2
Physics	-	2	2
Handicrafts, Drawing	3	2	2
Athletics	3	2	2
Home Economics	2	1	2
TOTAL	32	32	32

SOURCE: Ministry of Education, 1978, p. 214

example, boys receive more training in handicraft, drawing, music and athletics while girls, in turn receive more training in home economics.

Promotion from one grade to another at this level remains as it was during the Ottoman Colonial rule, when it was dependent on the child's performance in the monthly examination throughout the year. On completion of the third grade (i.e. the end of the stage, all students, sit the National Examination, which is called the General Preparatory Certificate of Intermediate Education. This examination includes six papers in six subjects, which are: religion, Arabic, a foreign language, social studies, history, geography, national education, general science and mathematics. It was, and still is, administered by the Ministry of Education to all candidates nation-wide in each subject and on the same date. The child passes if he/she scores 50% in all the subjects. Those who pass this examination get a certificate which enables them to go on to a higher secondary level but those who fail repeat the examination the following year unless they have reached the age for national service.

The examination is not very difficult but many student fail to pass and in some years the percentage of failure is over 50%. Students who pass the examination with over 70% have the choice of going either to the general secondary school or vocational school, but students who passed with less than 70% cannot go onto the secondary school and only have the right to go to vocational school or to teacher training institutes. So the future of the student depends upon his or her results in the public intermediate examination, which forms development planning which, in turn, aims to match educational development to the need of mid-level of manpower (technicians). However one problem with

this policy is that it will create class differences among students who go to vocational schools and those who go to secondary schools.

7.6 The Secondary School

There are two type of secondary education: general, which covers branches scientific and literary; and vocational which covers three branches; industrial , commercial and agricultural. The duration of the level in both cases in three years.

In general education the first year is common to both branches, then the students are divided into scientific or theory groups which starts in the second and the third years, where children are provided with different curricula. The school day and length of study are similar to those of the intermediate level and promotion from one grade to another is also similar to that of the intermediate level. Furthermore, all children who complete the course sit for the general secondary school examination (scientific, literary, vocational) according to their specialised course. Those who pass get the General Secondary School Certificate and they have either choice to go to university or institutes or to start work. Those who fail repeat the examination again until they pass or arrive at the age of compulsory national service (18 years old).

Enrolment at the general secondary level increased very significant. The growth in the number of students, teacher and school building, between 1920 - 1921 and 1970 - 1971. Table 7.9 shows that the number of students increased from 106,658 in 1960 - 1961 to 276,970 in 1970 - 1971. However, not all schools in Iraq experienced similar

TABLE 7.9

Development of Enrolment in the General Secondary Level 1920-1970

Year	Number of Students	Number of Teachers	Number of Schools
1920-1921	110	34	3
1930-1931	2082	129	19
1940-1941	13969	472	44
1950-1951	22706	999	90
1960-1961	106658	3588	287
1970-1971	276970	12245	912

Source: Mathes & Akraw, 1949, p. 223
Ministry of Planning, 1965, p. 238
Ministry of Education, 1975, p. 251

TABLE 7.10

Number of Students, Teachers, Schools in the Secondary Education 1971-1984

Year	Number			Number of Teachers	Number of Schools
	Male	Female	Total		
1971-1972	224533	92573	317106	13762	995
1972-1973	250083	103031	353114	14338	1033
1973-1974	271337	113806	385143	14992	1064
1974-1975	320947	131964	452911	16642	1099
1975-1976	352184	141273	493456	18472	1221
1976-1977	391383	163801	552042	18472	1320
1977-1978	468164	196133	664297	19573	1384
1978-1979	550023	231743	781766	21256	1579
1979-1980	626588	271112	897700	25254	1774
1980-1981	646478	303664	950142	28453	1891
1981-1982	686159	332450	1018600	31253	2042
1982-1983	636930	334897	971827	32556	1977
1983-1984	630523	331480	962003	36144	2027

Source: 1. Ministry of Planning, 1978, p. 214
2. Ministry of Planning, 1980, p. 55
3. Ministry of Planning, 1981, p. 221-222
4. Ministry of Planning, 1982, p. 223
5. Ministry of Planning, 1983, p. 214

growth in the enrolment of students. For example in 1957 the total population of Iraq was 6,538,199 persons: 2526,988 persons, i.e. 39% of the population lived in the big cities: Baghdad, Basrah and Mosul. The total number of secondary school teachers was 3588 and 2131 of these teachers or 59 percent were located in the above three cities (Ritha, 1966, p. 112).

From these figures, one can clearly see that the high concentration of teachers in the three largest cities leaves other parts of the country with proportionally fewer secondary school teachers. In other words rural areas are relatively inpoverished in terms of teacher provision, although the total number of teachers rose from 3762 to 36144. At this time the number of secondary schools also increased from 912 to 2027, so increasing overall secondary school provision. See Table 7.10

7.7 Vocational Education

There are four kinds of vocational education which are included in this section. They are agriculture, industrial, commercial and home art which had been closed in 1975 - 1975. All of these schools start after student has graduated from the intermediate school. Education in these schools followed the same pattern as general secondary education in regard to length of studies, awards of certificates and promotion in extended by a year. The curricula of these schools both differed from those of general (academic) and varied among themselves.

The aim of vocational education is to prepare skilled workers to the above mentioned fields to meet Iraqi needs and to provide them with

TABLE 7.11

Number of School Students and Teachers for Vocational Education 1950-1984

Year	No. Students	No. Teachers	No. Schools
1950-1951	3973	481	20
1951-1952	3615	481	20
1952-1953	3993	450	21
1953-1954	4070	455	26
1954-1955	4417	517	27
1955-1956	5811	577	28
1956-1957	6096	667	28
1957-1958	6535	703	30
1958-1959	11918	700	39
1959-1960	9807	812	41
1960-1961	7975	765	44
1961-1962	8101	820	43
1962-1963	8044	869	43
1963-1964	7973	879	46
1964-1965	8011	865	45
1965-1966	7626	677	37
1966-1967	8694	784	36
1967-1968	10217	871	45
1968-1969	9753	1069	43
1969-1970	10053	1046	46
1970-1971	9929	1059	47
1971-1972	10143	1100	52
1972-1973	11426	1130	62
1973-1974	15639	1250	64
1974-1975	21025	1506	71
1975-1976	23298	1607	75
1976-1977	28365	1906	82
1977-1978	35188	2333	92
1978-1979	48186	3272	109
1979-1980	54026	3928	126
1980-1981	56835	4150	143
1981-1982	53203	4223	148
1982-1983	61383	4733	157
1983-1984	77433	5115	176

Note: Home Arts School were abolished since 1975-1976

Source:
1. Ministry of Planning, 1965, p. 64
2. Ministry of Planning, 1980, p. 56
3. Ministry of Planning, 1981, p. 214
4. Ministry of Planning, 1983, p. 219

a general technical education as well as like the home arts schools the aim of such education was to prepare girls to develop the Iraqi home economy and work at occupations requiring these skills enrolment in these schools has been low, in 1951, for example total enrolment was less than 750 students showing how inadequate provision was at this level.

Apparently there have been difficulties in absorbing the graduates of these schools, largely because they lacked sufficient practical training and showed distaste for manual work (International bank, 1952, p. 63).

The cyclical changes in the number of students attending these schools were associated with oscillations in the number of institutes (Okwuanasa, 1984, pp. 16-18), which increased from 20 in 1950 - 1951 to 44 in 1960 - 1961. The average rate of growth was 82% during the 1950 - 1960 years. As in 1962 the number totalled 43. In the subsequent ten years 1962 - 1972 the annual rate of growth fell considerably to 1.9% hence by 1973 the number of institutions totalled 62 and this increased to be 176 in 1984 with annual rate of growth of 10.7%. See Table 7.11. Similarly, the number of teachers in vocational education schools changed cyclically. The average annual growth during the years 1950 - 1960 stood at 5.4% hence the number increased from 765 to 1100 in 1960 - 1972. For these twelve years the annual rate of growth was 3.1% thus the number had risen from 1130 to 5115 in 1973 - 1974 with annual rate of growth of 14%. The number of students had increased from 3973 in 1950 up to 9807 in 1960 and 10053 by 1970 to be totalled 77433 by 1984, with annual rate of growth 9.4%, 2.4%, 17% respectively.

One can see from the above numbers that prior to 1968 most of the governments did not give any attention to vocational education and this may be due to some inherited factors which caused the development of vocational education in the Middle Eastern countries to suffer considerably.

A number of very strong factors inhibited the development of vocational education. For untold generations a strong prejudice has existed throughout the Middle East against manual work. It was regarded as undignified, degrading and menial (Okwuanaso, 1984, pp. 16 - 18). As a result, trade schools, when they existed, usually attracted those with no other alternative - orphans and children of the poor and lowly most nature of charitable institutions with the gradual rise of industry, the disdainful attitude towards vocational training and manual labour has began to wane but it is very much in evidence. (Qubain, 1966, p. 25).

For these reasons, vocational education remained limited during this period, in spite of the country's immediate need to meet its shortages of manpower. In various areas of economic development the government was not able to reduce the gap between the development of general, academic education and vocational education. The government in its educational policy, drawn up in 1964 - 1965, had provided for substantial expansion in vocational education. But progress in this direction was not achieved to the degree that authorities had hoped. From 1950 - 1958 to 1969 - 1970 the number of vocational schools increased from 20 to 47 and the number and the ratios of schools teachers and student in vocational education to those in general education. We find that the share of vocational education represents only 5.8 percent. It can be observed that this rate remained far below

TABLE 7.12

Ratio of Schools, Teacchers, and Students in Vocational Schools to Secondary Education

1921 - 1984

YEAR	PERCENTAGE OF VOCATIONAL SCHOOLS TO SECONDARY SCHOOLS	PERCENTAGE OF VOCATIONAL TEACHERS TO TEACHERS IN SEONDARY SCHOOLS	PERCENTAGE OF VOCATIONAL STUDENTS TO STUDENTS IN SECONDARY SCHOOLS
1921-28	18.18	19.6	9.2
1939-40	8.6	9.5	2.8
1942-42	8.0	8.7	4.4
1945-46	5.35	8.0	1.2
1948-49	4.03	7.0	2.4
1951-52	4.5	4.9	2.9
1954-55	2.7	4.4	5.3
1957-58	15.0	9.5	7.5
1959-60	11.0	10.3	6.7
1961-62	8.0	13.9	4.1
1964-65	6.8	15.8	4.4
1968-69	5.2	10.6	3.7
1971-72	10.5	10.1	3.0
1974-75	5.2	8.9	4.5
1976-77	6.2	9.8	5.1
1977-78	6.6	10.9	5.2
1978-79	7.5	15.4	6.1
1980-81	7.5	14.5	5.9
1982-83	7.9	14.5	6.3
1983-84	8.6	14.1	8.0

SOURCE:
1. Ministry of Planning, 1960, pp. 70 - 71
2. Ministry of Planning, 1970, p. 97
3. Ministry of Planning, 1980, p. 56
4. Ministry of Planning, 1982, pp. 215 - 217
5. Ministry of Planning, 1983, p. 218

the country's basic needs,especially given that this type of education is in heavy demand for fulfilment of the national development plans.

In 1976 - 1977 there was a deficit of 234,204 graduates in vocational education. Other concerned authorities had managed to overcome the deficit by 27.8 percent of qualified workers and 36.7 at intermediate supervisory levels (Ministry of Planning, 1978, p. 23). By 1983 - 1984 the percentage of vocational students students in general education reached only 8.0 and the same number applies for the percentage of vocational schools to general schools (See Table 7.12) In comparative terms, it is also worth noting that the rate of students in vocational schools in the Soviet Union is 68 percent of the total number of students in secondary education. In the Democratic Republic of Germany the percentage of student in secondary education was approximately 12% greater than that in vocational schools. This figure approximately 20% in Belgium and the Federal Republic of Germany.

It has been noted that despite the relative increase in the number of graduates in vocational education in Iraq after 1970 did not satisfy the country's needs.

7.7.1 Agricultural Education

Agricultural schools were established much later than industrial schools In 1927 the first of these was called the Royal Faculty of Agriculture. Two years after its opening the school was closed but re-opened in 1931.

Despite the agricultural nature of the country the number of this type of schools grew much slower than the number of industrial schools

and certainly slower than the country's needs. In 1956 - 1957 there was only one agricultural school, with eleven teachers and 133 students in Abugrap near Baghdad. Later numbers started to increase gradually and, by 1971 - 1972 the number had reached 13 schools with 378 teachers and 3202 students. Towards the end of 1983 - 1984 the number of students had reached 8704, with 30 schools around the country and 1075 teachers. (Ministry of Planning, 1982, 1983, p. 127, p. 223).

The annual rates of growth were 10.5% for students and 10.6% for teachers, 8.2% for schools in 1973 - 1983(See Table 7.1)

In the agricultural secondary schools students train to run agricultural projects and to work as agricultural advisers. They were taught subjects such as (see Appendix D), Arabic, religion, agriculture, horticulture, husbandry, biology, physics, chemistry, zoology, food industries, rural economy, social studies and co-operative and farm administration.

In fact, the problem of agricultural education seems to be general in many developing countries where its growth is not given enough attention and as a result is too slow. In most developing countries fewer than 4% of the graduates have studies in the field of agriculture and there is cause to believe that most of these became administrators, indeed many of the universities do not even include faculties of agriculture . Yet the need to raise agriculture productivity is one of the main imperatives of economic development in developing countries (Coombs, 1968, p. 77).

7.7.2 Industrial Education

Among the four areas of vocational education, industrial education was the least developed. The first technical school in Iraq opened its door for students in 1907, but despite this comparatively early date, the contribution of this school was rather negligible in contrast to the country's need for industrial caders and up to 1950 there were only three industrial schools one in each major city: Baghdad, Mosul, Basrah. The situation remained the same even after the overthrow of the monarchy and the establishment of the republican regime.

For the most part, students in this type of education study the same curriculum as the general secondary schools, with the addition of specialist technical, (See Appendix D2)

Although in 1958 the new government managed to increase the number of technical schools upto 8, but could not expand industrial education to meet its demands.

As industry in Iraq developed rapidly, the need for technical caders increased and after 1968 the new government of Iraq paid great attention to this sectors need for skilled manpower. In the past years this sector experienced an acute shortage of technical workforce which has greatly affected the realization of a number of projects in Iraq.

By 1983 - 1984 the number of schools had increased to 81 and there were parallel increases in the numbers of teachers and students. From Table 7.13 it can be seen that the rate of growth for the last 10 years has increased to about 25.5% for students, 21.8% for teachers and 15.7% for schools.

TABLE 7.13

Rate of Growth in the Industrial, Agricultural and Commercial Education

YEAR	INDUSTRIAL			AGRICULTURAL			COMMERCIAL		
	STUDENT	TEACHER	SCHOOL	STUDENT	TEACHER	SCHOOL	STUDENT	TEACHER	SCHOOL
1940-1950	6.9	1.2	11.6	7.2	6.2	0	-	-	-
1951-1961	18.0	16.5	12.8	35.4	23.7	25.8	-	-	-
1962-1972	3.5	2.8	0	6.6	12.3	2.6	17	24	18
1973-1983	25.5	21.8	15.7	10.5	10.6	8.2	18	18	15

SOURCE: Compiled from Appendix D3, D4, D5.

7.7.3 Commercial Education

In the foregoing pages I have discussed agricultural and industrial education in Iraq. Hence, in this sub-section I shall deal with commercial education. The importance of commercial education is also unquestioned in the development of education in Iraq.

As a part of vocational education the commercial schools were amalgamated with general education in the early 1930's and until 1939, there were no separate commercial schools, only commercial classes in secondary education. In 1939, the first school for commercial education was opened in Baghdad.

Economic and social activities necessitated the presence of commercial cadres: and the Iraqi people have traditionally seemed to prefer white collar jobs.

In fact young men prefer white collar jobs, working with one's hands is not considered dignified, the wages of skilled workers were generally lower than those of officer workers. Therefore no strong enough incentive existed for acquiring technical skills. On the other hand, white collar jobs, in addition to being better paid, carried with them social prestige so that it was only natural for young men to seek them in preference to skilled work (Qubain, 1958, p. 217).

The number of schools of this kind increased from 10 schools in 1958 - 1959 to (57) schools in 1982 - 1983. Similarly the number of teachers and students had risen by 1982 - 1983 to 1008 and 20520, respectively. Meanwhile the annual student rate of growth had risen to 18% by 1972 - 1982, while for teachers and schools this figure was 18% and 15% respectively in 1972 - 1982. (Appendix D_{6}).

In general, therefore, vocational education had little impact or change and development in Iraq and upon the skilled labour force. This was due to the slow quantitative increase in this sector's output and its relative neglect over decades in comparison to general education.

One of the many reasons which caused vocational education to develop too slowly to meet the country's increasing demands for manpower was the traditional belief that vocational education was of secondary or of rather less importance than academic achievement.

Another factor was because the original idea behind establishing vocational schools was to absorb some of the primary school graduates who were not accepted by or were not able to pursue their education in academic secondary schools .Such a concept led to the impression that vocational education was inferior and confined to one skill or trade, rather than being a means for socio-economic development. Thus most students considered academic secondary education as the only route to higher education. It was a known fact that there was only a slight chance of vocational school graduates entering higher educational institutes, because of their restrictions contained in the admission policies.

Foster emphasized that the lack of vocationally trained people who are needed for economic development is caused primarily by the economic system rather than by the amount of quality of instruction of the vocational schools (Foster, 1965, p. 153).

Tobias argued that the education aspects of a manpower programme includes setting goals, requirements and resources of educated people, reviewing enrolment and curricula of school in support of economic development compatible with other educational objectives. Assuring an adequate source of apt students and able teachers is part of this aspect of manpower planning (Tobias, 1969, p. 39).

Although it is widely recognised that vocational education and training constitutes part of the social and economic infrastructure, the specific contribution they can make to individual or overall economic performance has not convincingly been proved by analyses of routes of return or cost-benefit studies.

According to Ghazal, many of the training programmes are not feasible in Iraq because of the lack of highly qualified staff of instructors and practical teachers (Ghazal, 1973, p. 9). Thus the quality of instruction continued to be generally poor nor merely because of the insufficient number of qualified teachers. Which in 1968 - 1969 accounted for only 10 teacher per 100,000 inhabitants. Also because of no serious consideration was given to the establishment of specialised institutes to prepare vocational school teachers and to expand vocational education.

In the opinion of the United Nations manpower expert the process of training vocational workers in Iraq has to be perceived in a new light, because it is vitally important to production and productivity. He suggests that in order to accelerate the capacity of trainees in the quickest way, training instructors should be more emphasized (Storm, 1969, p. 4).

Hence, those graduating from vocational schools are not highly appreciated in industry. (Storm, 1969, p. 4) . It is for partly this reason that most graduates of vocational schools try to avoid the kind of job for which they were supposedly trained. Instead, they would rather seek a teaching job or a white collar position in any government office. This is one of the fundamental problems in Iraq which is suffering from shortage of manpower. The government has responded to this by importing skilled manpower and by training the domestic labour force.

According to Ghazal, training activities in Iraq are not structured according to basic and rational priorities and needs. This is due to both the lack of plans for vocational training in specific

terms and the lack of stability in economic planning and development in general. Therefore while there are shortages of skilled personnel in some occupations, there is an excess of employed people in others (Ghazal, 1973, p. 4). This sort of unbalanced situation is harming both the value of schools' output and the process of modernization. Iraq will continue to do so unless a serious effort is made to integrate academic and vocational education on the one hand and national development plans on the other.

7.8 Teacher Training

Is one of the most important aspects in coping with the changes in education today. It plays a key role in the educational system and their quality is the single most important element in achieving effective learning. Education and teacher training in Iraq have engineered considerable discussion and publication for several years because education has been changing and developing rapidly, especially over the last 15 years, and with this development there has arisen a heavy demand for better qualified teachers.

Also the rising awareness of the importace of qualified teachers and the numerous changes in the scientific fields have led to continual re-evaluations of teachers and teacher education programmes. However, there are two major factors by which any development in the educational system may be judged. Firstly, the general educational standard of teachers in the system and secondly, the type and the length of their training. (Beeby, 1968, p. 69).

All segments of society would probably concur that teacher training and educational background are crucial to the effort to improve educational system. Teacher training has the unique capacity to lead the educational system as a whole to become a real force in the overall improvement in Iraqi society, if teachers have been prepared and are allowed to practice in ways that respond to the tangible needs of their respective societies. However, teachers contribute to the preparation of the future generation. The role will demand a great deal of skill and competence in order to build a useful and effective generation and society (Abdul-Salam, 1974, p. 12) and technological challenge and bring the standards of educators up to the level of competency of the rest of the world at least. The teacher education program is the most important institution for providing the necessary teaching skills and knowledge. Previously, little or no attention has been paid in Iraq to teacher improvement: the emphasis instead has been soley placed on curriculum changes; teaching materials, educational technology and other mechanical advances.

I think the time has arrived when must be made changes and improvements in teacher education to meet the needs of an expanding and socially developing society. Previously, Iraq was a backward nation, emerging from divergent tribal societies and from having been a colony of Great Britain both of which have severely impeded its growth as a social entity. It now must function as a member of the Arab world and as a member of the world community.

However, the Iraqi educational system, by and large, has not kept pace with the urgencies of social change and has not adjusted its training programme to prepare teachers to cope with these new conditions of modern Iraqi society. Many reports and studies available have

indicated the reason for the weakness of educational system is due to the lack of qualified teachers as well as other elements in the educational process. (Abu-Taleb and others, 1979, p. 3).

However, Iraq has two main types of teacher training institutions to provide teachers at pre-primary and primary levels. In 1945, at the primary level there were two teacher training colleges in Baghdad; one for women, the other for men, two others at the local level in Mosul, Basrah offering a three year course for graduates of the intermediate school. In 1950, because of the rapid increase in the number of children attending primary school, these numbers were expanded to eight. In addition short one year courses were offered to meet the growing annual demand for teachers.

By 1957 - 1958 there were 29 primary training colleges, 15 male, 14 female with 216 teachers; 149 male, 67 female attended by 5424 students. By 1975 - 1976 there were 27 training colleges with 8098 students. Then the number increased to 39 training colleges with 28788 by 1983 - 1984(See Table 7.14) This increase due to the compulsory Education Law No. 118, 1976.

The other type of teacher training is a two year course for the student who graduates of secondary schools. And graduates of these institutes they have to teach in primary schools in rural areas not less than two years before moving to settle in the big cities. This is part of government scheme to develop the rural area and make all the services available to the rural people.

TABLE 7.14

Teachers, Training Schools and Teacher Training Institutes 1974 - 1984

YEAR	TEACHER TRAINING SCHOOLS				TEACHER TRAINING INSTITUTES				TEACHER IN TEACHER TRAINING SCHOOLS			TEACHERS IN TEACHER TRAINING INSTITUTES		
	MALE	FEMALE	TOTAL	STUDENTS	MALE	FEMALE	TOTAL	STUDENTS	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
1975-1976	11	16	27	8096	4	7	11	7151			405			241
1976-1977	14	17	31	13521	4	8	12	7665	192	398	590	165	282	247
1977-1978	14	18	32	17361	3	10	13	6309	201	465	666	155	86	241
1978-1979	15	18	33	16102	3	10	13	4451	215	467	682	171	86	257
1979-1980	16	19	35	19377	2	13	15	4076	258	514	772	152	69	221
1980-1981	17	19	36	21892	2	13	15	4279	297	517	814	130	58	188
1981-1982	17	20	37	25468	2	3	5	3829	362	557	919	79	36	115
1982-1983	16	20	36	26191	3	4	7	6483	420	602	1022	160	59	219
1983-1984	17	22	39	28788	1	3	4	7687	477	638	1115	189	53	242

SOURCE:
1. Ministry of Planning, 1973, p. 552
2. Ministry of Planning, 1978, p. 32
3. Ministry of Planning, 1980, p. 56
4. Ministry of Planning, 1981, p. 231
5. Ministry of Planning, 1983, pp. 224 - 225

Table 7.14 shows the number of teacher training decreasing year by year from 15 institutes in 1979 - 1980 to 4 in 1983 - 1984 the reason for this is part of the educational planning to close these institute gradually and leave only the college of training due to the job.

7.9 Conclusion

From the foregoing discussion, one may conclude that the educational system in Iraq, has passed through different stages of development within national political development. Traditions and certain negative social attitudes have reflected adversely on women's and vocational education. The gigantic and massive quantitative growth which emerged during the periods between 1958 - 1968 and 1968 - 1980 affected the nature of the educational development. The government concentrated on the quantitative aspective or education to meet the urgent social and economic demands for education expansion. In this, it gave most attention to the building of more schools, preparing more teachers and allotting more funds. Thus the quantitative expansion was made at the expense of the qualitative aspects. Unqualified teachers, poor school buildings, and ineffective curricula were the fruits of much of that expansion. In addition, the instability of the political situation in the country till 1968 was also a stumbling block to the development of the educational system and which in-turn also hindered economic development.

Quantitatively, the expansion of educational opportunities was sufficient to initiate a change from a selective to a mass educational system. But from a point of view of modernization and development the educational system is still lagging behind the needs of the country.

This is partially due to the lack of systematic and comprehensive planning. The absence of detailed and systematic educational development plans has made it difficult to co-ordinate the efforts of the various educational organizations in the country.

The government planned to expand the scope of secondary education, but officials have stated that such expansion must be preceded by an adaptation of the predominantly humanistic and academic curricula to the country's need for people trained in technical and intermediate level skills. They have also expressed concern over arfrition rates because of examinations which diminish the upper grade of available, trainable manpower (Smith, 1971, p. 121).

So it may be concluded that political factors tend to dominate educational development in the country. The frequent changes at the ministerial level also did not provide the strong leadership needed so badly for education to develop a coherent educational policy geared toward fundamental changes required for developmental purposes. The lack of trained planners and the absence of an adequate statistical base were other obvious reasons for improper planning for educational development.

However, with the quantitative development of education in Iraq during the last two decades a number of problems and imbalances did occur. Not until recently have comprehensive educational plans been worked out for the first time to solve these problems. These plans seek to integrate the quantitative and qualitative expansion of the system, for example to achieve a better balance between the education of girls and boys and that of adults and children, between urban and rural facilities, between vocational and academic education, and

between educational output and the socio-economic needs. In actual fact the third arm of the government's manpower plan is based firmly on the expansion and strengthening of the education system. It was one of the main aims to see that every child has the chance of at least five years of elementary education by 1980 and that has been proved through the applying of compulsory Law No. 118, 1976. With almost half Iraq's population of 14 million under the age of 14 and there are nearly 2,5 million children in primary school. The five year 1976 - 1980 plan allocated large sums to buildings and training for education at all levels.

In the following chapter I shall discuss the Iraqi technical educational system with particular emphasis on the place and the role of technical education in the educational development.

CHAPTER EIGHT

Iraqi Technical Education System, Origins, Present Curricula, Structure, Duration and Administration

8.1 Introduction.

8.2 The Place of Technical Education in the Educational Structure.

8.3 Types of Technical Education Institutes.

8.4 The Structural Organisation of the Foundation of Technical Education.

8.4.1 Growth of Admission to Foundation of Technical Institutes.

8.4.2 The Present Curricular Structure of Technical Education.

8.4.3 Teaching Staffs.

8.5 Financing of Technical Education.

8.6 The Role of Technical Education in Education.

8.7 The Future Development of Technical Education From 1981-1995.

8.8 Obstacles to Efficient Technical Education.

8.9 Conclusion.

8.1 Introduction

In the previous chapter I demonstrated the overall aspects of the organisational structure of Iraqi educational system. This chapter is particularly concerned with the technical education in Iraq within the spheres of its system, origin, structure and administration. Hence, I like, to examine the place and role of technical education in the educational structure of Iraq with its problems and obstacles to supply adequate numbers of qualified and trained labour force.

In Iraq technical education started during the early fifties, due to the need for a skilled labour force 60 implemented the development plans which the country was making at that time.

There were a few technical institutes belonging to various colleges of Baghdad University until the later part of 1969, when the R.C.C. resolution No. 342 of 1969 unified all the institutes into one faculty, as part of Baghdad University.

The faculty included:

1 Technical institute.

2 Institute of Agricultural Technology.

3 Home Economics Institute.

4 Institute of Medical Technology.

5 Administration Institute.

The faculty was later separated from Baghdad University financially, technologically and administratively by means of R.C.C. Resolution No. 67 of 1972, which established a separate entity called (F.T.I.) the Foundation of Technical Institutes, related directly to the ministry of Higher Education and Scientific Research (Ministry of Information, 1979, p. 113).

The foundation of Technical Institutes there after became for organising and managing the greater part of technical education in Iraq. The FTI enjoys full legal financial and academic autonomy under a special law and it is represented at the highest planning council for education in the country, the Higher Education Council, (Al Bazzaz, 1978, p. 35).

Baghdad University had proved unable to solve the faculties financial and administrative problems and could not provide the necessary professional staff. From this it will be clear that existing system was incapable of preparing the skilled manpower required by the various different sectors, such as industry, agriculture, medicine etc.

Hence the new Foundation of Technical Institutes was created to meet the needs of development.

The main aims of the Foundation of Technical Institutes are as follows: firstly to train middle-level technicians for the industrial, agricultural, administrative, health and other sectors and to meet the national staff shortage, and secondly, because technology is the key to a countries national development, the manner in which governments perceive the role of technology is crucial to the contribution they can

make to economic development and social advancement, so the Foundation of Technical Institutes needs to co-operate with other establishments, exchanging knowledge and scientific experience, professional staff and other experts inside and outside the country. A third aim is to keep up with modern developments in technology and thereby speed the process of economic development especially by strengthening bonds with foreign technical and scientific institutes with a view to exchanging experience and knowledge. In this chapter Iraqi technical education system are presented and the role of it in education development is discussed.

8.2 The Place of Technical Education in the Educational Structure

Technical education is meant to be the education of skilled workers and technicians over a wide-ranging variety of fields which are in demand in a modern society (William, 1966, p. 30).

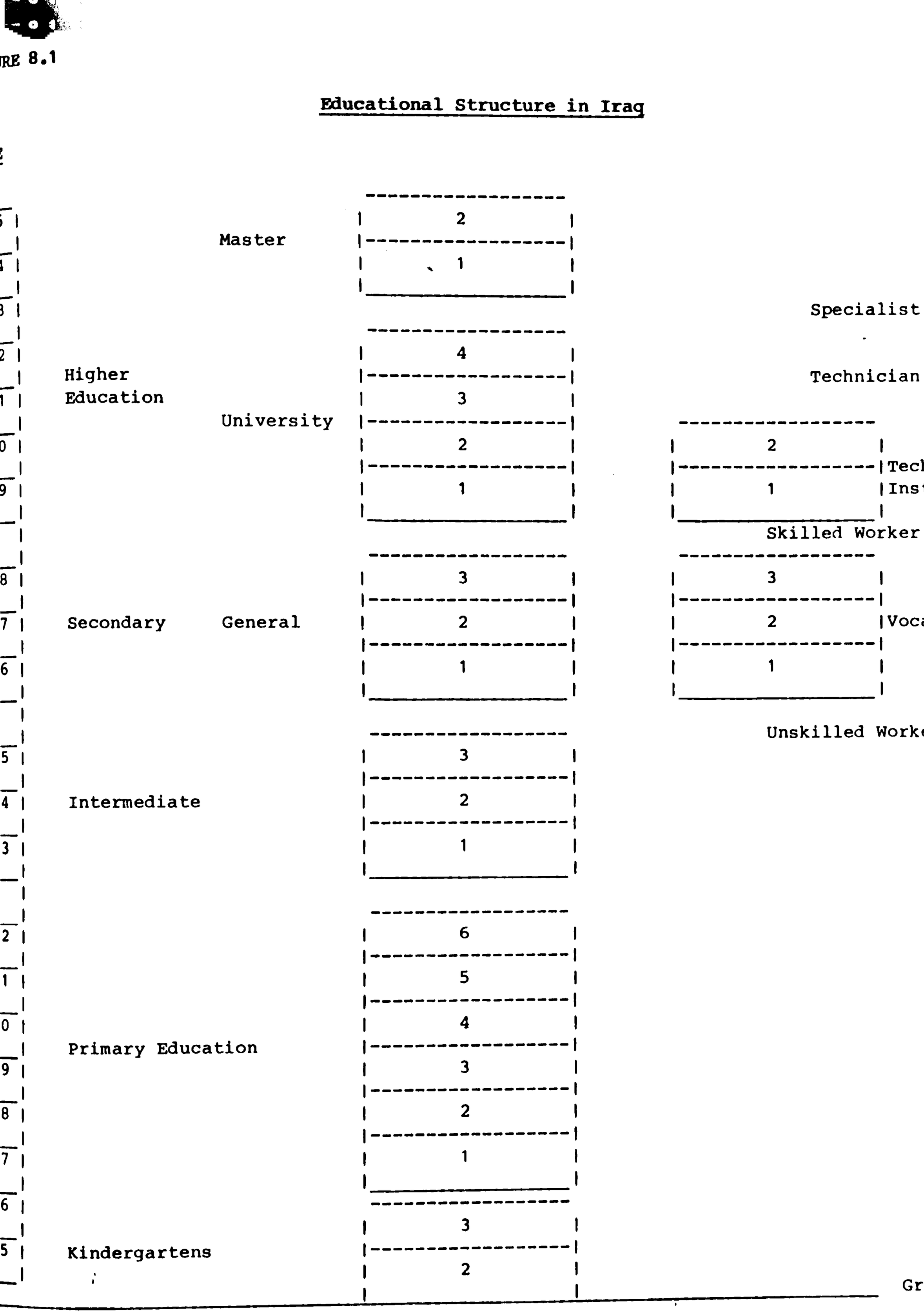
In Iraq technical education is customarily provided after secondary education.(Figure (8.1) shows the structure of education in Iraq and the place of technical education in it).

In general terms the responsibility for education in Iraq rests with the state. Attendance at school is compulsory from the age of six to twelve and education is free of charge.

The Iraq educational system falls under the control of the Ministry of Education. Education starts with primary school which children enter at the age of six. They then go to elementary school from the age of thirteen to fifteen. Secondary school students enroll at the age of sixteen and leave at eighteen. Higher education starts

URE 8.1

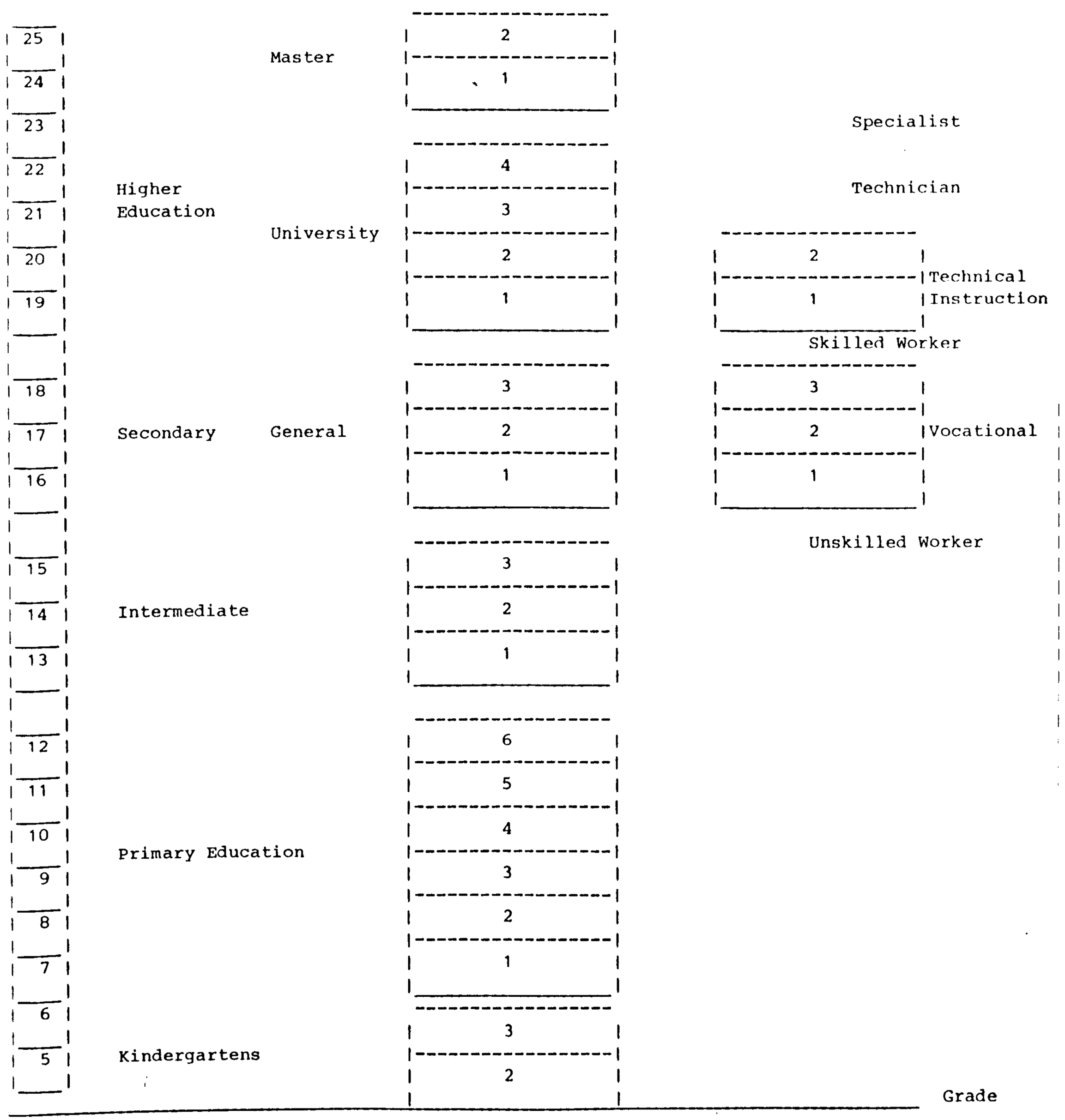
Educational Structure in Iraq



(H. Abdul Wahab, 1979, p. 62)

FIGURE 8.1

Educational Structure in Iraq



(H. Abdul Wahab, 1979, p. 62)

at the age of eighteen upwards and may take several forms. Students who want to do technical education can join one of the Technical Institutes. The duration of such education is not less than two years. Students who want to specialize further can join a University. Universities, like the Foundation of Technical Institutes, are directly related to the Ministry of Higher Education. (Ministry of Higher Education 1980, p. 18)

Technical training carried out at specialized training centres attached to various productive establishments is not included in the above outline. The duration, level of skills to be acquired and the depth of specialization to be achieved from such training varies according to the different needs of each of the establishments. The training centres pay little attention to pedagogy and provide trainees with a sound theoretical background, concentrating on manual skills through short and intensive courses, usually as pre-service training or in service training (Yahya & Ibrahim, 1982, p. 7).

They aim at improving, up-dating and up-grading the skills and abilities of the workforce. At the present time the role played by such centres is particularly important because they are able to part of the demand for technicians by up-grading some skilled workers to take up technicians jobs in the labour structure. This role is a transitional one, until the country's technical education institutions are sufficiently developed for the labour structure to be readjusted in such a way that the required ratios of specialists to technicians to skilled workers can be reached (Al-Bazzaz, 1978, p. 20).

Table (8.1) shows the training centres attached to various establishments and ministries. They offer a range of different

BLE 8.1

Technical Institutes and Training Centres in Iraq

(Excluding The Foundation of Technical Institutes)

	Institute or Centre	Attached to	Educational Level for Admission	Duration of Course
1.	Veterinary Institute	Ministry of Agriculture	Secondary School Certificate	2 Years
2.	Institute for Co-operatives and Extension Work	Ministry of Agriculture	Various	2 - 6 Months
3.	Mechanical Training Centre	Ministry of Agriculture	Various	Short Course
4.	Higher Health Institute	Ministry of Health	Secondary School Certificate	2 Years
5.	Iraqi National Oil Company Training Centre	Ministry of Oil	Secondary School Certificate	2 Years
6.	Telecommunication Training Centre	Ministry of Communication	Secondary School Certificate	2 Years
7.	Broadcasting Training Institute	Ministry of Information	University Graduates	3 - 10 Months
8.	Librarianship Department	University of Al Mustansiriyah	Secondary School Certificate	2 Years
9.	Hoteliery and Tourism Department	University of Al Mustansiriyah	Secondary School Certificate	2 Years
10.	Technicians Programms at the University of Technology	University of Technology	Secondary School Certificate	2 Years

URCE: Yahya and Ibrahim, 1982, p. 9.

subjects and the duration of such study is varies from between two and six months up to two years. The centrés admission requirement is the possession of a secondary school certificate. The graduates from these training centres or technical institutes are awarded a diploma in technical education.

However, the number of students admitted to these institutes is declining compared with the number of students admitted to FTI. Table (8.2) shows the increasing number of students attending the institutes in FTI in 1972-73. The percentage of students admitted to the FTI institutes as compared to the total number of students admitted to other institutes increased to 75% by the year 1981-82, due improvements in FTI which was able to provide technicians with a high level of skills. It also awarded degrees which enables FTI graduates to find better jobs.

Table (8.3) shows the increasing role being played by technical education in comparison with Universities during the last few years. In 1972-73, the percentage of students admitted to FTI was 6.23%, but by 1981-82 this number had risen to 41.01%. This was entirely due to the vigorous implementation of government policies to meet the speedy national growth and social change. From these figures, it can be seen that the FTI had grown to fill the gap created by development.

More students were entering the technical institutes given that the average duration of study in these institutes was two years, they represent good value for money. At the same time, they offer an excellent short-term solution to the problem of manpower shortages. In other words, they offer considerable economic advantages over the universities, which take more than four years to produce graduates.

TABLE 8.2

Number of Students Admitted in FTI

and the Other Training Centres From 1972-73 to 1981-82

YEARS	Institutes and Centres				FTI	Total	%
	I.N.O.C. Centre	High Health Institutes	Telecom-munication Centre	Total			
1972-73	248	1373	96	1717	940	2657	35.38
1973-74	209	1132	51	1392	2011	3403	59.09
1974-75	390	984	121	1495	2072	3567	58.09
1975-76	430	678	138	1246	3777	5023	75.19
1976-77	596	891	114	1601	5637	7238	77.88
1977-78	551	1200	193	1944	6454	8398	76.85
1978-79	783	1227	143	2144	6486	8630	75.16
1979-80	1001	1367	244	2612	7484	10096	74.13
1980-81	1556	1629	274	3459	12082	15541	77.74
1981-82	2021	2870	181	5072	14838	19910	74.52

SOURCE: (Yahya & Ibrahim, 1982, p. 10)

Number of Students Admitted to Universities and Technical

Institutes for the Academic Years 1972-73 to 1981-1982

YEAR	UNIVERSITIES							Total Number of Students in FTI (1)	Total Number of Students in Universities and FTI (2)	(1) / (2) = (3)
	Baghadad	Mosul	Basrah	Salh Aldeen	Al Mustinsrya	Technology	Total			
1972 - 1973	5387	1134	1361	477	4946	821	14126	940	15066	6.23
1973 - 1974	6843	1487	1631	770	5151	771	16653	2011	18664	10.77
1974 - 1975	8342	1993	2068	612	4974	703	18692	2196	20888	10.51
1975 - 1976	6930	2720	3104	909	2375	1737	18224	3777	22001	17.16
1976 - 1977	6445	3320	2550	1240	1600	2100	17963	6271	24234	25.8
1977 - 1978	6065	2391	1967	1163	2628	1804	16451	7187	23638	30.4
1978 - 1979	6860	3110	2460	1745	2255	2300	20546	7300	27846	26.21
1979 - 1980	10018	3757	2797	1952	3054	2054	23632	7484	31116	24.05
1980 - 1981	9648	3446	2581	1699	2737	2013	22124	12082	34206	35.3
1981 - 1982	8307	4339	2410	1361	3040	1882	21339	14838	36177	41.01

SOURCES: (Yahya & Ibrahim, 1982, p. 13)

By the time the university graduate has finished his studies, the FTI graduate had already worked for two years and earned more than the university graduate.

Figure (8.2) shows the number of students admitted to the FTI increasing year by year, a particularly sharp increase occurring between 1979-80 and 1981-82. We have already explained, it is government policy to encourage secondary school graduates to attend technical education institutes in order to meet the high demand for the middle cadres created by an accelerating development process.

8.3 Types of Technical Institutes

The importance today of technical education for economic and industrial progress, whether in developing countries or in advanced countries, is largely undisputed, since the acquisition and application of better technology is a key aspect of a country's national development. The manner in which governments perceive the role of technology is crucial to the contribution they can make to economic development and social advancement, (Al-Hilali, 1975, p. 36).

Technical education, therefore, has a substantial part to play in the socio economic development of developing countries. All too often, however, inappropriate technology has detracted from a country's. This being so, Iraq is making considerable efforts to develop and expand technical education within the carefully regulated context of over all educational reforms designed to serve the people.

However, although the technical institutes have witnessed a rapid rate of growth directed towards needed areas of specialization, these

Fig 8.2 Number of students Admitted to Universities and Technical Institutes

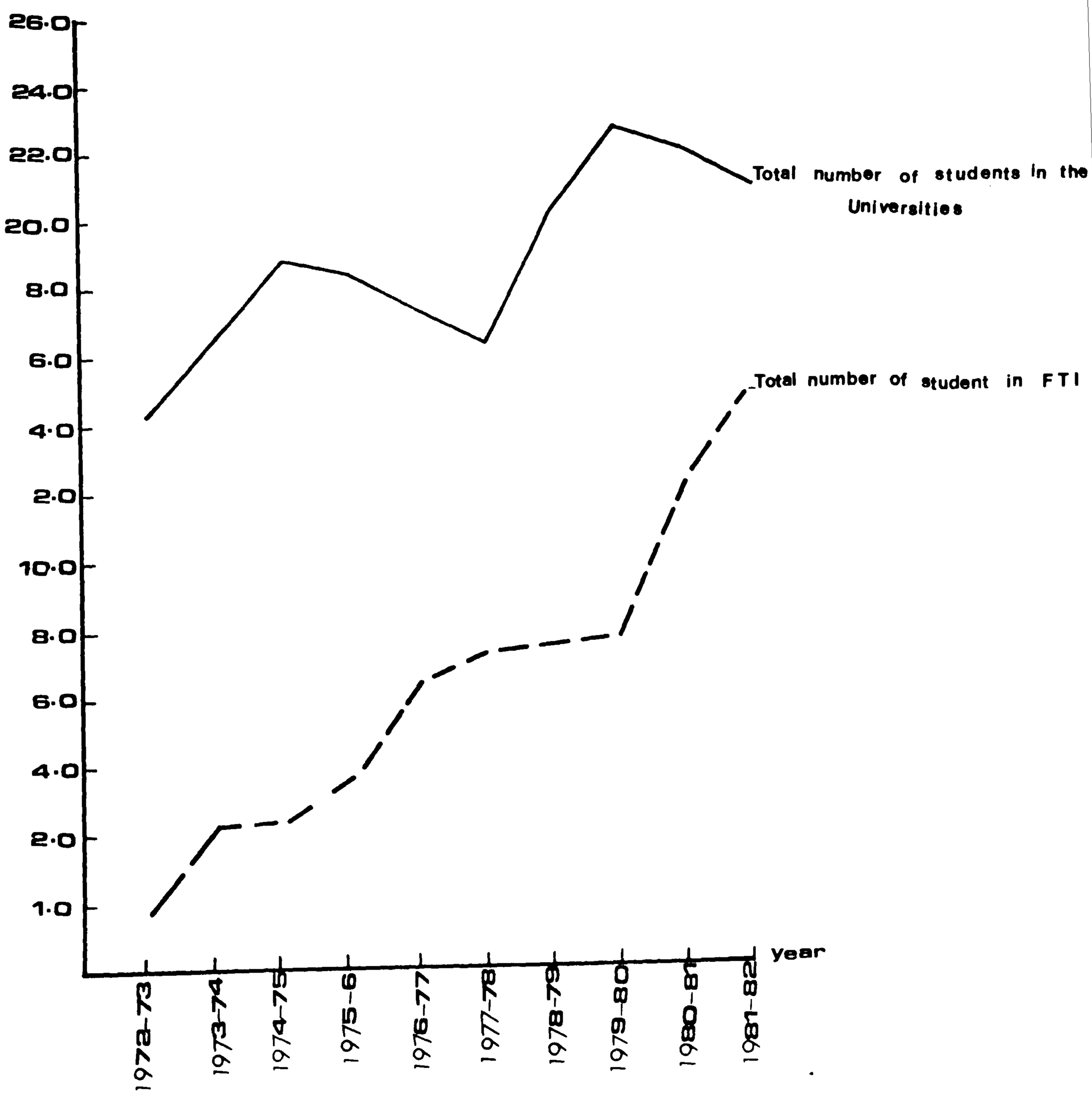


TABLE 8.4

Technical Institutes Attached to Foundation of Technical Education 1981 - 1982

	INSTITUTE	LOCATION	SPECIALIZATIONS	YEAR FOUNDATION
1.	Technology	Baghadad	Civil, Mechanical, Electrical Industrial Instruction, Chemical Industries, Surveying.	1969
2.	Administration	Baghadad	Office Management, Accounting, Statistics, Store Management, Hospital Management.	1969
3.	Administration	Baghadad/ Khurh	Office Management, Store Management, Law Management.	1976
4.	Technical Agriculture	Baghadad/ Abu Ghraib	Field Crops, Plant Protection, Soils, Horticulture, Animal Production, Farm Mechanization, Extension and Rural Development Agricultural Co-operatives.	1964
5.	Technical Medicine	Baghadad	Clinical Analysis, Dental Technology, Nursing.	1966
6.	Applied Arts	Baghadad	Commercial and Industrial Design, Social Work, Technical Training.	1969
7.	Technical	Mosul	Civil, Mechanical, Electrical, Chemical Industries, Office Management, Accounting, Store Management, Clinical Analysis, Preventive Medicine.	1976
8.	Technical Agriculture	Mosul/ Numrod	Field Crops, Horticulture Farm Mechanization, Agriculture Co-operatives, Animal Production	1980

Cont'd ....

TABLE 8.4 Cont'd

Technical Institutes Attached to Foundation of Technical Education 1981 - 1982

	INSTITUTE	LOCATION	SPECIALIZATIONS	YEAR FOUNDATION
9.	Technical	Kirkuk	Civil, Mechanical, Electrical, Office Management, Accounting, Store Management, Chemical Industries.	1976
10.	Technical Agriculture	Kirkuk/ Al-Hawaija	Agricultural Mechanization, Animal Production, Horticulture.	1980
11.	Technical	Arbil	Civil, Mechanical, Electrical, Office Management.	1978
12.	Technical Agriculture	Arbil/ Aski Kalak	Animal Production, Horticulture Agriculture Co-operatives.	1977
13.	Technical	Hilla	Civil, Mechanical, Electrical, Office Management, Accounting, Store Management.	1976
14.	Technical	Rumadi	Civil, Mechanical, Electrical, Office Management, Accounting, Store Management.	1977
15.	Technical	Najaf	Civil, Mechanical, Electrical, Store Management, Accounting, Office Management.	1978
16.	Technical	Nasryia	Technology, Administration	1980
17.	Technical Agricultural	Kufa	Agricultural Mechanization, Animal Production, Field Crops.	1981
18.	Technical Agricultural	Bami Saad	Animal Production, Field Crops, Agricultural Mechanization, Draingage and Irrigation.	1980

Cont'd ....

TABLE 8.4 Cont'd

Technical Institutes Attached to Foundation of

Technical Education 1981 - 1982

INSTITUTE	LOCATION	SPECIALIZATIONS	YEAR FOUNDATION
19. Technical Agriculture	Kut	Agricultural Mechanization, Field Crop, Animal Production.	1980
20. Technical Agriculture	Al Musayb	Agricultural Co-operatives, Horticulture, Agricultural Mechanization, Drainage and Irrigation.	1979
21. Technical Agriculture	As Shatra	Agricultural Mechanization, Field Crop, Animal Production, Horticulture.	1979
22. Technical	Amara	Civil, Mechanical, Electrical, Administration.	1979
23. Technical Agriculture	Kumet	Animal Production, Field Crops, Horticulture, Agricultural Mechanization.	1976

SOURCE: (Yahyah & Ibrahim, 1982, p. 8)

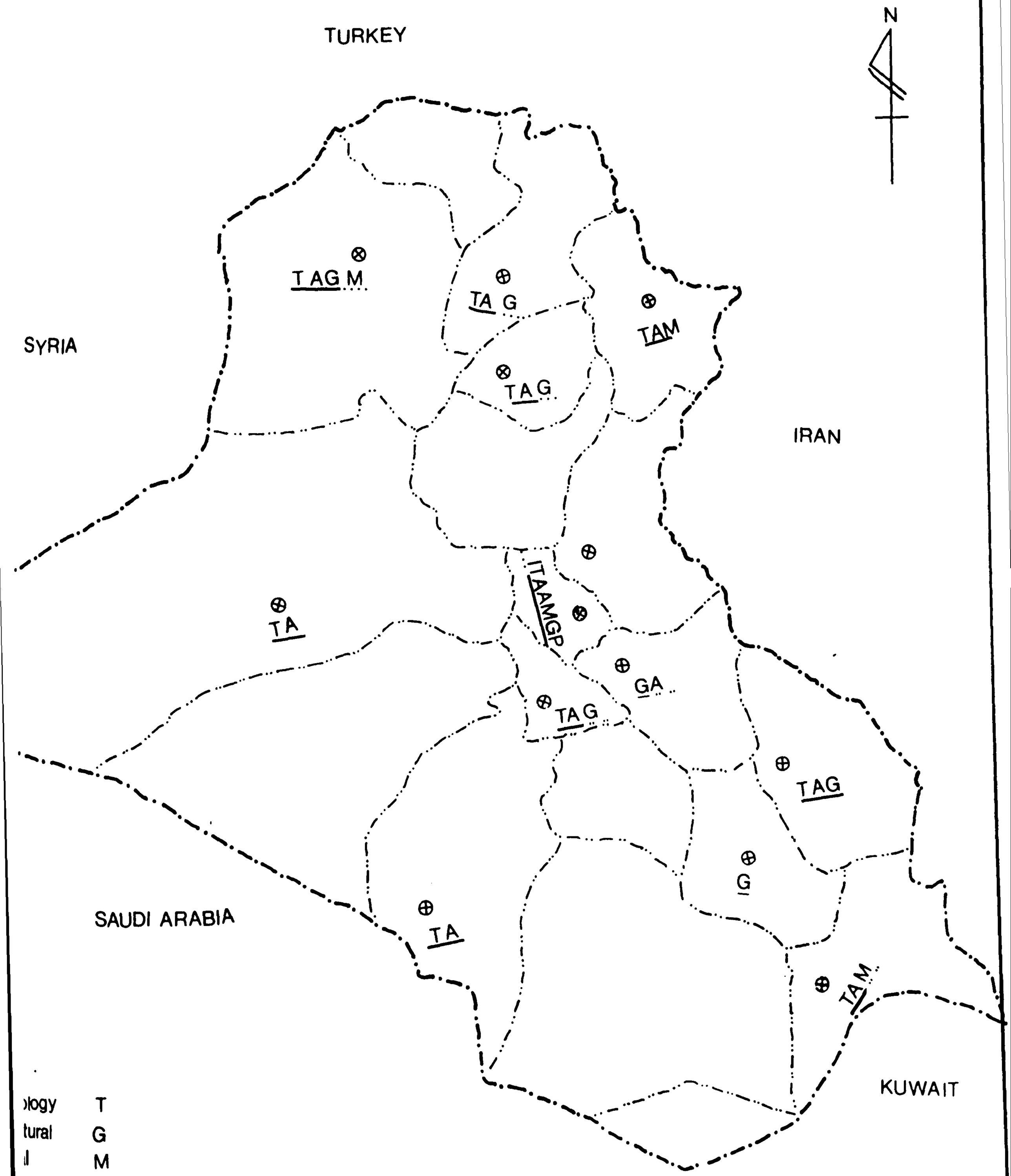
specialities have proved, for the most part, incompatible with the needs of the country's development programmes.

The various fields of specialization are located in different parts of the country, with the aim of providing a fair distribution of technical education, some institutes were merged to form Polytechnics and new departments were added to others. In 1979-80, institutes were opened in Molul, Kirkuk, Nasryia and Barisaad, and by 1981 an institute for Agricultural Technology was opened in Kufa, (Ministry of Planning, 1982, p. 73).

The institutes attached to the FTI are listed in table (8.4). The table also shows the specializations they offer and the year of founding. The location of these institutes and proposed additional institutes are shown in figure (8.3),

The great economic development that Iraq has witnessed since gaining control of its natural resources and has stressed the great need for technologists and technicians in large numbers to carry out the task of technology transfer, that is to say the assimilation and adaptation of technology to needs of the national development programme. This places a heavy responsibility upon the FTI for the training of middle level-technicians, who will carry out the construction, running and maintenance of the huge industrial and agricultural project that are being implemented or completed, (Ministry of Planning, 1982, p. 38).

re (8.3) Location Of Technical Institutets In Iraq



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8.4 The Structural Organisation of the Foundation of Technical Institutes in Iraq

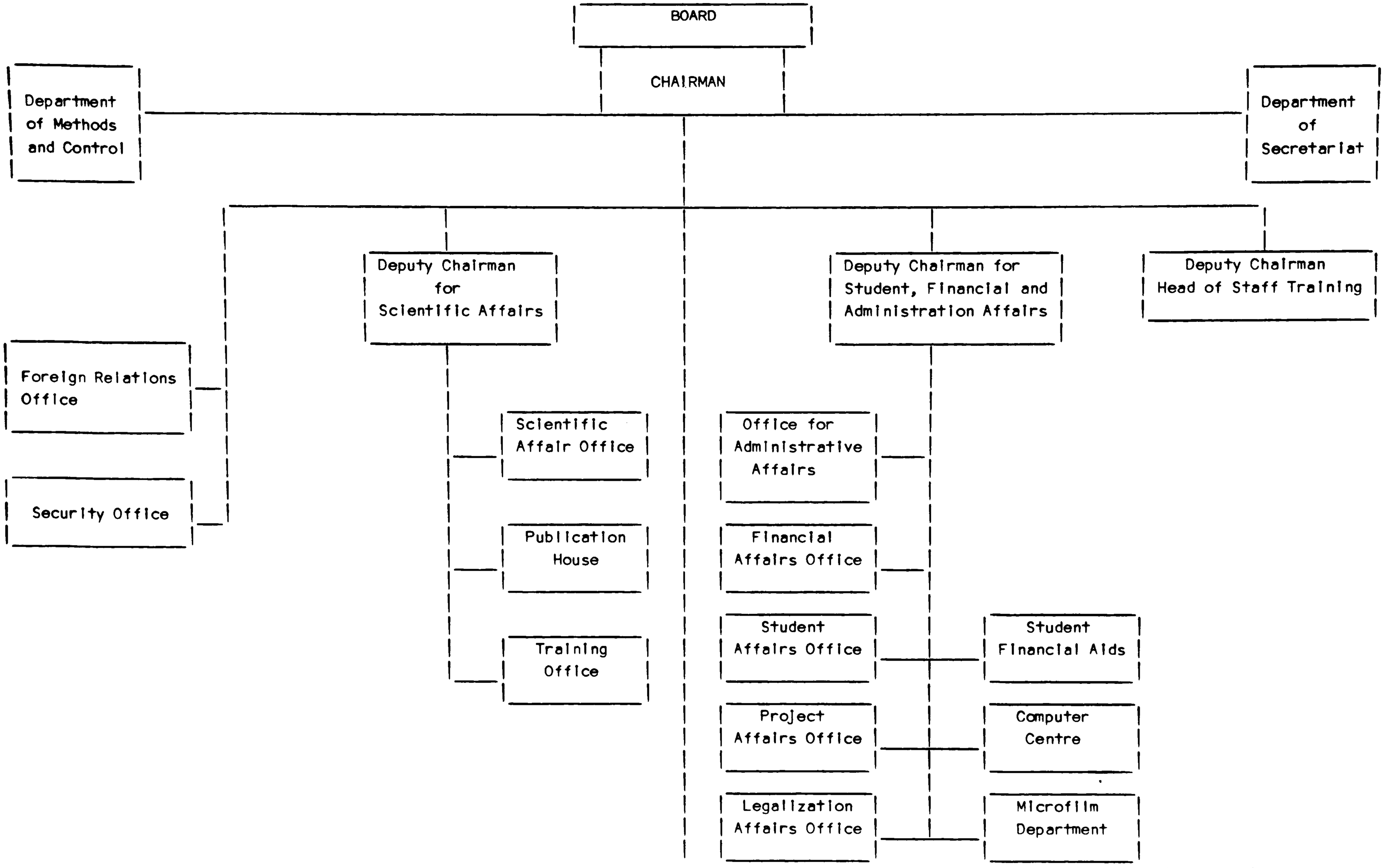
Since its establishment, the foundation of Technical Institute its main activities have been to expand existing institutes and to meet their need for facilities, equipment, teaching and training staff in accordance with the increase in student admissions (Al-Azawai, 1974 p. 66).

The foundation of Technical Institutes is run by its president and its council, which lays down the foundation's policies in educational, administrative and financial matters. The highest authority in the organisation is the board, whose chairman acts as head of the Foundation.

The Chairman has a deputy. Other members include a dean from the group of institutes and a representative from the Ministries of Planning, Industry and Agriculture as well as from the University of Technology, the foundation for vocational education, the National Union of Iraq; Youth and Students, the teaching staff and the teacher's union. Also included are the assistants to the president of the Foundation of Technical Institutes, (FTI, 1982, p. 175).

Each institute is managed by its dean and council, which consists of all the Heads of Departments, student representatives and representatives from the teaching staff, as well as representatives of the particular productive organisation related to the institute. There are twenty-four specialized Technical institutes which belong to the FTI. Fig (8.4) illustrates the administrative and organisational structure of the FTI.

The Structural Organization of the Foundation of Technical Insitututes in 1982



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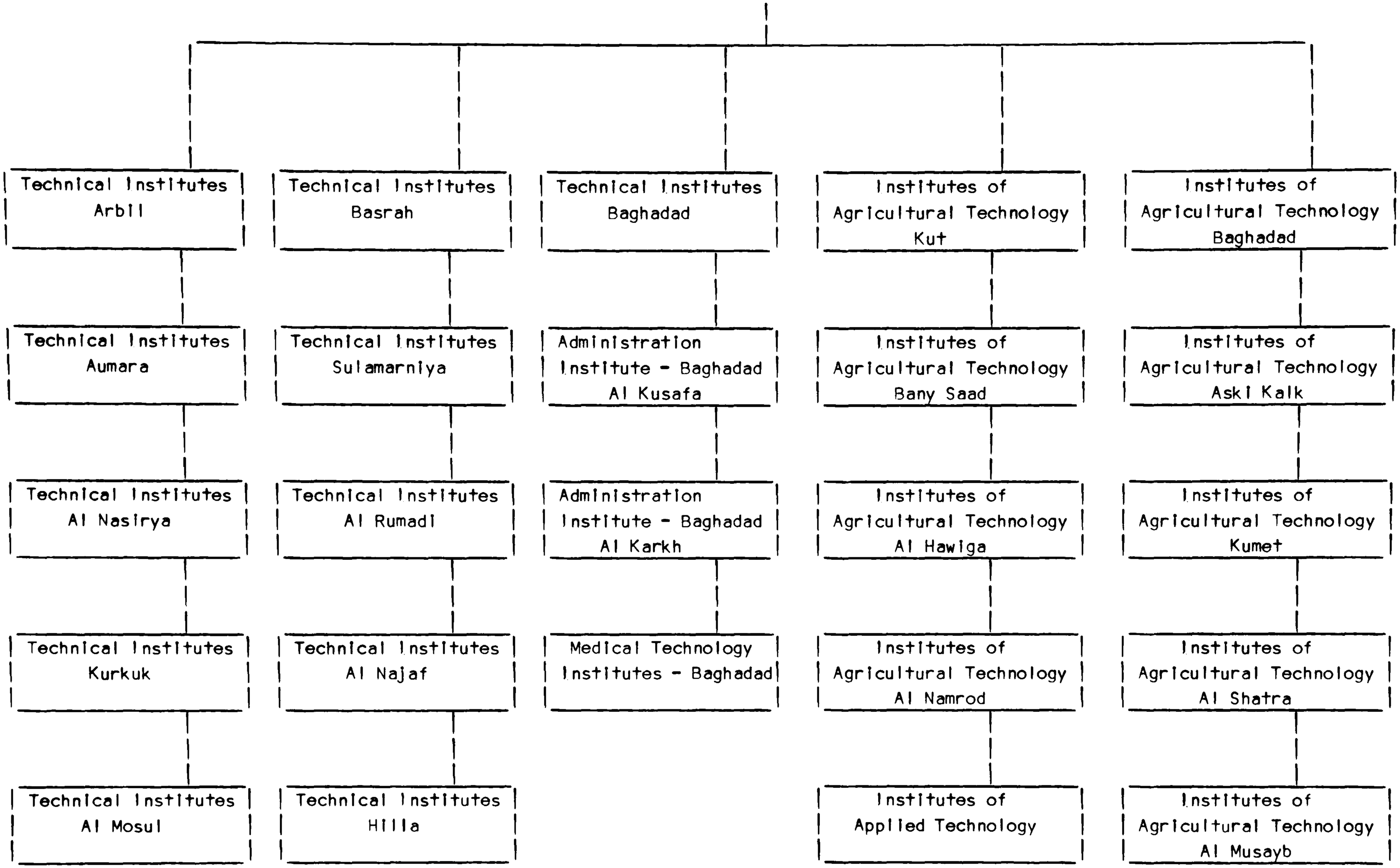


SOURCES:
1. (Bader, 1982, pp. 223-224)
2. (FTI, 1982, p. 74)

For administration purposes Iraq is divided into eighteen provinces (see Fig 8.4) and the TI's are scattered all around the country.

8.4.1. Growth of the Admission to FTI

Technical education has been viewed in Iraq as essential for an individual's economic and social advancement. Although the desire for knowledge no doubt an important factor among many students, for others, particularly those with a middle or lower class background, the driving force is largely a desire for economic security and social recognition (Qubain, 1966, p. 60).

The expansion of educational opportunities has generated increasing pressure on Technical institutes in line with political, ideological and developmental considerations. Because of the view that Technical education is one source of essential, highly skilled manpower, the successive Iraqi governments have striven to meet students esires and to modernise Technical education in relation to its manpower requirements. A major step taken towards this aim was the expansion of admission to the Foundation of Technical education. The FTI accepts admission applications from students who have successfully completed secondary school. Applications state the student's preferred institute and general area of study (science, arts, or vocational training). The admission are then processed by the central Bureau of Admission in the Ministry of Higher Education and Scientific Research. In actual fact, the admission and distribution of students to the various institutes and departments depends on the average number of marks obtained in the secondary school general examinations (Baccalaureat).

TABLE 8.5

Number of Students Admitted to FTI and Graduates From 1972 - 1982

YEAR	STUDENTS ADMITTED TO FTI	STUDENTS IN THE TO FTI	GRADUATE STUDENTS
1972 - 1973	940	2183	803
1973 - 1974	2011	2959	943
1974 - 1975	2027	4198	1980
1975 - 1976	3777	5899	2007
1976 - 1977	5637	9292	3168
1977 - 1978	6454	12253	4983
1978 - 1979	6484	13437	5540
1979 - 1980	7484	14987	5922
1980 - 1981	12082	20649	5938
1981 - 1982	14819	27808	8786

SOURCES: Derived from
See APPENDIX E_1, E_2, E_3.

The Baccalaureate is a basic entrance requirement of technical institutes or higher education in general. Not less than a 70% average mark is required if a student wishes to enter one of the Technical Institutes (Abdul-Wahab, 1981, p. 13).

Table (8.5) demonstrates that enrollment in Technical institutes increased rapidly from 940 in 1972-73 to 14819 by 1981-82.

Inspite of the expansion of the foundation of Technical institute facilities, the Ministry of Planning indicated in year 1981-82 that the demand by secondary school graduates for FTI admission was increasing and that the rate of expansion had failed to keep up with the increase (Ministry of Planning, 1982, p. 115).

From table (8.6) it can be seen that the rate of growth of students admitted FTI has increased from 24.3% in 1972-75 to 27.5% in 1975-78 while the rate of growth of graduate students remained the same during the above period. But the rate of growth for students admitted to FTI and Graduate in 1978-1982.

TABLE 8.6

Rate of Growth

Year	Student Admitted	Student Admitted to FTI	Graduate Student
1972 - 1975	29.1	24.3	35.0
1975 - 1978	19.5	27.5	35.4
1978 - 1982	23.0	19.9	12.2

Sources derived from Table (6.5)

8.4.2 The Present Curricular Structure of the Technical Education System

The foundation of Technical Institutes prepares the curricula of its institutes and most of the technical institutes. The duration of these course is now academic years, including extra summer training for about 7 weeks at the end of the first year and 5 weeks at the end of the second year. This takes place in factories, farms, and other related establishments. The academic year usually begins in the third week of September and lasts for 32 weeks (excluding holidays and the examination period).

The above curricula are the core of technical education in Iraq and reflect its philosophy. In recent years the foundation of technical institutes has revised the curricula of its institutes to comply more closely with the requirements of technical education. These requirements state that 70% of each week of study shall be devoted to practical and applied instruction. The remaining 30% of the week is given over to theory. In other words, a strong emphasis is placed on practical training and the acquisition of skills during the course of study and this represents the corner-stone of technical education in Iraq. (Ministry of Planning, 1977, p. 55).

In most specializations, like store-keeping and accounting, this is augmented by additional training during the academic year in the relevant government organisations. All training is conducted according to a set programme and is supervised jointly by the academic staff of the institutes and specialists from the organisation where the training is carried out. (Rashid, 1977, p. 11).

Summer training is considered an integral part of the curricula and satisfactory completion of such training is a prerequisite to graduation. The summer training lasts for 36 days at the end of academic year (for all the students in the FTI) with the exception of the students in the department of industrial training, which belong to Technological institutes, for whom the summer training period is only 24 days at the end of the second year. The Industrial Secondary schools are used as training centres for these students, (Ministry of Higher Education, 1980, p. 19).

The Foundation of technical institutes has also introduced new methods of summer training specifically for students of agricultural technology, where by they live communally on a campus. In summer of 1980 2,000 agriculture students trained on the specially adapted campus.

Although there has been a continuous development in the summer training programmes, there have been a variety of problems. For example, the training at the Agricultural training scheme does not always coincide with the relevant agricultural season.

There have been suggestions from the profession to change the training period in accordance with the agricultural seasons, so the students are able to acquire more practical skill (FTI, 1981, p. 35).

During their summer training the student's earn around 35 I.D. monthly as pocket money to cover transport costs and so on. After successful completion of their courses and summer training graduates are awarded a Technical Diploma in the appropriate field of study,

where upon the names of all graduates go to central planning at the Ministry of Planning, which then allocates jobs to the graduates.

8.4.3 Teaching Staff

The teaching staff consists of all those connected with instruction and this includes: Assistant Lecturers, Lecturers, Assistant Professors and Professors. Preference is given in the appointment of teaching staff of those with university degrees and with appropriate practical experience in their field.

On appointment, a new member of the teaching staff works as an assistant lecturer. He may achieve academic promotion by taking part in this field of specialization, as well as carrying out research. Participation in the design or development of projects related to his field of study is also encouraged (See Table (8.7).

Table (8.8) shows the development of the teaching staff of the Foundation of Technical Institutes, according to their academic titles, in the past ten years. From this, one can see that the number of Assistant Lecturers has increased sharply, from 34 in 1972-73 to 1558 in 1981-82. The number of lecturers has also risen from 32 in 1972-73 to 420 in 1981-82 (Ministry of Planning, 1982, p. 215).

Table (8.9) also shows the development of teaching staff, according to their qualifications, for the past ten years. It can be seen from the table that a large increase has occurred in the number of staff. These are mainly young recruits who are holder's of a first degree or postgraduate diploma.

Growth in the Staff of the FTI

INSTITUTES	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
Technology - Baghdad	40	60	66	103	138	162	227	240	269	273
Administration - Rissafa	28	35	36	40	62	69	105	102	105	118
Agricultural Technology - Baghadad	24	58	69	116	177	223	311	265	234	214
Medical Technology - Baghadad	24	26	40	60	68	79	102	114	115	115
Applied Art - Baghadad	20	19	21	29	32	37	39	36	40	37
Technical - Sulimanlyah		2	7	18	34	38	54	54	54	-
Technical - Basrah		23	28	52	65	71	99	115	119	124
Technical - Mosul					20	25	58	69	93	130
Technical - Kirkuk					9	37	35	38	47	61
Administration - Karh					13	18	32	39	44	45
Technical - Hillah					19	27	49	47	79	91
Agricultural Technology - Askikalk					37	89	158	115	106	-
Agricultural Technology - Kumet					39	71	133	95	76	78
Technical - Rumadi						14	36	40	58	71
Technical - Najaf							27	35	41	59
Technical - Arbil							30	31	43	61
Agricultural Technology - Al Shatrah								30	46	54
Agricultural Technology - Al Musaybe								63	115	133
Technical - Amarah								17	32	56
Technical - Al Nassryia									12	18
Agricultural Technology - Al Hawija									42	49
Agricultural Technology - Kut									35	53
Agricultural Technology - Bnisead									49	71
Agricultural Technology - Al Numrod									44	111
Agricultural Technology - Al Kufa									-	43
TOTAL	136	224	264	418	713	960	1495	1545	1888	2065

SOURCES: FTI, 1977-78, 79-78, 1980-81, 1981-82; p. 128, pp. 254-2601, pp. 171-200, pp. 155-180

Academic Staff and Technicians in the FTI, According to Academic Titles for the Year 1972-73 to 1981-82

	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
Professor	-	-	-	-	1	1	7	3	3	3
Assistant Professor	2	2	2	2	5	14	16	15	14	14
Lecturer	32	45	87	99	124	246	297	314	380	420
Assistant Lecturer	34	132	151	209	443	632	1,175	1,213	1,491	1,558
Research Assistant	-	-	-	-	-	-	-	-	-	-
Technical Instructor	78	64	101	122	287	412	535	1,136	1,634	1,661
TOTAL	146	245	341	695	860	1,305	2,030	2,681	3,522	3,656 0

SOURCE: Ministry of Planning, 1983, p. 215.

Number of Academic Staff and Technicians in the FTI, According to Qualifications, for the Year 1972-82

QUALIFICATIONS	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
Ph.D	8	9	4	4	12	37	54	46	61	72
Candiate	-	-	4	8	11	15	13	14	13	17
M.Sc	26	30	36	43	67	100	161	219	323	186
Post Diploma	3	9	10	14	33	99	126	153	186	47
B.Sc	66	162	193	239	452	648	1,132	1,111	1,304	277
Others	44	33	94	124	289	412	9	2	1	1
TOTAL	147	243	341	432	864	1,311	1,495	1,545	1,888	600

SOURCE: Yahya & Ibrahum, 1982, p. 23

TABLE 8.10

Number of Staff and Technician with their Rate of Growth

From 1972-1982

YEAR	NO. OF STAFF	NO. OF TECHNICIANS
1972-73	136	56
1973-74	224	92
1974-75	264	130
1975-76	418	219
1976-77	713	335
1977-78	960	285
1978-79	1495	843
1979-80	1545	1120
1980-81	1888	1613
1981-82	2065	1640

Rate of Growth

YEAR	NO. OF STAFF	NO. OF TECHNICIANS
1972-75	24.7	32.4
1975-78	31.9	9.1
1978-82	8.4	24.1

SOURCES: FTI Statistical Guide, 1981-1982, pp. 174, 65

A high rate of growth is recorded in the number of staff in 1972-75, well as in 1975-78. These increases amounted to 24.7% and 31.9%, respectively. There was also an increase in the number of technicians in 1972-75 and 1978-82, of 32.4%, 24.8% respectively (Abdul Wahab, 1982, p. 19). See Table 8.10.

At the present time, the relies mainly on non-Iraqi staff to meet the shortage of experienced and appropriately qualified staff. There were 583 non-Iraqi teaching staff out of 2065, the total number in 1981-82. In the same year 385 instructors out of 1640 were also non-Iraqi.

The FTI endeavours to keep the ratio of teaching staff to students at 1:10 to 1:16, according to specialization, and the ratio of technical instructors to students at 1:20. The percentage of teaching staff and instructors are shown in Table 8.11 and Appendix E.5.

8.5 Financing of Technical Education

In Iraq the cost of technical education, as in the case if primary and secondary education, is paid by the government. Technical education is considered in most countries of the world to be a high cost form of education, because it requires a great deal of modern apparatus and equipment for training, in the case of agriculture, for workshops, laboratories and, in the case of agriculture. These items require large sums of capital investment to provide the buildings, machinery and up-to-date technologists (Abdul-Wahab, 1978, p. 92).

In some countries expenditure on technical education and training is rising faster than the growth of the gross national product,

The Growth in the Percentage of Students to Staff Technicians and Officers in FTI 1972-81

YEAR	STUDENTS	STAFFS	TECHNICIANS	OFFICERS	WORKERS	Percentage of Students			
						Staff	Technicians	Officers	Workers
1972-73	2,138	136	56	-		1:16	1:38		
1973-74	2,959	224	92	-		1:13	1:32		
1974-75	4,198	267	130	-		1:15	1:32		
1975-76	5,899	418	219	406	673	1:14	1:27	1:15	1:9
1976-77	9,292	713	376	419	679	1:13	1:25	1:22	1:14
1977-78	12,253	960	485	474	833	1:13	1:25	1:26	1:15
1978-79	13,437	1,495	843	621	1,009	1:19	1:16	1:22	1:13
1979-80	14,947	1,545	1,120	722	1,280	1:10	1:13	1:21	1:12
1980-81	20,649	1,888	1,613	906	1,639	1:11	1:13	1:23	1:13

SOURCE: Yahya & Ibrahim, 1982, p. 25

TABLE 8.12

The State Ordinary Budget, Planned Budget

For the Foundation of Technical Institutes

1972-1982

YEAR	STATE ORDINARY BUDGET 000 ID	RATIO OF THE TOTAL	PLANNED BUDGET 000 ID
1972-1978	8000	0.7	-
1972-1974	1024	0.8	-
1974-1975	1906	1.6	6075
1975	2260	1.8	9239
1976	4713	1.9	11738
1977	6637	5.4	17478
1978	10104	8.9	32160
1979	14680	12.0	29229
1980	20984	7.0	39835
1981	26800	2.9	20724
1982	32400	26.5	-
TOTAL	122308	100	-

SOURCE: Abdul Wahab, 1981, p. 38

although in others, it is slower, as a matter of policy. The running cost is also high as it requires large number of specialist teaching staff and instructors. In Iraq the actual annual expenditure of the Foundation of Technical Institutes has developed rapidly, parallel with the increases in number of registered students. Between the years 1972 and 1982 the Foundation of Technical Institutes expenditure rose from 0.7% to 26.5% of the total expenditure for technical education in Iraq as shown in Table (8.12). The annual budget rose from ID 800,000 in 1972-72 to 26,800,000 ID in 1981 and further increased to 32,400,000 in 1982, at which time extensive developments of technical education was under way.

The average cost per student in the Foundation of Technical Institutes varies from one institute to another according to the specialization and place of study. In 1977, the estimated overall cost FTI per student was around ID 450. This sum does not include capital investment or depreciation (Abdul Wahab, 1981, p. 92).

8.6 The Role of Technical Education in Development

The role of technical education in all societies must be one of fulfilling the contemporary and projected requirements of society. In this context it must not be forgotten that the role of technical education in developing countries in bound to be different from that in a developed nation.

The role of technical education in developing countries is therefore somewhat limited and invariably falls far short of its purpose of allowing the people of third world countries to facilitate the exploitation of native resources, such as mineral deposits, natural

gas, petroleum and coal, copper, iron, zinc and other metallic ores. Similarly, the role of technical education should also be to enable the maximum utilisation of available land in such a way as to maximise agricultural, fisheries and forestry production, as well as factory-based industrial production (Jones, 1974, pp. 4-5).

Because the cost of technical education is invariably high balance has to be found between the sort of education provided and the number of trained people required. This in, turn, requires careful analysis of present and future national needs, based on reliable data. So in order to meet the needs of Iraq's national development programme for middle-level manpower, it is necessary to expand the foundation's activities and provide more technical institutes, distributed throughout the country.

The foundation of Technical Institutes also laid down its own plans for the same period. As shown in table (6.13), the difference between the number of technicians required by the national development plan and those trained by the FTI is met partly by the institutes not attached to the FTI, by training centres attached to different institutes, or by employment of foreigners.

Its worth mentioning here that, in 1974, the planning council approved the construction of thirteen agricultural and technological institutes. They were considered among the major development projects and they are as follows; six agricultural institutes in Hilla, Dijala, Ohi-Qar, Kirkuk, Wassit and Ninew; seven technological institutes in Barrah (petroleum institutes), Missan, Sulaimaniyah, Kirkuk, Hilla, Ninew and Baghdad (for training towards instructors).

Planned, Actual Rate of Implementation in Agricultural Technology, Technological, and Administrative Institutes (Related to the Needs of the National Development Programme)

1975-76 to 1979-80

INSTITUTES	1975-76			1977-77			1977-78			1978-79			1979-80		
	(P)	(A)	(RI)	(P)	(A)	(RI)	(P)	(A)	(RI)	(P)	(A)	(RI)	(P)	(A)	(RI)
Agricultural Technological Institutes	600	516	86	840	904	107.6	1680	1640	61.9	3000	1000	33.3	3480	-	-
Technological Institutes	1500	1145	76.3	2280	2333	102.3	3720	2490	66.9	5700	2935	51.4	6720	-	-
Administrative Institutes	1080	1343	124.3	1800	1966	109.2	3000	2295	76.5	4200	2810	66.9	4680	-	-

SOURCES: Abdul Wahab, Orient, 1978, p. 14.

P = Planned
A = Actual
RI = Rate of Implementation

The FTI has taken steps towards the implementation of these projects and some of the planned institutes have been opened in temporary premises until the completion of the appropriate buildings. The sites for these institutes were acquired and invitations to international companies for their construction of the instructors, training institutes and it is expected that work on the buildings for the others will start this year. Preparations were also completed for the opening of two new polytechnic institutes in April and Najaf.

It has been recognised that progress in developing countries is dependent upon speeding up the process of economic development and the better integration of human resources, policies and programmes to accord with economic planning. Economic development has to be the first goal of developing countries, because, unless the social and political structure of the country is such as to make economic growth a high priority no amount of education management skills, science, or technology added together, will raise the living standards of the mass of the population.

The role of technical education in developing countries must reflect this with regards to the way that policy-workers use these resources. Technology can only be a small but integrated part, of an overall strategy development, aimed at increasing social welfare. It is most certainly not sufficient to fund basic research projects and hope that benefits will automatically follow. It is not even enough to fund applied research and development work unless, of course, the goals are consistent with the immediate and future needs of society at large.

Technical education, therefore, has a substantial part to play in the socio-economic development of developing countries. One further point should be noted, which is the fact that technological development occurs at different rates in developed and developing countries, a phenomenon which threatens to widen the gap between these two types of society and so creating more problems not less.

New and old nations alike discovering that more money or credit or machinery or natural resources are valueless unless society has sufficient numbers of people, appropriately prepared by education and training, who can plan, manage, administer and do the necessary work for a modernising society. Development does not start with goods, it starts with people and their education, organisation and discipline. Without these three, all resources remain latent, untapped and potential.

8.7 The Future Development of Technical Education 1981-1985

There is an increasing awareness in Iraq of the role of education in socio-economic development, and most importantly, of the imbalance between educational development and economic needs. Consequently, efforts have been directed towards transforming the traditional, selective technical educational system into one that is in harmony with the requirements of modernization. Attempts were also made to reform the educational system, as a whole, by stressing the need for technical education and scientific training.

Dr. Abdul Bagi has pointed out that in Iraq education was one of the most intensive planning activities undertaken by the government of Iraq.

The educational authorities and the educational research centre of Baghdad University have embarked upon a period of intensive rethinking of educational aims and researching into the existing system of education, the aim being to re-organising and expand. This means in particular the fostering of a real sense of choesion and national unity, and the careful preparations of the younger generation for their future roles in social, economic, scientific and technical education, (Ministry of Education, 1971, p. 5)

The co-ordination with the supreme council of Educational Planning and the Ministry of Planning, the Foundation of Technical Institutes is working towards both quantitative development of education on a national scale. The plan for the period ending in 1995. (See Appendix E_6, E_7, E_8, E_9) was designed to accommodate the following numbers of graduate students in 1987 - 1988.

Agricultural Institutes	=	38.889
Medicine	=	17.409
Administration	=	80.095
Technology	=	110.910

The Foundation of Technical Institutes drew up its plans, according to these figures, calculating the number of students to be admitted and each year constructing, buildings according to local needs.

It is aimed to build another three institutes by 1988. These include a technical institute in Kurkik during the same year, technical institute is planned for Kur and a medical department is to be added to the technical institutes of Hila, Dyala and Arbil by 1986-87.

of these institutes will have departments of administration and technology.

> "We must also urgently tackle the problem of technical education whose inadequacies jeopardise the national development plan and the proper functioning of production and services in the country. What has been done in this domain falls far short of requirements. Each year, schools and universities produce thousands of students whose training cannot be effectively used in industrial or agricultural projects or in those in the expanding in public services. The government has to find employment for them in organisations which are already over-staffed, where they in fact add to the pool of disguised unemployment." (Political Report 1983, p. 114)

8.8 Obstacles of Efficient Technical Education in Iraq

We have previously concluded that education, particularly Technical Education, must be a crucial component in any country's development strategy, and with regard to Iraq, this must be orientated towards the basic needs of the community at large. The critical elements of such a strategy must focus upon the mobilisation of the country's vast manpower at all levels in the service of national development, including labour intensive small scale industries, developing side by side with agricultural progress and linked to education and population planning.

These tangible socio-economic goals would require fewer highly educated scientists and technologists than technicians and health and extension workers to operate within a decentralised framework.

The fact is that educational programme in general reflect the philosophies, the culture and the needs of people at a given time and place and this is particularly true in the case of technical education.

It has been pointed out by Graney that technical education frequently lags behind the development of a people and catches up, so to speak, in spurts and starts (Graney, 1964, p. 7).

As we know a society so habituated to education which permits achievement of occupational goals simultaneously with progression up the educational ladder, finds it hard to settle for less. It appears that in Iraq the majority of people place greater value upon upward educational progression than upon the achievement of technical education and this is one of the main obstacles to effective technical education.

Although the number of students admitted to the Foundation of Technical Institutes is increasing yearly, given the choice many students would prefer to go somewhere other than Technical Education, because of the attitudes of the society towards technical education. One of the major obstacles to the development of technical institute education for engineering technicians is the cult of the B.A. degree.

This has become such a status symbol that many people give no thought to the education one needs or is capable of acquiring but rather blindly charge ahead of unsuccessfully, for a Bachelor's degree.

One of the most important symbols down through the years has been the Bachelor's degree. It surely is more important than a lesser educational crudential because the graduate of the technical institutes lacks the bachelor's degree and the title of a professional. It is usually believed that a technician is merely a person who is trained to help an engineer or scientist, which means that he occupies

a position that is not only subordinate but also designated as subordinate to professionals.

Another problem of technical education is the lack of teaching staff and technicians. The Foundation of Technical Institutes depends mainly upon university graduates for their teaching staff in the technical institutes, but staff growth has kept pa with the subsequent growth of student enrollments. Moreover these graduates often lack teaching experience.

Another major problem is the lack of books and articles for the curricula of technical institutes in the Arabic language and the FTI is currently devoting considerable attention to this problem.

Moreover, the existence of technical institutes and training centres which are attached to various establishments and ministries and not to the FTI, causes waste of effort and suffer from lower standards of teaching than is the case with graduates. Owing to such problems, the FTI is currently trying amalgamate and co-ordinate and training centres and incorporate them into the FTI.

Finally, it remains difficult for institutions of technical education in Iraq to achieve a balance between their production and manpower needs, especially as regards mid-level personnel. It was reported recently that the worst obstacles to development projects are caused by a shortage of qualified personnel.

8.9 Conclusions

The philosophy and structure of education has changed radically in recent years and the expansion and development of technical education is at the very core of this change. Prior to World War II, very few people in the developed countries had heard of Technical Institutes and those who were familiar with the term usually had no clear idea of what a technical education was. In the last decade, there has been a very considerable increase in the development and growth of this new form of education, particularly technical education. Because of the rapid technological advancement in recent decades, with the consequent shortage of highly skilled manpower has forced the government to assume more and more responsibility of technical educatior (Al Samari, 1980, p.42). There are simply not enough people available who have the necessary intelligence and interest and who are willing to pay the price of getting a solid education in science, so more and more scientists and engineers have to depend upon assistance from semi-professional workers and technicians. Thus higher technical education is considered to be a new path in higher education in Iraq with clear and well defined objectives, independant of classical university education.

Iraq is even considered to be one of the few countries, if not the only one in the developing world, that is dealing with the problem of its shortage of middle-level manpower with an ambitious programme and to have taken important steps in its implementation.

The high rate of economic development in Iraq, at the present time creates changing needs for technicians and technical education

must maintain a harmony with such socio-economic demands, by future maintaining close links with society.

The problems and obstacles that face this new form of education are numerous, but the comprehensive planning for all levels of education and the special attention received by technical education has made possible the progress achieved so far.

Exceptional efforts will continue to be made until the manpower structure in Iraq is corrected from its present unbalanced form to that universally accepted, and a ratio of 1:4:40 between specialists, technicians and skilled workers is achieved. Therefore, technical education should continue to thrive, so long as it is not regarded as synonymous with the general educational, and so long as it remains the servant of educational opportunity instead of becoming a master.

For the improvement of technical education and its quality, continuous efforts are being made by the FTI to supply all the institutes with their basic needs in terms of equipment, apparatus and books. Curricula development requires the regular revision of the curricula by all departments in all institutes. The principles laid down by the special committee on technical education must be carefully observed.

In order that technical education remains responsive to the requirements of the national development programmes, close ties must also be maintained between the FTI and the industrial, agricultural and administrative sectors. Representatives from those sectors are on the Board of Directors of the FTI and participate directly in formulating

its policies. They are also represented in the institutes, councils and in some of the departmental councils.

Another direct link between technical education and society is through summer training in factories, farms or other establishments, as an integral part of students technical education. Teaching staff and instructors are required for their academic promotion to spend some time in industry or working on agricultural projects, to acquire practical experience. They are encouraged to participate in joint research with industry and agriculture to solve the problems that may face them and to make their technical skills and knowledge available at all times as consultants.

The FTI also organises training courses for the employees of the various sectors through the continuing education programmes to up-date their knowledge and improve their work performance.

It is important to mention here that the number of applications for admission to the FTI in recent years has been very large and exceeds the capacity of the institutes. This trend is the result of a greater awareness of the importance of higher technical education for society as well as the numerous material incentives provided by law to technicians and technologists in general and to the graduates of FTI in particular.

In this context it is worth mentioning that the current starting salary of a technician is higher than that of a university graduate.

CHAPTER NINE

The Role of Higher Education in Economic Development In Iraq 1958-1982

9.1 Introduction

9.2 The Development of Higher Education in Iraq From Its Origins to 1982

9.3 The Organization of Higher Education

9.4 Number of Universities in Iraq

9.4.1 Baghdad University

9.4.2 Mosul University

9.4.3 Salah Al Deen University

9.4.4 Al Mustansriyiah University

9.4.5 Basrah University

9.4.6 Technological University

9.5 Trend and Problems of Higher Education

9.5.1 The Growth of Enrolment in Higher Education

9.5.2 Staffs Shortage in the Universities

9.5.3 Lack of Educational Planning

9.5.4 The Brain Drain

9.6 Conclusion

9.1 Introduction

Iraq, which became independant towards the end of the nineteen fifties, had been left with an economy geared to meeting needs of the advanced industrial countries. There was a general backwardness in all economic, social cultural and educational fields. Higher education is no exception.

Technological evaluation and rapid changes in human demand and environment in many countries have encouraged local universities to review their objectives, activities and policies. Universities have become fundamental and important elements in the execution of national development plans. Tremendous responsibilities fall upon the universities in preparing qualified personnel, both in particular specialisations and in quantitative terms, in response to national economic, industrial and social plans.

This chapter explores the role of development of higher education in Iraq. The development of higher education will be discussed in the organization of higher education . The universities distribution among the different regions of the country will be surveyed. The institutional structure of bodies in charge of higher educational planning will be reviewed, lastly the trend and problem of higher education will be discussed.

9.2 The Development of Higher Education in Iraq From its Origins to 1982

Higher education in Iraq is of relatively recent origin. There was no formal organized university prior to 1956. Higher education was provided in separate colleges which were located mainly in Baghdad, such as the college of law which was opened by the Ottomans in 1908. This college was organized primarily to train Iraqi students in modern judicial and administrative procedures and to prepare them for junior government posts, and the legal profession. The British authorities re-opened the college in 1919 after a period of closure.

In fact, little encouragement was given to higher education in Iraq, due to the control of the Ottoman Empire which was followed by the British mandate from 1920-1932. By 1927 the college of Medceine had been founded and this was followed by the College of Pharmacy. No additional colleges were built in the thirties. Any one who sought university education had to leave the country to obtain a higher degree. Therefore, due to the inability of the country at this period to provide adequate institutions of higher education in a full range of subjects, the practice of sending missions abroad at government expense was initiated. As early as 1921 students were sent to the U.S.A., France, U.K., Egypt, Syria and Turkey. These scholars were enrolled mainly to the areas of general education. Most were preparing for secondary school teaching. They were seeking to gain professional training in various skills that were needed for national development (See Table 9.1).

The idea of establishing a modern university in Iraq was suggested first by the Council of Ministers in 1921. It was further discussed in

Students Sent by the Iraqi Government to Study at Foreign Universities

YEAR	LEBANON	EGYPT	BRITIAIN	U.S.A.	WEST GERMANY	EAST GERMANY	ITALY	FRANCE	SWITZERLAND	U.S.S.R.	CZECHOKL-OVAKIA	YUGO-SLAVIA	POLAND	BULGARIA	ROMANIA	OTHERS	TOTAL
1921-25	14	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-	21
1925-30	54	19	48	16	-	-	-	1	-	-	-	-	-	-	-	1	139
1930-35	52	21	38	33	12	-	-	11	-	-	-	-	-	-	-	6	173
1935-40	114	30	46	30	31	-	3	10	-	-	-	-	-	-	-	10	274
1940-45	30	58	57	24	-	-	-	1	1	-	-	-	-	-	-	9	180
1946-50	144	152	104	250	-	-	1	39	2	-	-	-	-	-	-	-	596
1950-51	-	-	78	47	-	-	-	1	7	-	-	-	-	-	-	-	133
1955-56	-	4	55	68	-	-	-	-	2	-	-	-	-	-	-	-	130
1956-57	-	3	38	60	46	-	2	-	3	-	-	-	-	-	-	-	152
1958-59	-	-	237	37	26	35	4	-	-	342	66	25	24	18	17	28	859
1959-60	-	-	45	18	8	23	24	-	-	158	24	3	1	-	4	23	331

SOURCE: Qubain, 1966, p. 278

1945 but no progress was made until 1956, when parliament passed the law establishing the university of Baghdad which incorporated the already existing colleges of higher education in to one university. (Qubain, 1958, p. 219). The real progress in higher education in Iraq began only after 1958 with the establishment of the university of Baghdad comprising its 33 colleges. Al-Hikman university was founded in the city of Baghdad which consists of two faculties, namely civil engineering and business administration. During the past demand for higher education was growing at a slow rate and fluctuated considerably. The factors which kept demand at a low level was mainly a result of the socio-economic features of that period, which was characterized by an extremely low level of socio-economic development, low income, general backwardness of the educational and the cultural poverty of the population due to acute shortages in the supply of educational facilities. Moreover, the high price and cost of education, particularly of higher education, was another factor which kept the demand for education at a low level.

The people's demand for education was mainly generated by their desire to increase their social status. National aspirations played a decisive role in creating demand for improvements in national intelligence and for efficient leaders and cadres in the struggle against feudalism and colonialism. Nevertheless, the demand for education was low and, for the most part, bore no relation to the needs of the economy. During that period the major emphasis in higher education was placed on law specialization and there was very little stress on science and on the more practical subjects such as engineering, medicine and other applied technical fields.

The other limitation of higher education in Iraq was mainly designed and advanced for the upper classes and was limited to the City of Baghdad. Thus, most Iraqi's were completely cut-off from university education (Smith, 1971, p. 128). Despite the foundation of different institutes of higher education during the first half of the century public demand for law, commerce, and the arts was growing very rapidly (Qubain, 1966, p. 59).

There is no denying that some development was achieved in the field of higher education during the first half of the present century. Yet there was a great public demand for law, commerce and the arts because of the changing socio-economic circumstances.

However, during the last two decades the enrolment for higher education in Iraq, as in most developing countries shows a higher tendency as compared to developed countries. Despite the low enrolment ratios at all educational levels for the corresponding age group, the enrolment ratio for higher education in the age group 20-24 in Iraq during the period 1970-1980 grew at a rate of 9.06 percent annually. This rate exceeded the rate of population growth in the age group 20-24 by nearly three times, and by more than three times the total population growth rate.

As Chapter Three makes clear, population trends and age structure play a decisive role in the process of manpower and educational planning as they influence the volume of supply of manpower as well as the demand for education. Like most developing countries, Iraq reveals a high rate of population growth, particularly in the population of school age. This phenomenon together with the process of

introducing compulsory education, caused a steep increase in the demand for higher education.

However, factors that affected the expansion of higher education in Iraq are mainly a result of the rapid increase in demand for high level manpower and of the increasing out-flow from the secondary level of education. These two factors are, in fact, a result of various socio-economic and demographic variables affecting the volume of demand for higher education.

9.3 The Organization of Higher Education

The demand for higher education resulting from a dramatically increased high school population has been a major factor in the establishment of new universities and institutions of higher education.

The central purpose of higher educational institutions is to educate adults as well as young people in order to develop their potentiality and qualities , which is essential for this growth and development of a modern society. Because a good society is one whose members are capable of the highest satisfaction of the mind and spirit and without education such society can not stand.

Higher education in Iraq, especially in the Republican period, has inherited heavy and complicated problems in terms of administration, organizational objectives and content of study. Moreover, it was hoped that after 14th July 1958 the quantitative expansion, that is, the number of enrolments would be accompanied by a radical change in relation to the content and quality of higher education, but this did not occur and

higher education remained the captive of old traditions, leading to inappropriate specialization which distanced the graduate from the existing social and political problems of his society.

This phenomenon led the authorities to realize that such a complex state of confusion in the country's system of higher education did not correspond with the real needs of national development. Therefore, in 1969, the government introduced one of the most decisive academic and administrative reform of the system of higher education. In its resolution No. 342 of 1969, the Revolutionary Command Council abolished all colleges and institutions of higher education and organized a new structure of higher education (See Fig. 9.1) with the firm intention of integrating higher education with national development plans (Rybnikov, 1971, p. 18). Currently, the institutions of higher education are as follows:

1.	The University of Baghdad	1958
2.	The University of Al Mustonsiryiah	1964
3.	The University of Basrah	1967
4.	The University of Mosul	1967
5.	The University of Salah Al Deen	1968
6.	The University of Technology	1975

Furthermore, to meet the crisis in higher education Law No. 132 of 1970 was promulgated to establish the Ministry of Higher Education and Scientific Research (Law No. 132, 1970). This step was intended primarily to implement national policy regarding higher education through planned programmes (See Chapter Two). Because of this phenomenon, the Revolutionary Command Council formed a committee to

Chairman
Board of Higher Education
and Scientific Research

Minister of
H.E. & S.R.

Minister's
Secretariat

Universities of

Baghdad
Al-Mosul
Technology

Basrah
Salah-Aldeen
Al-Mustansariya

Counsellors for

Scientific and
Technology Affairs

Departments of

Administrative
Affairs & Planning

Departments of

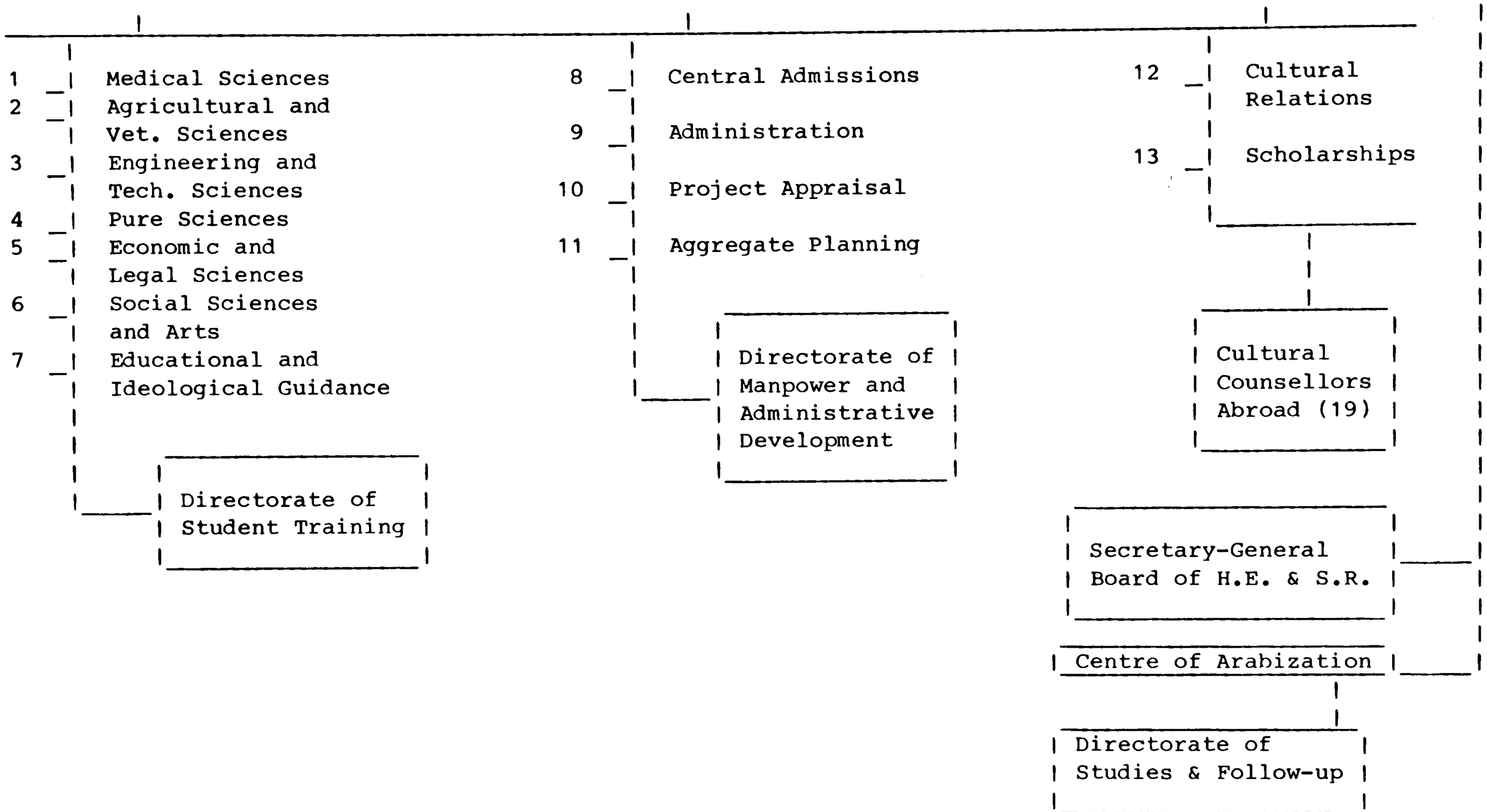
Cultural
Affairs

Departments of

Cont'd...

FIGURE 9.1 (Cont'd) ORGANIZATION CHART

Ministry of Higher Education and Scieftific Research



SOURCE: Ministry of Higher Education and Scientific Research, 1977, p. 14.

reconsider the process of educational planning and university education in the country, and to define the objective of higher with a view to adopting a remedial plan. After several successive meetings, the committee came to the following conclusions-

1. Higher educational planning is not integrated with political, social and economic planning.

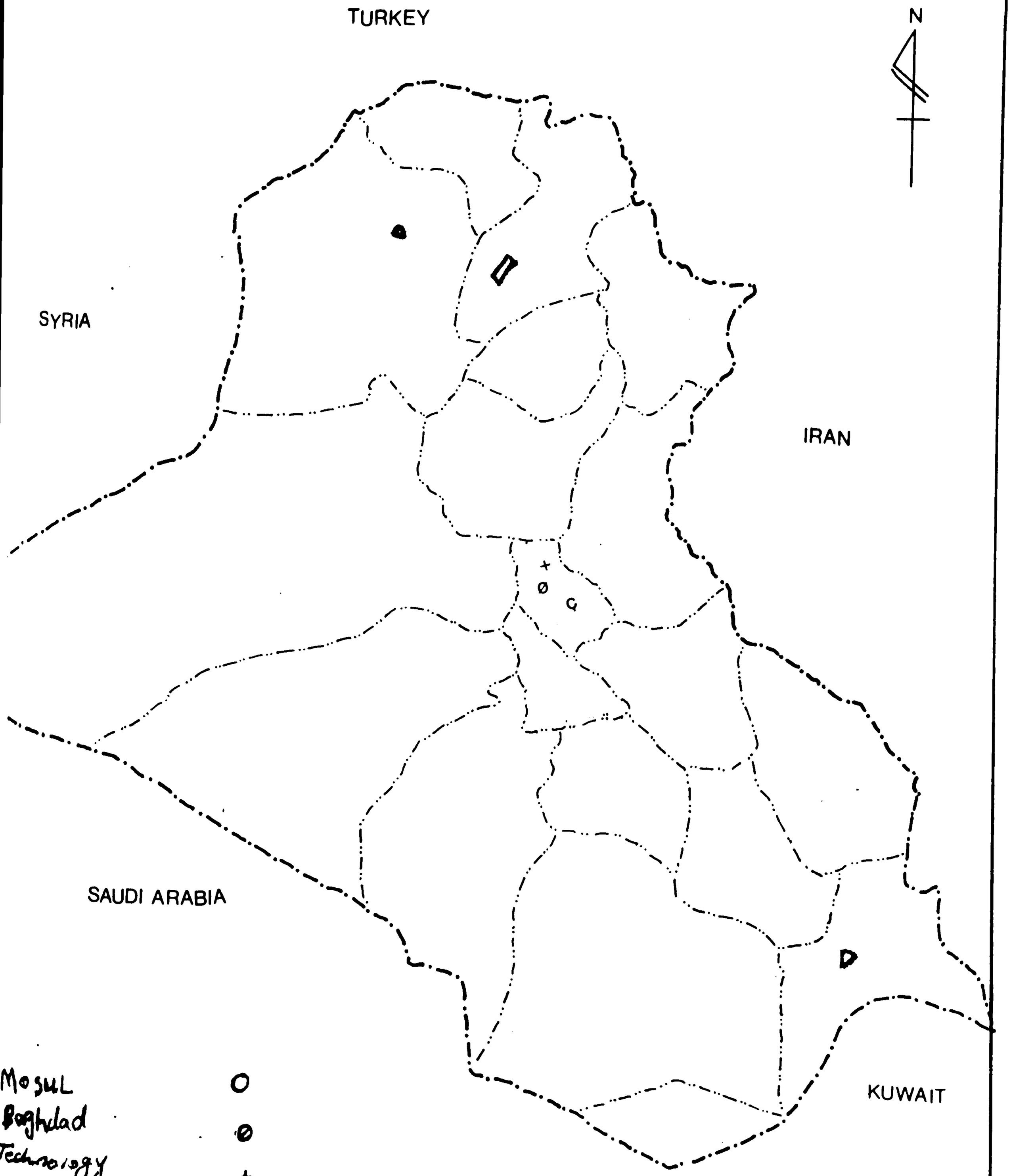
2. Higher educational planning is not integrated and also does not cope with general educational planning (Al Rawi, 1971, p. 10).

According to Rynikov the situation of higher education in Iraq can be improved if the functions of higher learning institutions are properly planned and co-ordinated. However, decisions and plans might be logically perfect, but practically questionable. Therefore, it should be realized that planning is only one factor which might help achieve progress and that it should be dynamic, flexible, and integrative. As will be seen through the discussion of trends and problems in higher education in Iraq in the succeeding sections of this thesis.

9.4 Number of Universities in Iraq

There are six universities in Iraq, all of which are owned by the government. The oldest is the university of Baghdad. Each university is autonomous and is responsible only to the Ministry of Higher Education and Scientific Research. Fig (9.2) gives a clear picture of where these universities are located. The university curriculum is prepared centrally by the Ministry which also appoints the teaching staff .

Figure (9.3) Location Of Universities in Iraq



Each university comprises a number of colleges corresponding to the different fields of specialisation. Each college has a council, headed by the dean, whose membership is comprised of all heads of departments at the college, as well as representatives of the National Union of Iraq students. The main duties of the college council are: organizing the curriculum in each department; organizing admission to the college concerned, and giving its views concerning the number of students to be enrolled in each department and their related branches.

The college department are often subdivided into branches and the chief of the branch normally heads the branch council which comprises a given number of branch teachers.

The main duties of the branch are similar to those of the department, but going to greater details particularly concerning specialized matters.

In the following sections I will discuss each university and give a brief outline of the number of students, staff, and constraints applying in each case.

9.4.1 Baghdad University

As I have already mentioned, Baghdad university was established in the city of Baghdad in 1958 and was an amalgam of different colleges and institutes which were in existence at the time. The number of students enrolled was 8293. It is worth mentioning here that until 1960 Baghdad university prepared its students for the B.A. degree in various specializations, but in 1961-1962, postgraduate study began in some of its departments (Ministry of Information, 1960, p. 12).

The number of students at the university increased between 1960-1970 to give the rate of growth in admissions of 1.5%. This further increased to 4.5% the years 1973-1979. These large increases were due to the large outflow from the secondary schools after the nationalization of oil and the enforcement of the compulsory education law(See Table 9.2) The university includes the following colleges:

a. College of Science
b. College of Art
c. College of Administration and Economics
d. College of Agriculture and Veterinary Medicine
e. College of Engineering
f. College of Law and Politics
g. College of Medicine
h. College of Dentistry
i. College of Midwifery and Nursing
j. College of Pharmacology
k. College of Industry
l. College of Physical Education
m. College of Education
n. Academy of Fine Arts

9.4.2 Mosul University

The University of Mosul was established on 1 April 1967. It is a state university affiliated to the Ministry of Higher Education and Scientific Research and maintained financially mainly with funds allocated by the government. The university of Mosul started as separate colleges, the oldest of which is the College of Medicine, which was established on October, 1969. Four years later, in the

TABLE 9.2

Number of Students Admitted and Graduates from The University of Baghdad with the Number of Staff 1960 - 1983

YEAR	NO. OF STUDENT ADMITTED	NO. OF STUDENT GRADUATES	NO. OF STAFF
1960 - 1961	3372	728	1580
1961 - 1962	4020	792	2765
1962 - 1963	4060	931	2639
1963 - 1964	6291	814	2639
1964 - 1965	8731	984	2761
1965 - 1966	5810	84	3231
1966 - 1967	3000	466	3761
1967 - 1968	3641	1237	4890
1968 - 1969	6589	1335	4674
1969 - 1970	3939	1544	4752
1970 - 1971	2553	1635	4047
1971 - 1972	4317	1516	5074
1972 - 1973	4978	1513	9889
1973 - 1974	6843	1528	3405
1974 - 1975	7801	1630	3826
1975 - 1976	7453	1771	5289
1976 - 1977	5059	1740	6397
1977 - 1978	6745	1692	6948
1978 - 1979	8918	1950	6802
1979 - 1980	8117	2059	6161
1980 - 1981	8387	2116	2050
1981 - 1982	7429	2014	-
1982 - 1983	6881	2010	-

SOURCES:

(1) Ministry of Planning, 1960 - 1970 p. 227
(2) Ministry of Planning, 1960 - 1975 pp. 23 - 216
(3) Ministry of Planning, 1974 p. 389
(4) Ministry of Planning, 1975 p. 406
(5) Ministry of Planning, 1976 p. 354
(6) Ministry of Planning, 1977 p. 226
(7) Ministry of Planning, 1978 p. 256
(8) Ministry of Planning, 1980 p. 242
(9) Ministry of Planning, 1981 p. 238
(10) Ministry of Planning, 1982 p. 242
(11) Ministry of Planning, 1983 pp. 226 - 233

College of Engineering and the College of The Science were founded and the College of Pharmacy in 1964, College of Arts (which was then called the College of Humanities) was established in 1966. These colleges were incorporated with the university of Baghdad and remained so until April 1967, when university Law No. 114 of 1967 dissolved their affiliation the university of Baghdad and conferred upon them the status of a separate university, to be called the university of Mosul. In 1974, the College of Administration and Economics was affiliated to the university of Mosul in 1975 and 1976 respectively. The colleges of education and Veterinary Medicine were established plans for establishing a College of Physical Education, College of Agriculture and Forestry is planned to become an independant university.

After the 17 July revolution of 1968 the Revolutionary Command Council issued a degree concerning the re-organization of higher education. The purpose of this re-organization was to enhance those studies which are vital to the purpose of the country, and to avoid duplication in the teaching of certain branches of knowledge. (Mosul University Catalogue, 1980-1981). Up to the end of the academic year 1982-1983, 2567 students had graduated from Mosul university. The number of staff had risen from 189 in 1965-1966 to 902 in 1982-1983, an annual rate of growth of 9.6%. Moreover, the number of enrolled students also increased from 52 in 1960-1961 to 3762 students in 1982-1983. See Table 9.3.

The university includes the following colleges:-

a. College of Science

b. College of Art

c. College of Medicine

TABLE 9.3

Number of Students Admitted, Graduates of the University of Mosul with the Staffs 1960 - 1983

YEAR	NO. OF STUDENT ADMITTED	NO. OF STUDENT GRADUATES	NO. OF STAFF
1960 - 1961	52	-	-
1961 - 1962	65	-	-
1962 - 1963	68	-	-
1963 - 1964	376	-	-
1964 - 1965	709	52	-
1965 - 1966	664	49	-
1966 - 1967	978	155	189
1967 - 1968	1130	302	114
1968 - 1969	951	481	222
1969 - 1970	486	573	71
1970 - 1971	1911	612	411
1971 - 1972	1010	619	382
1972 - 1973	1028	407	185
1973 - 1974	1405	915	260
1974 - 1975	1911	1179	217
1975 - 1976	2563	1769	260
1976 - 1977	3196	1632	556
1977 - 1978	2329	1574	613
1978 - 1979	3218	2103	699
1979 - 1980	3757	2715	784
1980 - 1981	3446	2160	910
1981 - 1982	4339	2359	952
1982 - 1983	3762	2567	902

SOURCES:

(1) Ministry of Planning, 1960 - 1970 p. 227
(2) Ministry of Planning, 1960 - 1975 pp. 23 - 216
(3) Ministry of Planning, 1974 p. 389
(4) Ministry of Planning, 1975 p. 406
(5) Ministry of Planning, 1976 p. 354
(6) Ministry of Planning, 1977 p. 226
(7) Ministry of Planning, 1978 p. 256
(8) Ministry of Education 1978 - 1979 p. 210
(9) Ministry of Planning, 1980 p. 242
(10) Ministry of Planning, 1981 p. 238
(11) Ministry of Planning, 1982 p. 242
(12) Ministry of Planning, 1983 pp. 226 - 233

d. College of Agriculture

e. College of Engineering

f. College of Veterinary

g. College of Education

h. College of Physical Education

i. College of Law

j. College of Administration and Economics

k College of Dentistry

l. College of Pharmacology

(Mosul University Catalogue, 1982, pp. 11-15)

9.4.3 Salah Aldeen University

Salah Aldeen University established in 1968 under the name of the university of Sulaymaniyah, the one of the largest cities in the Kurdish region, which was the centre of the Kurdish culture in the nineteenth century. In 1980-1981, the government decided to move the whole university to another city in the same region. The reason for this step was due to the Kurdish problem and the university was not considered to be secure in Sulaymaniyah. The university, now called Salah Aldeen, was moved to Arbil city, It has several colleges, including a college of Agriculture, and colleges of Medicine, Administration, Engineering, Science and Art, and is competent validat B.A. and M.Sc. Degrees. Meanwhile the number of students enrolled had risen to 3412 by 1982-1983, a rate of growth of 22.2%.

The number of staff had also increased, with a rate of growth of 11.9% during the last ten years (See Table 9.4)

TABLE 9.4

Number of Students Admitted, Graduates and the Number of Staff in Salah-Aldeen University 1968 - 1983

YEAR	NO. OF STUDENT ADMITTED	NO. OF STUDENT GRADUATES	NO. OF STAFF
1968 - 1969	515	-	81
1969 - 1970	412	-	21
1970 - 1971	381	-	88
1971 - 1972	336	252	127
1972 - 1973	459	253	126
1973 - 1974	724	268	157
1974 - 1975	582	272	124
1975 - 1976	811	503	130
1976 - 1977	1326	548	316
1977 - 1978	1200	633	291
1978 - 1979	1678	745	324
1979 - 1980	1952	1116	339
1980 - 1981	1699	1046	432
1981 - 1982	1361	1148	462
1982 - 1983	3412	1321	390

SOURCES:

(1) Ministry of Planning, 1960 - 1970 p. 228
(2) Ministry of Planning, 1960 - 1975 pp. 28 - 216
(3) Ministry of Planning, 1974 p. 380
(4) Ministry of Planning, 1975 p. 407
(5) Ministry of Planning, 1976 p. 355
(6) Ministry of Planning, 1977 p. 227
(7) Ministry of Planning, 1978 p. 256
(8) Ministry of Planning, 1978 - 1979 p. 211
(9) Ministry of Planning, 1980 p. 243
(10) Ministry of Planning, 1981 p. 239
(11) Ministry of Planning, 1982 p. 243
(12) Ministry of Planning, 1983 p. 226 - 233

9.4.4 Al Mustansiriyah University

The university had a different starting point from the others. In 1963 two public universities were founded. One of these was founded by the Teachers' Union and ensured higher educational opportunities for primary school teachers and other government officials. Three years later in 1966 these two universities were fused into one which was recognised by the government.

Al Mustansiriyah university is unique among Iraq's universities in that it offers a day time programme for regular students as well as an evening programme. Colleges include Business Administration and Economic, Education, Law and Islamic Studies, Liberal Art and Medicine. B.A. and M.Sc. degrees are awarded in this university since 1964-1965, the number of students admitted to this university has increased sharply. There were 757 students in 1964-1965 and by 1982-1983 the number had shot up to 2790. In the same year, the number of graduates rose to 1734, an annual rate of growth of 7.5%. The number of staff also increased, with a rate of growth of 12.3% per annum. (See Table 9.5)

9.4.5 Basrah University

Basrah University, originally established as a branch, became independent in 1967. Centres affiliated with the university include those for Arab Gulf Studies Marine Sciences and a Computer Centre. The number of students enrolled in this university has risen sharply during the last eighteen years from 816 in 1964-1965 to 2160 in 1982-1983, a 5.5% annual rate of growth. The number of staff also increased, with a rate of growth of about 15% per annum (See Table 9.6)

TABLE 9.5

Number of Students Admitted, Graduates and Staff of Almustinsryia University 1963 - 1983

YEAR	NO. OF STUDENT ADMITTED	NO. OF STUDENT GRADUATES	NO. OF STAFF
1963 - 1964	1735	-	-
1964 - 1965	757	-	-
1965 - 1966	1211	-	-
1966 - 1967	1473	1074	69
1967 - 1968	2088	511	82
1968 - 1969	2371	813	73
1969 - 1970	1844	871	64
1970 - 1971	3762	1999	46
1971 - 1972	4196	1286	46
1972 - 1973	4418	1874	46
1973 - 1974	4893	2224	81
1974 - 1975	4235	2642	28
1975 - 1976	2201	5019	97
1976 - 1977	2377	4341	292
1977 - 1978	2767	2715	282
1978 - 1979	2661	2488	295
1979 - 1980	2054	2484	367
1980 - 1981	2737	1720	416
1981 - 1982	3040	1721	458
1982 - 1983	2790	1734	445

SOURCES:

(1) Ministry of Planning, 1960 - 1970 p. 227
(2) Ministry of Planning, 1960 - 1975 pp. 23 - 216
(3) Ministry of Planning, 1974 p. 389
(4) Ministry of Planning, 1975 p. 405
(5) Ministry of Planning, 1976 p. 354
(6) Ministry of Planning, 1977 p. 226
(7) Ministry of Planning, 1978 p. 256
(8) Ministry of Planning, 1978 - 1979 p. 210
(9) Ministry of Planning, 1980 p. 242
(10) Ministry of Planning, 1981 p. 238
(11) Ministry of Planning, 1982 p. 242
(12) Ministry of Planning

TABLE 9.6

Number of Students Admitted, Graduates and the Staff of Basrah University 1964 - 1983

YEAR	NO. OF STUDENT ADMITTED	NO. OF STUDENT GRADUATES	NO. OF STAFF
1964 - 1965	816	-	-
1965 - 1966	832	-	-
1966 - 1967	865	-	-
1967 - 1968	716	512	68
1968 - 1969	1079	578	95
1969 - 1970	443	568	168
1970 - 1971	853	623	176
1971 - 1972	1068	578	232
1972 - 1973	1253	282	227
1973 - 1974	1507	619	153
1974 - 1975	1946	1057	177
1975 - 1976	2900	1713	199
1976 - 1977	2707	1531	409
1977 - 1978	1995	1462	437
1978 - 1979	2557	2162	486
1979 - 1980	2797	2103	540
1980 - 1981	2581	1623	574
1981 - 1982	2410	1756	834
1982 - 1983	2160	1829	576

SOURCES:

(1) Ministry of Planning, 1960 - 1970 p. 227
(2) Ministry of Planning, 1960 - 1975 pp. 23 - 216
(3) Ministry of Planning, 1974 p. 389
(4) Ministry of Planning, 1975 p. 406
(5) Ministry of Planning, 1976 p. 354
(6) Ministry of Planning, 1977 p. 226
(7) Ministry of Planning, 1978 p. 256
(8) Ministry of Planning, 1978 - 1979 p. 210
(9) Ministry of Planning, 1980 p. 242
(10) Ministry of Planning, 1981 p. 238
(11) Ministry of Planning, 1982 p. 242
(12) Ministry of Planning, 1983 pp. 226 - 233

The university awards most bachelor's degrees after four years of study and Bachelor's of Medicine, Veterinary Medicine and Surgery after six years. Master's degrees are awarded also by Basrah university.

9.4.6 University of Technology

The University of Technology was established in 1960 and joined the University of Baghdad in 1969 as the College of Engineering. The technolgical university became independant in 1975. Accent for lifelong education is affiliated with the university, whose colleges include Chemical Engineering, Construction Engineering, Control and Systems Technology, Electrical Engineering, Mechanical Engineering, Production Engineering, Technical Education and Metallurgy. Degrees conferred include B.Sc.'s and M.Sc.'s.

A special achievement has been made in establishing the (UOT). The number of academic departments increased . The university provided half the country's need for engineers and technical teachers. (UOT Catalogue, 1983).

Prior to 1968 Iraqi industries were few and limited to light consumer goods. As mentioned in Chapter Two the 1976-1980 national development plan introduced heavy and strategic industries, including iron and steel, machines, precision instruments, petrochemical, fertilizers, paper, textiles, electrical goods and others. The sudden expansion, both in the size and specialization of Iraq industry has been taken seriously by the University of Technology and has resulted in various decisions to ensure a better interaction with industry.

The UOT recognises the importance of technical training and considers it to be vital to development. In 1981-1982, industries all over the country received more than 4,000 students for summer industrial training and approximately 2,000 students in spring, each training period being for one month. Prior to the start of the training period the university training office, in close co-ordination with the various industries and academic departments, draws up training programmes for the different groups of students depending upon the year of study, the specialization of the resources of the industry concerned. Although the industrial training programme has been beneficial in many ways, there are currently some difficulties and it is by no means as perfect as desired. Most difficulties arise from the rather large number of students requiring training, and the limitations of industrial capacity.

The national development plan counts on the faculties of various universities in Iraq as vital elements in the transfer of technology and in development (Al Nassri, 1978, p. 62). In 1982-1983, 1473 admitted to the UOT which had a staff of 297 (See Table 9.7.)

9.5 Trends and Problems of Higher Education

Higher education has been viewed in Iraq as an essential element for an individual's economic and social advancement. Although the desire for knowledge is no doubt an important factor among many students, for others particularly those with a middle or lower class, background, the driving force is largely a desire for economic security and social recognition (Qubain, 1966, p. 60).

TABLE 9.7

The Number of Students Admitted, Graduates and the Number of the Staff at the Technological University 1975 - 1983

YEAR	NO. OF STUDENT ADMITTED	NO. OF STUDENT GRADUATES	NO. OF STAFF
1975 - 1976	1300	1263	99
1976 - 1977	1884	1193	163
1977 - 1978	2008	1099	184
1978 - 1979	2327	1487	193
1979 - 1980	2054	1457	195
1980 - 1981	1953	1411	239
1981 - 1982	1883	1443	250
1982 - 1983	1473	1514	297

SOURCES:
(1) Ministry of Planning, 1975 p. 406
(2) Ministry of Planning, 1976 p. 354
(3) Ministry of Planning, 1977 p. 226
(4) Ministry of Planning, 1978 p. 256
(5) Ministry of Planning, 1978 - 1979 p. 210
(6) Ministry of Planning, 1980 p. 242
(7) Ministry of Planning, 1981 p. 238
(8) Ministry of Planning, 1982 p. 242
(9) Ministry of Planning, 1983 pp. 226 - 233

9.5.1 The Growth of Enrolment in Higher Education

The expansion of higher educational opportunities, since 1958, at both the primary and secondary level of education in Iraq has generated increasing pressure on higher educational institutes. Due to political, ideological and developmental considerations and because of the view that higher education is one source of essential high level manpower, successive governments of Iraq have striven to meet students' desires, to modernize higher education and to relate it to the country's manpower requirements. The most important step taken towards this aim was the expansion of admission to higher education. As Table 9.8 and Appendix F2 demonstrates, enrolment in higher education increased rapidly from 5, 433 in 1957-1958 to 29,767 in 1967-1968 and further to 119023 in 1983-1984. From 14 students (11 males and 3 females) in 1960-1961 to 125 students (1021 males and 21 females) in 1967-1968. The number of admissions however, dropped to 51 in 1969-1970 and 66 in 1970-1971. Adequate statistics are not yet available concerning the number of students who completed their degree requirements. It has been reported, however, that relatively few students were able to graduate. Available statistics show that in 1969-1970 some 59 students were awarded mast degrees in various fields of specialization and in 1970-1971, the total number of degrees awarded was 80. (Ministry of Planning, 1973, p. 26). With the creation of the Ministry of Higher Education and Scientific Research in 1970, a programme for graduate study degrees in various areas of specialization was initiated. Thus post graduate enrolment grew noticeably from 173 students in 1971-1972 to 1674 in 1976-1977, rising to 2674 in 1979-1980 and then declining to 1862 in 1982-1983. As Table 9.9 demonstrates, the staff has increased fourfold.

TABLE 9.8

Growth of Students in Universities, Colleges and Technical Institutes

1957 - 1984

YEAR	FEMALES	MALES	TOTAL
1957 - 1958	-	-	5,433
1958 - 1959	-	-	8,431
1959 - 1960	-	-	11,618
1960 - 1961	2,536	8,550	11,086
1961 - 1962	3,290	9,426	12,716
1962 - 1963	3,555	9,631	13,186
1963 - 1964	4,641	12,181	16,822
1964 - 1965	6,085	151,771	21,262
1965 - 1966	7,059	15,164	22,223
1966 - 1967	7,608	18,999	26,607
1967 - 1968	7,557	22,210	29,767
1968 - 1969	8,328	26,346	34,674
1969 - 1970	8,045	29,245	37,290
1970 - 1971	9,522	33,806	43,358
1971 - 1972	10,561	37,580	48,141
1972 - 1973	11,743	37,451	49,194
1973 - 1974	15,896	42,455	58,351
1974 - 1975	19,160	51,087	70,247
1975 - 1976	22,524	53,074	75,598
1976 - 1977	24,584	56,914	81,498
1977 - 1978	26,575	58,989	85,564
1978 - 1979	27,800	61,397	89,197
1979 - 1980	30,001	68,411	98,412
1980 - 1981	31,661	70,769	102,430
1981 - 1982	33,692	78,773	12,430
1982 - 1983	35,657	80,603	116,260
1983 - 1984	37,447	81,581	119,023

SOURCES:

(1) Ministry of Planning, 1960 - 1970 p. 227
(2) Ministry of Planning, 1960 - 1975 pp. 23 - 216
(3) Ministry of Planning, 1975 p. 406
(4) Ministry of Planning, 1976 p. 354
(5) Ministry of Planning, 1977 p. 226
(6) Ministry of Planning, 1978 p. 256
(7) Ministry of Planning, 1978 - 1979 p. 210
(8) Ministry of Planning, 1980 p. 242
(9) Ministry of Planning, 1981 p. 238
(10) Ministry of Planning, 1982 p. 242
(11) Ministry of Planning, 1983 pp. 226 - 233

In spite of the expansion of higher educational facilities, the Minister of Planning indicated in 1970 that the demand for secondary school graduates for university admission was increasing and that the rate of expansion had failed to keep up with the increase of applicants for university admission. (H. Smith, 1971, xxii).

Accurate statistics are not available for the 1060's. However, the figures in Table 9.10 indicate that even though proportions vary from one year to another, at least two-thirds of secondary school graduates were admitted each year to an institution of higher education during the period 1970-1971.

However, for both educational and developmental purposes educational plans should still aim at further expansion of secondary schools in rural and remote areas.

As far as post graduate study in concerned it was not until 1960-1961 that programme lending to a Master's Degree were initiated by the University of Baghdad in the colleges of Arts, Science, Engineering and Agriculture. (Qubain, 1966, p. 229). This represented a positive step forward higher education. However, due to the existing conditions of higher education, it seems that such an early step was poorly organized and prematurely implemented. The absence of adequate facilities, shortages of experienced faculty staff and law standards of undergraduate programmes wee all factors hindering the progress of graduate studies. In 1967, Dawlish point out that in the sciences, many departments find themselves unable to keep the programme running because of shortages of equipment, limitations of space and the unavailability of the necessary supervisors. (Dawlish, 1971, p. 180).

TABLE 9.9

Number of Students Admitted to Post Graduate Studies

1960 - 1961 to 1982 - 1983

YEAR	MALE	FEMALE	TOTAL
1960 - 1961	11	3	14
1961 - 1962	21	8	29
1962 - 1963	37	11	48
1963 - 1964	31	1	32
1964 - 1965	46	4	50
1965 - 1966	35	15	50
1966 - 1967	72	9	81
1967 - 1968	104	21	125
1968 - 1969	NA	NA	NA
1969 - 1970	37	14	51
1970 - 1971	48	18	66
1971 - 1972	95	42	173
1972 - 1973	652	130	782
1973 - 1974	740	149	889
1974 - 1975	NA	NA	1083
1975 - 1976	1019	192	1211
1976 - 1977	1403	271	1674
1977 - 1978	NA	NA	NA
1978 - 1979	337	1857	2194
1979 - 1980	438	2236	2674
1980 - 1981			
1981 - 1982	236	1659	1895
1982 - 1983	241	1621	1862

SOURCES:
1. Ministry of Planning, 1960-1970, p. 228
2. Ministry of Planning, 1960-1975, p. 25-46
3. Ministry of Planning, 1980, p. 244
4. Ministry of Planning, 1983, p. 226 - 233

As can be seen in Table 9.10, 9.11, the number of students admitted to graduate studies evolved gradually.

According to Zahlan the acute shortage of graduate students created great pressure on colleges to admit more students while the absence of any general understanding of the problems of colleges and universities threatened the academic community with serious problems. (Zahlan, 1975, p. 315).

If higher education in Iraq is to contribute to the country's development expansion of sound postgraduate study programmes ... indispensable in order for higher educational institutions to recruit faculty staff. This is also necessary if graduate students became involved in institutional and social problems, and might even encourage expatriate intellectuals to return home (Zahlan, 1975, p. 304). In addition, appropriate graduate studies probably help to alleviate some of the prevailing problems of higher education to which discussion will hereafter be devoted. Table 9.16 shows the number of graduates from 1970 to 1983..

9.5.2 Staff Shortages in the Universities

Attempts to improve education in Iraq are hindered by the serious problem of faculty shortages which impair the efforts of higher education to cope with growing students enrolment. The growth of teaching staff has not kept pace with the subsequent growth of student enrolment. At the university of Baghdad, for example, the staff student ratio dropped from 1:10:8 in 1960-1961 to 1:15:9 in 1966 and then rose to 1:23:3 in 1974-175 dropping again in 1981-1984 (See Table 9.12).

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lumber of Post Graduate Students for the Academic Year

1982 - 1983

IRAQIS		ARABS		FOREIGNERS		TOTAL		
FEMALES	MALES	FEMALES	MALES	FEMALES	MALES	FEMALES	MALES	TOTAL
154	806	7	44	-	-	161	850	1011
19	154	-	1	-	-	19	155	174
30	272	-	1	-	-	30	273	303
13	62	-	-	-	-	12	62	74
14	59	-	4	-	-	-	-	-
5	218	-	-	-	-	5	218	223
-	-	-	-	-	-	-	-	-
234	1571	7	50	-	-	241	1621	1862

:y of Planning, 1983, pp. 226 - 230

TABLE 9.11

Number of Students Admitted, Currently Studying and Graduating

ACADEMIC YEAR	ADMITTED			CURRENT			GRADUATED		
	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL
1969 - 1970	6298	1461	7759	29245	8045	37290	5301	1760	7061
1970 - 1971	10440	2511	12951	33806	9552	43358	6019	1893	7912
1971 - 1972	11812	3018	14830	37580	10561	48141	7064	2934	9998
1972 - 1973	10760	4306	15066	37451	11743	49194	5866	1636	7502
1973 - 1974	12688	5976	18664	42455	15896	58351	7137	2203	9340
1974 - 1975	14728	6160	20888	51087	19160	70247	8432	3118	11550
1975 - 1976	15080	6721	22001	53074	22524	75598	18788	5082	17870
1976 - 1977	16957	7277	24234	59014	24584	81498	11106	5504	16610
1977 - 1978	15829	7809	23638	58989	26575	85564	13201	6334	19535
1978 - 1979	19702	8144	27846	61397	27800	89197	14323	7004	21327
1979 - 1980	12884	9298	31182	68411	30001	98412	14288	6729	21017
1980 - 1981	21731	9179	20910	70769	31661	102430	12030	6592	18622
1981 - 1982	26019	10140	36159	78773	33692	112430	15050	7258	22308
1982 - 1983	23626	10536	34162	80603	35657	116260	16125	7946	24071

SOURCE:
1. Ministry of Planning, 1979, p. 240
2. Ministry of Planning, 1980, p. 240
3. Ministry of Planning, 1982, p. 242

Table 9.13 on the other hand, shows that in 1983-1984 the staff student ratio varied from 1:18:4 at Baghdad University to 1:15:1 for Basrah University, 1:15:9 for Mosul University, 1:11:3 at Salah Deen University, 1:23:5 at all Mustansiriya University, 1:25:1 at the Technological University and 1:16:9 for the foundation of Technical institutes. This problem has been more crucial in the colleges of humanities and social sciences than it has been in the colleges of engineering, science and medical studies. The latter colleges previously enjoyed a healthy staff-student ratio until 1962. since then, the overcrowded faculty and the problems presented by the lack of laboratories and equipment has restricted the number of enrolments to a certain extent.

This is of course a result of a general expansion in student enrolment, which occurred in response to the rising need for graduates in areas which the country could not ignore if it wishes to succeed in the modernization efforts.

9.5.3 The Lack of Educational Planning

The Iraqi higher education system has expanded rapidly over the past 20-30 years in response to an explosive increase in educational demand and the need for professionally trained university graduates, teachers, physicians, engineers.

Therefore, planning the tasks of universities in accordance with the needs of development and growth could be regarded as one of the main ways of providing a sound foundation for higher education and high level manpower planning. One of the fundamental principles of planning the development of higher educational institutions is the process of

TABLE 9.12

Teaching Staff in the Universities, Colleges and Technical Institutes

1960 - 1984

YEAR	TEACHING STAFF			NO. OF STUDENTS IN THE UNIVERSITY	STAFF STUDENT RATIO
	IRAQIS	NON IRAQIS	TOTAL		
1960 - 1961	843	184	1027	11086	1:10.8
1961 - 1962	749	187	936	12716	1:13.6
1962 - 1963	807	201	1008	12186	1:13.0
1963 - 1964	834	176	1010	16822	1:16.6
1964 - 1965	967	158	1125	21262	1:18.9
1965 - 1966	-	-	1557	22223	1:14.3
1966 - 1967	-	-	1674	26607	1:15.9
1967 - 1968	-	-	1696	29767	1:17.5
1968 - 1969	-	-	1744	34674	1:19.9
1969 - 1970	-	-	2166	37290	1:17.2
1970 - 1971	2074	214	2288	43358	1:18.9
1971 - 1972	1904	240	2144	48141	1:22.5
1972 - 1973	2108	255	2363	49194	1:20.8
1973 - 1974	2430	239	2669	58351	1:21.8
1974 - 1975	2417	599	3016	70247	1:23.3
1975 - 1976	2726	942	3668	75598	1:20.6
1976 - 1977	3176	832	4008	81498	1:20.3
1977 - 1978	3524	972	4496	85564	1:19.0
1978 - 1979	4152	1055	5207	89197	1:17.1
1979 - 1980	4667	1013	5680	98412	1:17.3
1980 - 1981	5389	1126	6515	102430	1:15.7
1981 - 1982	5582	1361	6943	112430	1:16.2
1982 - 1983	5881	793	6674	116260	1:17.4
1983 - 1984	6577	357	5934	119023	1:17.2

SOURCES:
1. Ministry of Planning, 1979, p. 243
2. Ministry of Planning, 1980, p. 244
3. Ministry of Planning, 1982, p. 245
4. Ministry of Planning, 1982, p. 253-254

TABLE 9.13

Percentage of Teaching Staff and Student in Universities

Colleges and Technical Institutes

1983 - 1984

UNIVERSITY	NO. OF TEACHING STAFF			NO. OF STUDENTS			TEACHING STAFF	STUDENTS	STAFF - STUDENT RATIO
	FEMALE	MALE	TOTAL	FEMALE	MALE	TOTAL	%	%	
Baghdad	465	1545	2010	13365	21190	34553	28.9	29.0	1:17.1
Basrah	80	560	640	2976	6726	9702	9.2	8.1	1:15.1
Mosul	128	847	975	4330	11228	15558	14.0	13.0	1:15.9
Salah Al Deen	29	490	519	1655	4211	5866	7.4	4.9	1:11.3
Mustansirya	123	373	496	4339	7347	11686	7.1	9.8	1:23.5
Technology	31	263	294	1701	5683	7384	4.2	6.2	1:25.1
Foundation of Technical Institutes	432	1595	2027	9081	25196	34277	29.2	28.7	1:16.9
TOTAL	1288	5646	6934	37447	81581	119028	100.0	99.7	1:17.1

SOURCE: Ministry of Planning, 1984, p. 253 - 254

achieving close co-ordination and integration between those institutions and sectors demanding or employing high level manpower, including the required expansion of higher education.

In the context of such planning a whole range of problems have to be considered, in order to shape the future quantitative and qualitative outflow in accordance with the requirements of the national economy.

The main aspect of these are:

a. the lessons of the past

b. the social purpose of education

c. establishing an information system between the institutions of higher education and other sectors.

(UNESCO, 1975, p. 12)

The main criterion that is being taken into consideration for the expansion of higher education in Iraq is the available capacity of each college and department regardless of the demands of the national economy for the various categories and specializations of higher level manpower.

Another drawback in the information system and planning of the institutions of higher education in Iraq is the absence of efficient criteria for changing enrolment in the different departments, according to the needs of the national economy.

Most of the colleges investigated had no plans for and means of ascertaining the number of highly qualified specialists needed, or the fields which should be given top priority. Enrolment in higher education depended upon two main criteria, the first of which was the present capacity of colleges and departments and the second war the desire to satisfy individual, aspirations for higher education, as much as possible. Meanwhile, requirements of the national economy for the different categories of high level manpower have tended to be decided on the spur of the moment and have frequently been regarded as an adjunct to the quantitative growth of enrolment in higher education.

As a consequence, the outflow from higher education has often proved irrelevant to the needs of socio-economic development.

The long term plans for 1971-1995:

1. 30% of secondary school graduates are to be admitted to universities. The number of studentsapplying to do engineering medicine agricultural science and science is to be increased.

2. Postgraduate studies and the number of students admitted to postgraduate courses in science are to be expanded.

3. The numbers of qualified staff and buildings and departmental equipment are all to be increased.

4. The number of universities in the country as a whole and near the villages is to be increased to give an opportunity to the students from different backgrounds to attend.

9.5.4 The Brain Drain

In the decade leading up to 1930 massive migrations of unskilled and semi-skilled labour have been observed on various occasions, but in recent years there have been marked changes in the scale of quality of international flow.

For the last twenty years, there has been a definite migratory movement of high skilled people, was based on the desire for a better life, or political evolution, or the exchange of knowledge and experience.

Many developing countries who most need but do not demand skilled manpower are losing many of their best and most talented people to the developed countries. The reason for high level manpower migration lies in a combination of factors in developing countries, as well as a combination of factors creating the attraction of the developed country. Such countries exist on a large and increasing scale.

The United States has been made the subject of a whole series of complaints. It has been accused of draining the developing countries and Europe of their professionals and therefore holding back the development of those countries. It has been blamed for taking away potentially able personnel who could participate in creating and expanding a national scientific and technological foundation for their own countries. Table (9.14) shows the number of immigrants admitted to the U.S.A. 1953-1977.

Middle Eastern countries, today, are under greater pressure than ever before because of the brain drain problem. According to Shaw, between 1962-1977 the U.S.A. absorbed some 18,000 professionals and 1100 natural scientists from the Arab world. By 1976 the share of Arab emigrants to the U.S.A. in the professional category amounted to 7% from Iraq to 13.3% from Qatar and 34.3% from Libya (Shaw, 1981, p. 645).

Indeed, Arab institutions of higher learning are experiencing great difficulties in satisfying their own needs and demands nearly every day there appear numerous advertisements in various newspapers inviting applications to fill thousands of academic posts, all the way from the Atlantic to the Gulf, and many a university administrator finds himself at his wit's end trying to assemble the necessary staff to educate the growing influx of students in each freshman class.

Much of the effort at recruitment has been, naturally enough, aimed at enticing those Arabs abroad to return. Some Arab governments have even gone so far as to provide considerable incentives to encourage a homeward flow. Others have sharply increased their salary scales in a bid to attract those who might be lured primarily by prospect of pecuniary pain.

In 1967 Iraq lost some 136 of her engineers by emigration to the U.S.A., Canada and France (Adesishea, 1970, p. 6).

Malcolm Adesishea believes that as a result of the brain drain from the Arab countries, education should no longer be considered as an engine for development (Adesishea, 1970, p. 6).

TABLE 9.14

Number of Immigrante Admitted to the United States From Selected Middle Eastern Countries 1953 - 1977

YEAR	TOTAL IMMIGRANTS FROM MIDDLE EAST	EGYPT	IRAQ	IRAN	JORDAN	LEBANON	SYRIA
1953	170,434	168	125	160	304	261	124
1958	253,265	498	215	433	528	366	207
1963	306,260	760	426	705	752	448	226
1965	296,697	1,429	279	804	702	430	255
1968	454,448	2,124	540	1,280	2,010	892	644
1970	373,326	4,937	1,202	1,825	2,842	1,903	1,026
1971	370,478	3,643	1,231	2,411	2,588	1,867	951
1972	384,685	2,512	1,491	3,059	2,756	1,984	1,012
1973	400,063	2,274	1,039	2,998	2,450	1,977	1,128
1974	394,861	1,374	1,880	2,491	2,529	3,013	826
1977	-	10,763	6,848	-	14,771	23,066	4,823

SOURCE: (1) Askari, J. Cummings, East Economics in 1970, 1976, p. 314
(2) Shaw, 1981, p. 646

Adesishea is correct in implying that the money invested in educating these emigrants is wasted but he should not blame the entire educational system. In fact Iraq was one of the Arab countries which played a very important role in solving the problems of the brain drain with a law issued in 1976, known as the Alkafat Law. In accordance with this law highly skilled and qualified people why they have left the country and settle abroad and those students who are pursuing their education abroad can come back to Iraq and with the opportunity of working either in the public or the private sector, or in a privileged scientific occupation with a high salary and various perks, such as furnished house , a private car, tax free, free land and a sum of 5,000 I.D. to build a house for those who have no home of their own. This was quite an effective way of attracting highly skilled people back to their own countries to take part in the development process.

Many of these qualified people went back and started a new life.

A few of these people layed for short periods and could not adjust to socio-economic conditions, but despite some limited successes, these efforts have, by and large, fallen short of their objective. It soon became apparent that while academic are, like other sometimes.

One of the main factors causing the problem of brain drain from developing countries is weakness of educational planning and the forecasting of manpower needs, in developed countries would have helped to avoid this discrepancy between demand and supply. This lack of the balance between the demand and supply of highly educated people in developed countries continues to act as strong pole of attraction.

In many cases, educating people in systems accords better with the professional requirements of the developed countries than with the requirements of socio-economic development in developing countries. This is also a fodor causing the problem of underutilization of skills. The brain drain is especially marked in those developing countries which encourage education abroad, with little supervision or contact. The main reasons for seeking education abroad on the part of developing countries are: the lack in the home country of sufficient or efficient education institutions to accommodate the outflow from secondary education or to match the requirements from different occupations; a colonial attitude towards the prestige of foreign institutions; and a variety of other reasons connected with the attitudinal and political systems and relationships of the developing countries. In some developing countries stress is laid on higher education abroad for post graduate studies, such as masters and doctoral degrees rather than undergraduate studies, as they are increasingly able to absorb students from the secondary level their own universities. Nevertheless, the problem of the brain drain is growing since the higher the level of education obtained by those students from the developing countries the greater the ease of job opportunities within a complex economic system, and the higher the rate of permanent migration (Henderson, 1970, p. 81).

It is also pertinent to education abroad that education is not limited to books but extends importantly to a way of life different from the foreign student's own and in which his profession becomes associated with his life style, thus affecting his capacity to pursue his profession in a place where the life style with which he connects differs radically from his environment abroad.

The underdevelopment of the (system) of compensation in most countries and the salary gap between them and the developed countries may be regarded as an inducement for the brain drain - in many cases the difference is more than six times (Henderson, 1970, p. 88).

In fact educated people in developing countries usually earn higher incomes than their colleagues in industrialised countries, if their earnings are compared to the national income per head of population of their respective countries.

Their international mobility and the income differential may encourage people to emigrate. In many developing countries and regions, however, salaries paid to highly trained people, in relation to per capita income, are such that the social status gained at home may be a counterbalancing item in the decision making process of the potential emigrant. This is true of certain countries in Africa but is not so in other countries such as the United Arab Republic.

More consideration could therefore be given to the substantial differences in the native purchasing power of such people. However, the existence of such a gap is an attracting factor is favour of migration. Moreover, the system of compensation in most developing countries is related more to tradition, colonial heritage and political pressures than to the requirements of economic development (Harbison, 1973, p. 32).

Some compensations are far from sufficient to persuade persons, not only to educate themselves for the required occupations, but also to practise these occupations in their home countries.

Other social and political elements also exert pressure and induce high level manpower to leave their home country, or attract to foreign countries. These factors include the social attraction of a foreign social environment.

For example, many students from developing countries do part-time working during their foreign studies, because their funds are insufficient to allow them to devote themselves solely to their studies. This leads to fairly long periods abroad, during which the student put down roots in their host countries (Gardiner, 1968, pp. 194-196).

So much for the various factors that may push or pull educated people from developing regions to industrialised countries. Each case naturally involves a combination of various political, economic and sociological motives or incentives which are difficult to evaluate and vary from one country to another. As Oldham puts it, "total sum probably adds up to describing many of the characteristics of underdevelopment" (Oldham, 1968, p. 14).

Developing countries which are losing their brain power through emigration and wasting their human resources and brains through underutilization, are, at the same time, importers of these brains. The brain gain in developing countries comes about in many ways: through colonial administrators and other kinds of high level manpower; via foreign enterprises engaged in various economic and social activities; by the renting of experts to work in these countries; through technical assistance from international agencies; and through agreements between individual countries. The main aim of such processes of importation of experts, is the fulfilment of national

tasks and objectives which local nationals cannot undertake, or where they are present in insufficient numbers to accomplish these tasks. However, the process of brain drain importation to satisfy the needs of developing countries for different kinds of high level manpower is limited. there are various reasons why this is so. One is the

foreigner who wish to work in these countries, and the terms on which they consent to do so. On the other hand, no country wants to depend upon imported foreigners for their high level manpower, especially for a long period. Furthermore, many difficulties may confront foreigners working in developing countries, such as adjustments to the social environment, political situation, technolgical conditions, and the lack of counterparts and specialists to work with . Moreover, this imported brain power tends to concentrate on research geared to the advancement of its home country, instead of answering the practical needs of developing countries (Harbison, 1973, pp. 100-103).

9.6 Conclusion

For all its remarkable progress higher education in developing countries and in Iraq in particular, will be incapable of meeting demands for skilled and highly qualified manpower for some time to come. The role of the universities in the execution of national development plans is significant and vital in the building up of the national economy.

The relationship between higher education and economic development is fairly obvious. In Iraq universities have been expanded, new departments and institutes have been set up and attempts have been made to plan research and development.

One of the most noticeably weak features of that system is the uneven distribution of educational services between the different regions and government and between rural and urban areas. Higher education is confined to a few governorates, and most of that is concentrated in the city of Baghdad. Such uneven distribution creates intractable problems and bottlenecks in socio-economic development and problems for future development. Therefore closing the gap between the levels of development in the different regions is one of the most urgent needs of development in Iraq.

The supply of higher education has to be planned and expanded at least on the regional level. Such creation and expansion should be planned according to the nature and size of demand and the needs of development in reach region, as an integrated part of the needs of national development. It is worth mentioning that meeting the requirements of high level manpower has been regarded as an adjunct to the quantitative growth of higher education. With this in mind the expansion in the supply of higher education should be established primarily on the present and future demand and the needs of the national economy and in accordance with the quantitative and qualitative requirements of different regions.

To avoid bottlenecks in the balance between the demand for and the supply of skilled manpower and technicians there needs to be an increase in the number of students at vocational schools and technical institutes. (See Chapter Eight)

To this end, the admissions policy of higher education needs to achieve the democratization of access to education and the democratization of the student's attitudes toward education. The most

urgent need is to give priority to those pupils from working class and peasant families. Priority also needs to be given to those candidates from industrial, agricultural and other organizations and establishments. The number of females enrolled in higher education must be increased, particularly those from rural areas. Policies are required which will achieve social equity between males and females in the labour force.

Higher education in Iraq is being developed and expanded, regardless of the size and structure of national development data concerning the present and future requirements of the different economic sectors and regions in different categories should be made available to those units developing high level manpower. Data concerning the requirements of scientific research should also be easily accessible to those bodies in charge of producing high level manpower. Moreover, the requirements of Iraqi assistance of trained personnel in other.

Long range development and growth in higher education call for profound structural changes, serious considerations must be given to the achievement of an integrated system of education in line with the requirements of the national economy. Allowances must be made for the introduction of radical changes in the expansion of higher education in favour of those specialists most needed, particularly in engineering and the medical sciences. Considerable effort must also be made to produce more technicians. Moreover, the qualitative aspect of higher education need to develop in accordance with technological development, as a matter of urgency.

Furthermore, the rational distribution of higher education among the different regions, as well as the judicives expansion and development of such services according to the quantitative and qualitative needs of each region and as an integral part of the whole economy, are very desirable measures.

Information concerning the emigration of Iraqi brains and data concerning the countries to which they emigrate as well as their qualifications and social and economic status are among the indicators required for the planning of any long range strategy of employment.

Higher education and the scientific community in Iraq suffer from brain drain. Hundreds of the most eminent specialists have settled in the west after obtaining scientific degrees there. This results in a net loss for the development of the country.

Finally, there is a great gap between the development of higher education and the training of middle level personnel. This gap is widening at an alarming rate. The scarcity of technicians, nurses, agricultural and other middle level personnel is already acute. Contacts between secondary schools and higher education are still outside the scope of planning efforts. Neither the aspirations of pupils at secondary schools to future study, nor the co-ordination between these schools and higher education, have been taken into consideration.

CHAPTER 10

SUMMARY AND CONCLUSION

In this thesis. I have attempted to explore the potential need for the integration of educational and national development and to study the development and planning of the education system in Iraq during the period 1958-1982.

The year 1958 is significant. Firstly, it was the year when a relatively progressive regime came into power with a declared policy to transform the social structure. Secondly, it signalled a new emerging economic feature; the rising importance of the oil sector in the national economy, with important implication for Iraq's political economy. Oil revenues have gradually assumed a determinent role in deciding particular forms of development policies and emphasis whats are reflected in the allocation of resource in different economic activities.

In the period prior to 1958 education development in Iraq did not contribute substantially to its development and modernization. At that time educational policies emphasized purely classical education. Thus education was adopted rather than adapted. Also, it was the priviledge of the few rather than the rights of all; automatic rather than democratic; academic and theoretical rather than practical and functional.

The 1958 Revolution marked a turning point in the expansion of educational opportunites in Iraq but educational developments since the

revolution have been inspired by the demand of quantitative education than by the demands of functional and qualitative education.

My arguments in this thesis can be summarised as follows:-

Iraqi economy is promising, but like most developing country, it lacks the required manpower in order to increase output and to carry out the tasks of development. In general this is a product of an inadequate co-ordination between educational planning and manpower development.

While appreciating the fact that in the face of competing demands of development, the resources available to education are usually limited, maintained through any analysis of the 1970-1974 and 1976-1980 national development plans that education is yet to be accorded its due priority in the planning process. Although there had been increased government spending in education, Since the sixties, commitment to education is still relatively low when compared with the agricultural and industrial sectors. Thus the flows in these development plans become obvious. The landable objectives of transfiring the agricultural and industrial sectors and equiping them with up-to-date technical manpower cannot be adequately realised inspite of the national resources available.

Accepting the fact that little progress can be obtained unless the human resources are developed, I proceeded, in Chapter Three, to examine Iraqi human resources in terms of her composition with about 3.5% annual rate of growth dominated by a high population few people in the economically active sector and an increasing rural-urban

migration. Iraq reflects the trend in population growth common to most developing countries. This increase in population growth has provided a strain in available educational resources and an increase in government spending.

Consequently, in Chapter Four, I proceeded to examine the manpower problems of Iraq in detail. In that Chapter, I examined the nature of Iraqi labour force, its composition especially in terms of sex and its distribution in the national economy. Recent national development plan figures provided show that there is an imbalance in the supply of particular categories of manpower graduates. This imbalance is attributed to:-

1. Rural-urban migration induced by more attractive working conditions and higher wages in the firm of white collar jobs in the cities.

2. The comparatively low participation of women in the productive segments of the labour force inspite of the fact that they constitute half of Iraqi society. This, I argued, is a product of an inherited tradition of male domination which has led to the seclusion of women and the restriction of their lives to the home - a feature that is common in islamic countries, where as the percentage of women in the profession and in the administrative sector have increased over the years, their impact on the labour market is yet to be substantial considering the fact that a very high percentage of women are still illiterates.

3. The problem of illiteracy: prior to the revolution, the percentage of the Iraqi population that were illiterates was very high. Since the revolution, the percentage is still high inspite of the government efforts to combat the problem.

Having examined the nature of Iraqi economy, the country's general approaches to development planning, the structure and composition of the population and the nature of the labour force, I examinedin Chapter Five various approaches to the economics of education. The basic argument of each approach were described and their disadvantages in explaining the situation in developing countries analysed. The Chapter provides the framework for analysing the Iraqi situation.

In Chapter 6, 7, 8 and 9 I examined the trends in Iraqi educational policy, with view to explaining why education in the country has contributed so negligibly to development, especially in the provision of required manpower in the qualified cadres in most sectors of the economy.

Chapter Six provides a detailed historical account of the development of education in Iraq. It was shown that until the 19th Century, education in Iraq had been influenced considerably by the tenets of Islam when in the 19th century the Turks introduced secular education, the aim of education, which even centred arqund military training was to control the indiqenous population and to strengthen the ottoman domination. The period of British rule witnessed a radical change in iraqi education. For male education was introduced and geared to suit the socio-cultural environment of Iraq as well as the requirements of British colonial administration.

Under the national government (1958-68). Iraqi education policy geared towards quantitative expansion in education. By so doning the government merely followed the British precedents in that it merely stressed expansion at the expense of an ideological orientation. This is not a feature that is peculiar to Iraq but to most developing countries where educating the masses is a political issue.

The Baath government (1968-1982) followed the footsteps of its predecessors by expanding educational facilities in vocational and technical fields and by introducing new teaching methods and curricula. Devoted to a political ideology of pan-Arabism and socialism, the Baath government stressed commit to universal eradication of illiteracy and the elimination of regional and sexual discrepancy in education. The right of every Iraqi to education was emphasized. Thus considerable importance was placed upon compulsory universal primary education for all Iraqi children of school age.

By viewing education as a political issue, the Iraqi government neglected the every crucial economic issue of the relationship that should exist between educational policy - making and manpower development. The gearing of education to nationalist sentiments and ideologies has led to the creation of educational policies that are general and superficial rather than functional and practical. There is yet to be an educational policy in Iraq that would consider in practical terms the potentialities of the disadvantaged rural population, especially women, who, as earlier mentioned, are a vialable component of the Iraqi labour force.

A careful analysis of the organizational structure of the educational system in Iraq Chapter Seven and Eight, shows that developments in primary, intermediate and secondary education tend to overshadow development in vocational and technical education in Chapter Seven. It were noted that the number of students in vocational schools compared with those in formal (secondary) schools is very low and that the rate of growth of the vocational institutions for industrial, agrricultural and commercial education have also been relatively slow. The slow development in vocational education in attributed to the errourus belief that vocational education is of secondary or of rather less importance than academic education. This is so, because of the history of the establishment of vocational education which in Iraq was geared towards observing primary school graduates who were not accepted by or were unable to pursue further education in the academic secondary schools. The negative impact of this misconception of vocational training as an inferior form of education, the lacks of serious consideration given to the expansion of vocational institution and the training of vocatinal school teachers and manpower development in Iraq cannot be over emphasised. This general attitude towards vocational education has resulted in the diversion of vocational school graduates, who are generally not highly appreciated in the industries into other aspects of the labour force for which they were not trained. This explains why there are a shortage of skilled manpower in some sectors of the economy while there are excesses of employed people in other (e.g. the administrative and services sector).

Consequently, I argued that unless a serious effort is made to integrate academic and vocational education with national development plans, the process of modernization in Iraq will continue to suffer

serious set-backs. Whereas, considerable quantitative expansion has taken place, the Iraqi government is yet to tackle seriously the problem of qualitative education in the light of the increasing demands of modernization and development.

I have blamed this seemingly incoherent Iraqi education policy to:-

1. Political factors: The frequent changes at the ministerial level, resulting in ineffective leadership and perhaps, under bureaucratic delays.

2. The lack of trained planners.

3. The absence of an adequate statistical base.

The plight of technical education in Iraq is also similar to that of vocational education (Chapter 8). Available data shows that Iraqi government is aware of the importance of technical education to national development and here made efforts to expand facilities in technical training to meet the huge demands in construction and the maintenance of industrial projects. The establishment of the foundation of Technical institutes (F.T.I.) was an important step towards the realisation of these goals. But, like most developing countries Iraq faces a number of obstacles in her efforts towards a technical revolution. Technical education, like vocational education, is yet to be viewed in a more positive light by the majority of Iraqi people. Although the number of student intakes by the F.T.I. has increased considerably over the years, given a choice, many students would opt for an academic discipline. Technicians are yet to be

regarded as professionals and are still looked upon as subordinates to the professionals. Accordingly, the inadequacy in technical education has produced an adverse effect of a substantial increase in the importation of manpower from abroad.

Finally, in Chapter Nine, after examining the structure and composition of Iraqi universities, I concluded that, like the other level of the education system, decisions on higher education in Iraq have been made on the spur of the moment and in response to the needs of a quantitative growth in education. As a consequence, the outflow from higher education has proved inadequate for the requirements of national development.

In addition, I have identified the problem of the brain drain which I blamed on the inadequate co-ordination between educational planning and manpower needs and on the practice of educating Iraqi students abroad, with the result that such students, having acquired skills that are most relevant to the societies where they have studied, usually for permanent migration. Needlesss to mention, are the attractions of better salaries and working conditions. Finally, I maintained that there is the need to increase student enrolment in the strategic areas of development like engineering, the medical sciences and technology in order to cure the already acute problem of searcity of technician and pursued in the middle-level cadre.

In conclusion, my arguement in this thesis is based on the promise that educated manpower is obviously an important element in economic development. The economy and its rate of growth are dependent upon an adequate supply of skilled and trained labour force. The

general acceptance of this view is mandating to any effective educational planning.

Adopting a human capital approach I have identified the flow in the Iraqi educational system and planning, hence their inadequacy in meeting the country's manpower needs.

APPENDIX

RELEVANT STATISTICAL INFORMATION

Iraq's Sectoral Contribution of GDP During the Period 1958-1982

(million Iraqi Dinars)

Year	1958		1959		1960		1961		1962		1963		1964		1965		1966		1967		1968		1969	
Sectors	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP
Agriculture	101.8	16.6	87.3	13.9	104.4	14.9	128.0	16.4	151.5	18.5	114.1	14.0	157.4	17.7	172.9	17.8	1976.5	17.6	17.07	18.6	186.3	17.5	191.6	17.4
Mining	203.6	33.1	213.9	33.9	234.7	33.6	241.8	31.0	239.9	29.2	267.7	32.9	288.4	33.6	321.8	33.1	326.7	32.7	266.6	29.1	342.7	32.1	343.2	31.1
Manufacturing	46.6	7.6	54.5	8.7	65.7	9.4	74.1	9.5	79.3	9.7	75.8	9.3	73.3	8.6	79.1	8.1	88.1	8.8	88.4	4.7	96.7	9.1	103.0	9.3
Construction	42.8	7.0	40.0	6.3	32.2	4.6	34.2	4.4	27.7	3.4	27.7	3.4	25.0	2.9	28.2	2.9	30.7	3.1	27.9	4.5	30.4	2.8	30.5	2.8
Electricity and Water	1.9	0.3	2.0	0.3	2.4	0.3	3.4	0.4	3.7	0.5	3.4	0.4	4.9	0.6	6.5	0.7	7.9	0.8	7.8	0.9	9.6	0.9	10.9	0.9
Services	218.4	35.5	232.3	36.9	258.2	37.0	297.6	38.2	318.9	38.8	324.9	39.9	314.3	36.7	364.4	37.5	375.5	37.5	354.0	38.7	401.0	37.6	425.0	38.5
Total GDP at 1989 Prices	615.1	100.0	630.0	100.0	697.6	100.0	779.1	100.0	821.0	100.0	813.0	100.0	857.3	100.0	972.9	100.0	1000.4	100.0	915.4	100.0	1066.7	100.0	1103.9	100.0

Cont'd ....

PPENDIX A Continued

Iraq's Sectoral Contribution of GDP During the Period 1958-1982

(million Iraqi Dinars)

Year	1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982	
Sectors	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP	Absolute	% Share of GDP
Agriculture	186.6	16.4	179.9	15.1	228.6	18.6	180.5	13.3	166.1	11.1	165.5	9.3	185.6	8.7	193.6	9.3	206.5	9.1	611.8	5.9	741.9	5.3	955.5	11.5	1277.8	12.8
Mining	352.4	31.0	382.7	32.1	333.0	27.1	457.8	33.7	448.4	30.0	515.4	29.0	611.3	38.6	629.0	30.1	663.6	29.4	6749.9	65.8	9647.5	68.7	3295.0	39.7	2962.6	29.8
Manufacturing	105.1	9.3	122.5	10.3	132.6	10.8	143.5	10.6	153.7	10.3	182.4	10.3	236.8	11.1	254.6	12.2	285.1	12.6	628.6	6.1	709.0	5.0	717.1	8.6	875.1	8.8
Construction	39.3	3.5	40.0	3.4	42.3	3.4	51.1	3.8	52.7	3.5	69.1	3.9	148.9	6.9	131.1	6.3	159.8	7.1	993.8	9.7	1135.6	8.1	111.4	13.38	2080.6	20.9
Electricity and Water	12.7	1.1	4.9	0.9	13.7	1.1	16.0	1.2	18.6	1.2	23.4	1.3	28.3	1.3	34.1	1.6	43.1	1.9	37.8	0.37	49.5	0.35	92.4	1.11	65.0	0.65
Services	439.5	38.7	455.1	38.2	480.3	39.0	511.1	37.6	664.7	44.5	820.6	46.2	929.1	43.4	845.6	40.5	901.5	39.9	1230.7	12.0	1758.4	12.5	2136.1	25.7	2687.6	27.0
Total GDP at 1969 Prices	1135.5	100.0	1191.9	100.0	1230.5	100.0	1360.0	100.0	1492.2	100.0	1776.4	100.0	2140.0	100.0	2088.0	100.0	2259.6	100.0	10252.6	100.0	14041.9	100.0	8307.5	100.0	9948.7	100.0

OURCES: Data or sources of GDP for the year 1958 - 1968 are taken from: Hashem, J. "Appraisal of Economic Growth of Iraq 1950 - 1970", 1971, p. 285.

For the years 1969 - 1975 are taken from: A. A. of Statistics, 1976, p. 179.
International Financial Statistics Year Book, 1980, p. 202.
Iraq, Ministry of Planning, 1983, Table 5, p. 119.

APPENDIX B

Population In Iraq Classified by Sex - Age Groups

1957 - 1983

AGE GROUP	1957			PERCENTAGE			1965			PERCENTAGE		
	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL
0 - 1	112408	96067	208475	1.7	1.5	3.2	150229	132783	283012	1.8	1.6	3.4
1 - 4	510032	505300	1015332	8.0	7.9	15.9	664557	648991	1313548	8.2	8.0	16.2
5 - 9	504926	458856	965332	7.9	7.2	15.1	668421	614554	1282975	8.2	7.5	15.7
10 - 14	334650	319684	963782	5.2	5.0	10.2	532608	462991	995599	6.5	5.7	12.2
15 - 19	241030	258894	499924	3.8	4.0	7.8	333427	317759	651166	4.1	3.9	8.0
20 - 24	184412	211266	395678	2.9	3.3	6.2	281122	278776	559898	3.4	3.4	6.8
25 - 29	219682	228787	448469	3.4	3.6	7.0	229244	264141	493385	2.8	3.2	6.0
30 - 34	187368	214036	401404	2.9	3.3	6.2	232670	243051	475721	2.7	1.6	4.8
35 - 39	154692	145070	299762	2.4	2.3	4.6	229779	220236	450015	2.8	2.8	5.5
40 - 44	165385	316191	316191	2.6	2.2	4.9	164897	151921	316818	2.0	1.8	3.8
45 - 49	124395	99296	223691	1.9	1.5	3.4	149465	131095	280560	1.8	1.6	3.4
50 - 54	117318	119234	236533	1.8	1.8	3.6	123344	104646	227990	1.5	1.2	2.7
55 - 59	97909	104089	201998	1.5	1.6	3.1	103097	94379	197476	1.2	1.1	2.3
60 - 64	67147	71926	139073	1.0	1.1	2.1	69145	72088	141233	0.8	0.8	1.6
65 - 69	48388	49789	98177	0.7	0.8	1.5	85294	104422	189716	1.0	1.2	2.2
70 - 74							30834	30785	61619	0.3	0.3	0.6
75 - 79	70422	73419	143841	1.1	1.1	2.2	35657	36460	72117	0.4	0.4	0.8
80 - 84												
85 and over	39242	42660	81902	0.6	0.7	1.3	16280	17297	33577	0.2	0.2	0.4
90 - 94	-	-	-	-	-	-	4152	4960	9472	0.05	0.06	0.11
95 - 99	-	-	-	-	-	-	3541	4223	7764	0.04	0.05	0.09
100 and over	-	-	-	-	-	-	2439	2997	5436	0.3	0.03	0.06
Unknown	3711	6553	11374	0.09	0.09	0.27	6098	8087	14185	0.07	0.09	0.16
TOTAL	3185117	3154843	6339960	-	-	-	-	-	9478	-	-	-

Cont'd ....

Population In Iraq Classified by Sex - Age Groups

1957 - 1983

1977			PERCENTAGE			1980			PERCENTAGE			1983			PERCENTAGE		
MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL
261744	240028	501772	2.1	2.0	4.1												
912314	868642	1780956	7.6	7.2	14.8	1192918	1125362	2318280	8.5	9.0	17.5	1295582	1233875	2529367	8.8	8.4	17.2
1063572	981387	2044959	8.8	8.1	16.9	1088392	1009032	2097424	7.6	8.2	15.8	1126662	1051429	2178091	7.7	7.2	14.9
8140204	725755	1539959	6.7	6.0	12.7	915535	866494	1782029	6.5	6.9	13.4	1040538	966543	2007081	7.1	6.6	13.7
488306	521955	1010261	4.0	4.3	8.3	745095	691290	143385	5.1	5.6	10.7	840526	782267	1622793	5.7	5.3	11.0
602362	514014	1116376	5.0	4.2	9.2	593735	553592	1147327	4.1	4.4	8.5	690401	644252	1334653	4.7	4.4	9.1
422793	388146	810939	3.5	3.2	6.7	469208	436324	905532	3.2	3.5	6.7	527814	491616	1019430	3.6	3.3	6.9
318043	286041	604084	2.6	2.3	4.9	378709	351452	730161	2.6	2.8	5.4	435540	404528	840068	2.9	2.8	5.7
257707	237443	495150	2.1	1.9	4.0	294043	272584	566627	2.0	2.2	4.2	335308	310796	646104	2.3	2.1	4.4
186447	192590	379037	1.5	1.6	3.1	244860	227949	472809	1.7	1.8	3.5	267900	247739	515639	1.8	1.6	3.4
214064	204161	418225	1.7	1.7	3.4	208802	197910	406712	1.4	1.5	2.9	226843	212971	439814	1.5	1.5	3.0
153403	167720	331123	1.2	1.3	2.5	173979	169287	343266	1.2	1.3	2.5	188769	182556	371325	1.3	1.3	2.6
121602	122776	244378	1.0	1.0	2.0	138567	138107	276674	1.0	1.0	2.0	153598	153724	307322	1.0	1.1	2.1
113053	108374	221427	0.9	0.9	1.8	108497	109881	173815	0.8	0.4	1.2	115257	117671	232928	0.8	0.8	1.6
81004	74297	155301	0.6	0.6	1.2	89780	92605	182385	0.6	0.6	1.2	92472	95679	188151	0.6	0.7	1.3
59607	65036	124643	0.4	0.5	0.9	70076	75203	145279	0.5	0.5	1.0	72368	76901	149269	0.5	0.5	1.0
43522	52947	96469	0.3	0.4	0.7	47966	54040	102006	0.4	0.3	0.7	49697	55376	105073	0.3	0.4	0.7
20029	22468	42497	0.1	0.1	0.2												
26685	31460	581450	0.2	0.2	0.4	42031	51735	93766	0.3	0.3	0.6	44819	53910	98729	0.3	0.3	0.6
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22437	12359	34760	0.1	0.1	0.2	-	-	-	-	-	-	-	-	-	-	-	-
6182898	5817599	12000497	-	-	-	6815831	6422847	13238678	-	-	-	-	-	14585837	-	-	-

SOURCE:
1. Ministry of Planning, 1977, p. 3
2. Ministry of Planning, 1978, p. 26
3. Ministry of Planning, 1981, p. 34
4. Ministry of Planning, 1983, p. 50

PPENDIX C_1

The Gainfully Employed Population, Distribution by Economic Sectors in Iraq 1960-1980

YEAR	AGRICULTURE		MINING		MANUFACTURING		ELECTRICITY GAS & WATER		TRADE		TRANSPORT		SERVICES	
	ABSOLUTE	%	ABSOLUTE	%	ABSOLUTE	%	ABSOLUTE	%	ABSOLUTE	%	ABSOLUTE	%	ABSOLUTE	%
1960	733900	45.9	11000	0.7	130000	8.1	11800	0.7	100000	6.8	110000	6.3	245000	15.3
1961	780500	46.7	11500	0.7	130000	7.7	11900	0.7	105000	6.8	114000	6.3	250000	15.0
1962	827000	47.9	12000	0.7	130000	7.5	12000	0.7	110000	6.8	117000	6.3	255000	15.0
1963	873500	49.0	12500	0.7	130000	7.2	12000	0.7	115000	6.8	121000	6.4	260000	15.0
1964	920100	49.7	13000	0.7	130000	7.0	12200	0.7	120000	6.8	125000	6.4	265000	15.0
1965	1009600	50.9	13500	0.7	135000	6.7	12400	0.6	125000	6.8	129000	6.3	270000	14.0
1966	1103100	52.3	14000	0.7	140000	6.6	12600	0.6	130000	6.3	133000	6.2	275000	13.0
1967	1177400	53.5	145000	0.7	140000	6.3	12800	0.6	135000	6.2	131000	6.1	295000	13.0
1968	1253600	54.0	15000	0.7	146000	6.2	12900	0.6	140000	6.1	140000	6.0	290000	12.0
1969	1306400	54.4	15500	0.7	148000	6.1	130000	0.5	145000	6.0	143000	6.0	295000	12.0
1970	1385700	55.2	16000	0.7	150000	5.9	13000	0.5	150000	6.0	150000	6.0	300000	12.0
1971	1434700	55.3	16500	0.7	160000	6.1	13400	0.5	155000	6.0	154000	6.0	310000	12.0
1972	1486200	55.5	17500	0.7	165000	6.1	13900	0.5	160000	6.0	158000	6.0	320000	12.0
1973	1545600	55.9	18500	0.7	170000	6.1	14300	0.5	14000	6.0	162000	6.0	330000	12.0
1974	1654400													
1975	1707995	58.0	20000	0.7	185000	6.2	15000	0.5	170000	5.7	170000	6.0	350000	12.0
1976	1769565													
1977	1831142	59.8	36835	1.2	284395	9.2	23190	0.7	224106	7.3	177990	8.0	989068	32.0
1980	1751000	49.3	281000	7.9	514060	14.0	361000	1.0	2693000	7.5	1048000	5.2	7320000	20.0

Cont'd...

APPENDIX C_1 (Cont'd)

The Gainfully Employed Population, Distribution by Economic Sectors in Iraq 1960-1980

YEAR	CONSTRUCTION		OTHERS	TOTAL EMPLOYMENT	TOTAL UNEMPLOYMENT	TOTAL LABOUR FORCE	TOTAL POPULATION
	ABSOLUTE	%	ABSOLUTE	ABSOLUTE	ABSOLUTE	ABSOLUTE	ABSOLUTE
1960	58000	3.6	200000	1599700	31400	1631100	6885.2
1961	58000	3.4	210000	1670900	63600	1734500	7142.8
1962	50000	3.0	215000	1728000	109800	1837800	7366.7
1963	43100	3.0	220000	1787100	154100	1941200	7601.1
1964	47200	3.0	220000	1852100	192500	2044600	7846.5
1965	61000	3.0	230000	1985300	162700	2148000	8047.4
1966	70000	3.2	240000	2107500	143800	2251300	8359.6
1967	59100	3.0	260000	2200600	154100	2354700	8632.7
1968	66000	3.0	270000	2323400	134700	2458100	8914.4
1969	67000	3.0	275000	2402800	158200	2561500	9205.2
1970	67000	3.0	275000	2506700	1582000	2664900	9440.1
1971	69000	3.0	280000	2592600	166500	2759100	9750.0
1972	71000	3.0	285000	2676600	181400	2858000	10074.0
1973	73000	3.0	290000	2762200	200100	2962300	10413.0
1974							10765.0
1975	77000	3.0	300000	2944000	240100	318500	11124.3
1976							11505.0
1977	321696	10.5	582370	3059272	74725	3133939	12000.0
1980	1130000	31.0	550000	3549300	393000	3510000	13238.0

SOURCE: Compiled from: Iraq, Ministry of Plannig, Statistical Pocket Book, 1960-1970, Baghdad, 1972 Table 10, p. 32.
Iraq, Ministry of Planning, 1973, Table 208, p. 358.
Nilstorm Report on Manpower in Iraq, Baghdad, 1970.
The Development Plan of 1976-1980, Baghdad, 1977, Table 3, p. 13.

APPENDIX C_2

Female Qualifications 1980

QUALIFICATIONS	URBAN		RURAL		THE TOTAL FEMALE
	FEMALE	TOTAL	FEMALE	TOTAL	
Primary Certificate	231641	806760	9826	171451	241467
Intermediate Certificate	85421	272254	1571	33433	86993
Secondary Certificate	46879	149625	461	10737	47340
Vocational Schools	25536	75715	331	6971	25867
Diploma	13759	46647	219	7191	13978
B. Sc.	27223	103004	263	8382	27486
H.N.D.	856	3739	10	117	866
M.A., M. Sc.	477	7537	4	155	481
Ph. D.	135	2284	1	24	136
Higher Specialist Certificate	53	621	1	6	54
Others	1434	4076	62	623	1496
Not Known	46936	88694	21587	39991	68523

SOURCE: Badre, 1980, p. 209

APPENDIX D_1

Weekly-Time Table for Preparatory Agricultural Schools in Iraq

1975 - 1976

	NO. OF WEEKLY IN GRADE					
	IV	THEORY PRA	V	THEORY PRA	VI	THEORY PRA
Arabic Language & Religion	2	-	2	-	2	-
Kurdish Language	a	-	a	-	2	-
English Language	2	-	2	-	-	-
Mathematics	2	-	-	-	-	-
Physics	2	1	-	-	-	-
Chemistry	2	2	-	-	-	-
Botany and Zoology	2	2	-	-	-	-
Horticulture	2	3	2	3	2	3
Farm Produce	2	3	2	3	2	3
Plant Protection	-	-	2	1	-	-
Silk Worm & Bee Keeping	-	-	1	-	-	-
Animal Care	2	2	-	-	-	-
Poultry Farming	-	-	1	2	-	-
Veterinary Science	-	-	1	1	-	-
Food Industries	-	-	-	-	1	2
Dairy Farming	-	-	-	-	1	2
Soil & Agricultural Reform	-	-	2	1	-	-
Economics & Co-Operatives	-	-	2	-	-	-
Farm Management & Book Keeping	-	-	-	-	2	-
Agricultural Extension and Social Development	-	-	-	-	1	-
Agricultural Machinery	-	4	-	4	-	4
Farm Labour & Training	-	5	-	8	-	13
TOTAL	18	22	18	22	13	27

SOURCE: Ministry of Education, 1978, p. 57

APPENDIX D_2

Weekly Time-Table for Preparatory Industrial Schools in Iraq

1975 - 1976

	NO. OF WEEKLY IN GRADE		
	IV	V	VI
ACADEMIC SUBJECTS			
Religious Education	1	1	-
Arabic Language	2	2	-
English Language	2	3	3
Social Sciences	2	-	-
Vocational Health	-	1	-
Physics	3	4	4
Commercial Information and Labour Laws	-	-	2
Mathematics	2	3	3
Chemistry	-	-	2
Sub Total Academic Subjects			
TECHNICAL SUBJECTS			
Geometrical & Industrial Drawing	6	4	4
Industrial Arithmetic	2	2	2
Industrial Sciences	4	4	4
Practical Training	18	18	18
Physical Education	2	2	2
Sub Total Technical Subjects	32	30	30
TOTAL	44	44	44

SOURCE: Ministry of Education, 1978, p. 58

APPENDIX D_3

Number of Students, Teachers, Schools, in the Agriculture Education From 1940-1984

Year	Student	Teacher	School
1940-1941	55	6	1
1941-1942	91	6	1
1942-1943	110	6	1
1943-1944	137	10	1
1944-1945	136	8	1
1945-1946	119	9	1
1946-1947	146	11	1
1947-1948	150	11	1
1948-1949	144	11	1
1949-1950	111	11	1
1950-1951	79	11	1
1951-1952	74	11	1
1952-1953	80	11	1
1953-1954	87	11	1
1954-1955	93	11	1
1955-1956	91	11	1
1956-1957	133	11	1
1957-1958	449	16	9
1958-1959	1640	33	10
1959-1960	1450	60	10
1960-1961	1640	93	10
1961-1962	1680	118	10
1962-1963	1627	148	10
1963-1964	1577	151	9
1964-1965	1726	187	10
1965-1966	1896	172	10
1966-1967	2186	201	13
1967-1968	3120	219	13
1968-1969	3554	255	13
1969-1970	3603	299	13
1970-1971	3616	312	13
1971-1972	3202	378	13
1972-1973	3119	395	14
1973-1974	3531	354	14
1974-1975	4112	378	15
1975-1976	4696	430	16
1976-1977	5390	550	18
1977-1978	5784	646	21
1978-1979	7896		25
1979-1980	8489		28
1980-1981	9010	1054	30
1981-1982	7962	1030	30
1982-1983	8514	1088	31
1983-1984	8704	1075	30

Source:
1. Ministry of Planning, 1978, p. 84
2. Ministry of Planning, 1981, p. 228
3. Ministry of Planning, 1982, p. 217
4. Ministry of Planning, 1983, p. 223

APPENDIX D_4

Number of Students, Teachers, Schools, in the Industrial Education From 1940-1984

Year	Student	Teacher	School
1940-1941	178	32	1
1941-1942	187	26	1
1942-1943	254	31	2
1943-1944	290	45	2
1944-1945	238	47	2
1945-1946	189	58	3
1946-1947	207	31	3
1947-1948	296	61	2
1948-1949	286	61	2
1949-1950	348	36	3
1950-1951	399	55	3
1951-1952	431	54	3
1952-1953	491	60	3
1953-1954	575	45	3
1954-1955	641	48	3
1955-1956	808	93	4
1956-1957	1219	123	5
1957-1958	1695	161	8
1958-1959	2089	166	8
1959-1960	2653	205	8
1960-1961	2089	249	10
1961-1962	1907	275	10
1962-1963	1923	310	0
1963-1964	1786	275	8
1964-1965	1601	258	8
1965-1966	1598	222	7
1966-1967	1671	240	7
1967-1968	1877	280	9
1968-1969	2296	304	10
1969-1970	2410	325	12
1970-1971	2660	334	10
1971-1972	2680	364	11
1972-1973	3321	385	16
1973-1974	5264	425	18
1974-1975	8059	590	20
1975-1976	9697	730	23
1976-1977	13768	1035	32
1977-1978	19460	1425	38
1978-1979	27854	1870	45
1979-1980	30968	2337	50
1980-1981	31182	2288	63
1981-1982	2820	2335	67
1982-1983	32249	2637	69
1983-1984	43503	2923	81

Source:
1. Ministry of Planning, 1978, p. 84
2. Ministry of Planning, 1981, p. 228
3. Ministry of Planning, 1982, p. 217
4. Ministry of Planning, 1983, p. 223

APPENDIX D_5

Number of Students, Teachers, Schools, in the Commercial Education From 1958-1984

Year	Student	Teacher	School
1958-1959	978	-	10
1959-1960	967	-	10
1960-1961	1279	16	9
1961-1962	464	18	2
1962-1963	423	20	2
1963-1964	252	19	2
1964-1965	666	20	4
1965-1966	478	32	3
1966-1967	560	58	3
1967-1968	814	42	4
1968-1969	1246	64	5
1969-1970	1522	66	5
1970-1971	1699	97	5
1971-1972	2253	158	11
1972-1973	3840	189	14
1973-1974	5614	233	15
1974-1975	7782	370	21
1975-1976	8279	428	27
1976-1977	9207	487	32
1977-1978	9944	527	33
1978-1979	12436		39
1979-1980	14569		48
1980-1981	16643	806	50
1981-1982	17036	860	51
1982-1983	20620	1008	57
1983-1984	25226	1117	65

Source:
1. Ministry of Planning, 1978, p. 84
2. Ministry of Planning, 1981, p. 228
3. Ministry of Planning, 1982, p. 217
4. Ministry of Planning, 1983, p. 223

APPENDIX D_6

Weekly Time-Table for Preparatory Commerical Schools in Iraq

1975 - 1976

SUBJECTS	NO. OF WEEKLY PERIODS IN GRADE		
	IV	V	VI
Religious Education	2	2	2
Arabic Language	5	5	5
English Language	5	5	5
Accounts/Book Keeping	5	5	5
General Mathematics	3	-	-
Commercial Arithmetic & Financial Mathematics	-	3	3
Geography	3	-	-
Economics			
Labour Administration	2	2	-
Commercial Law	-	-	2
Commercial Correspondence	-	2	2
Education	1	1	1
Typing English	5	-	-
Typing Arabic	-	3	3
TOTAL	31	31	31

SOURCE: Ministry of Education, 1978, p. 59

APPENDIX E_1

Number of Students Admitted to FTI for the Years 1972/73 to 1981/82

		1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
1.	Technology - Baghadad	194	501	607	1145	1488	1453	1354	1891	1852	2240
2.	Administration - Rissafa	335	471	645	1182	1105	1141	1181	883	1148	1400
3.	Agricultural Technology - Baghadad	232	289	387	516	686	822	656	715	636	925
4.	Medical Technology - Baghadad	72	145	157	134	190	306	287	274	362	470
5.	Applied Art - Baghadad	107	118	31	112	161	208	78	65	190	160
6.	Technical - Sulimaniyah		163	89	225	297	379	402	344	427	470
7.	Technical - Basrah		322	111	463	786	731	687	790	959	1325
8.	Technical - Mosul					251	318	482	582	1139	1340
9.	Technical - Kirkuk					165	192	193	252	978	1020
10.	Administration - Karh - Baghadad					166	190	166	139	317	450
11.	Technical - Hillah					124	652	299	328	820	1080
12.	Agricultural Technology - Askikalk					110	125	123	142	141	310
13.	Agricultural Technology - Kumet					108	131	109	114	113	240
14.	Technical - Rumadi						222	202	258	427	560
15.	Technical - Najaf							135	265	341	570
16.	Technical - Arbil							132	267	719	980
17.	Technical - Amarah								25	146	160
18.	Agricultural Technology - Al Shatrah								55	304	585
19.	Agricultural Technology - Al Musaybe								89	469	840
20.	Agricultural Technology - Kut									101	300
21.	Agricultural Technology - Bnesaad									87	240
22.	Agricultural Technology - Al Hawlja									119	360
23.	Agricultural Technology - Al Numrod									178	360
24.	Technical - Al Nassryia									109	300
25.	Agricultural Technology - Kufa										180
	TOTAL	940	2011	2027	3777	5637	6454	6484	7484	12082	16975

SOURCE: FTI Yearbook of 1972-1982, p. 31

APPENDIX E_2

Number of Students In the FTI for the Years 1972/73 to 1981/82

		1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
1.	Technology - Baghadad	598	673	1106	1808	2635	2098	2908	3469	3947	4655
2.	Administration - Rissafa	829	980	1139	1821	2257	2325	2339	2424	2480	2873
3.	Agricultural Technology - Baghadad	399	446	650	900	1172	1513	1533	1440	1312	1685
4.	Medical Technology - Baghadad	144	250	331	270	316	497	597	580	656	824
5.	Applied Art - Baghadad	168	209	129	127	263	356	285	165	277	202
6.	Technical - Sulimaniyah		167	267	336	518	654	820	756	805	970
7.	Technical - Basrah		224	576	637	1207	1545	1562	1613	1852	2159
8.	Technical - Mosul					251	575	850	1053	1720	2781
9.	Technical - Kirkuk					165	351	404	479	1276	2232
10.	Administration - Karh - Baghadad					166	336	345	328	506	858
11.	Technical - Hillah					124	372	575	689	272	1792
12.	Agricultural Technology - Askikalk					110	228	247	267	217	465
13.	Agricultural Technology - Kumet					108	229	242	214	655	245
14.	Technical - Rumadi						174	387	464	672	864
15.	Technical - Najaf							139	440	981	1024
16.	Technical - Arbil							132	397	555	1107
17.	Technical - Amarah								89	169	1310
18.	Agricultural Technology - Al Shatrah								25	500	228
19.	Agricultural Technology - Al Musaybe								55	119	987
20.	Agricultural Technology - Kut									178	385
21.	Agricultural Technology - Bnesaad									87	491
22.	Agricultural Technology - Al Hawija									109	179
23.	Agricultural Technology - Al Numrod									101	409
24.	Technical - Al Nassryia										387
25.	Agricultural Technology - Kufa										131
	TOTAL	2183	2959	4198	5899	9292	12253	13437	14947	20649	29243

SOURCE: FTI Yearbook of 1972-1982, p. 33

Number of Graduates from The FTI for the Years 1972/73 to 1980/81

		1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81
1.	Technology - Baghadad	239	269	402	590	947	1359	1297	999	1366
2.	Administration - Rissafa	276	316	524	614	1015	1016	927	821	654
3.	Agricultural Technology - Baghadad	174	199	269	377	412	611	637	519	393
4.	Medical Technology - Baghadad	63	69	167	135	100	170	278	204	169
5.	Applied Art - Baghadad	51	90	110	15	99	147	171	68	45
6.	Technical - Sulimaniyah			161	120	202	247	366	314	273
7.	Technical - Basrah			347	156	393	629	689	630	645
8.	Technical - Mosul						212	299	350	498
9.	Technical - Kirkuk						153	167	159	213
10.	Administration - Karh - Baghadad						134	146	144	85
11.	Technical - Hillah						114	210	225	222
12.	Agricultural Technology - Askikalk						98	103	69	102
13.	Agricultural Technology - Kumet						93	127	88	88
14.	Technical - Rumadi							156	169	155
15.	Technical - Najaf								105	188
16.	Technical - Arbil								117	151
17.	Technical - Amarah									60
18.	Agricultural Technology - Al Shatrah									21
19.	Agricultural Technology - Al Musaybe									116
	TOTAL	803	943	1980	2007	3168	4983	5173	4981	5438

SOURCE: FTI, 1972-1973, p. 44
FTI, 1977-1983, p. 79

APPENDIX E_4

Scholarships for Training, Study Abroad in the FTI

For 1972 - 1982

YEAR	SCHOLARSHIPS FOR TRAINING	SCHOLARSHIPS FOR STUDYING			SCHOLARSHIPS
			IN IRAQ	OUT OF IRAQ	
1972-1973	3	5	1	-	-
1973-1974	9	3	6	-	-
1974-1975	8	5	1	2	-
1975-1976	43	15	5	3	-
1976-1977	39	7	3	22	-
1977-1978	32	15	6	50	-
1978-1979	941	20	12	108	-
1979-1980	254	25	19	121	28
1980-1981	51	14	11	189	12
1981-1982	16	4	12	3	12
TOTAL	547	113	77	499	52

SOURCE: Yhya and Ibrahim, 1982, p. 28

Growth In the Number of Technicians In Iraq

1972 - 1982

INSTITUTES	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80	1980-81	1981-82
Technology - Baghdad	27	50	64	105	150	155	246	297	374	364
Administration - Rissafa	3	3	8	9	12	22	35	54	73	82
Agricultural Technology - Baghadad	17	23	26	39	37	56	99	78	87	89
Medical Technology - Baghadad	7	10	6	16	21	30	37	50	52	50
Applied Art - Baghadad	2	2	9	10	8	9	13	15	16	15
Technical - Sulimaniyah		-	-	5	8	16	23	31	38	-
Technical - Basrah		4	17	35	62	63	94	106	123	129
Technical - Mosul					9	15	30	48	82	104
Technical - Kirkuk					4	13	37	29	61	66
Administration - Karh					7	12	17	50	40	24
Technical - Hillah					6	15	31	49	95	89
Agricultural Technology - Askikalk					36	42	66	31	54	-
Agricultural Technology - Kumet					16	28	49	58	44	42
Technical - Rumadi						9	31	42	77	68
Technical - Najaf							21	43	56	73
Technical - Arbil							14	21	80	81
Agricultural Technology - Al Shatrah								39	30	78
Agricultural Technology - Al Musaybe								27	61	79
Technical - Amarah									51	70
Technical - Al Nassryia									11	15
Agricultural Technology - Al Hawlja									26	29
Agricultural Technology - Kut									24	18
Agricultural Technology - Bnisead									31	43
Agricultural Technology - Al Numrod									26	66
Agricultural Technology - Al Kufa									-	16
TOTAL	56	92	130	219	333	285	843	1120	1613	1640

SOURCES: Ibrahim & Yhya, 1982, p. 45

APPENDIX E6

The Number of Students Admitted to Technical Institutes From 1982-1995

		1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1993-95
1.	Technology - Baghadad	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
2.	Technical - Basrah	700	700	700	750	850	850	850	840	840	840	840	840	840	840
3.	Technical - Kirkuk	840	840	840	840	840	840	840	840	840	840	840	840	840	840
4.	Technical - Mosul	840	840	840	840	840	840	840	840	840	840	840	840	840	840
5.	Technical - Al Sulimaniyah	120	150	200	340	340	340	340	340	340	340	340	340	340	340
6.	Technical - Al Hillah	780	780	780	780	780	780	780	780	780	780	780	780	780	780
7.	Technical - Al Rumadi	350	400	550	600	780	780	780	780	780	780	780	780	780	780
8.	Technical - Arbil	760	780	780	780	780	780	780	780	780	780	780	780	780	780
9.	Technical - Najaf	335	390	520	635	670	700	720	720	720	720	720	720	720	720
10.	Technical - Aumara	700	750	790	840	840	840	840	840	840	840	840	840	840	840
11.	Technical - Al Nassryia	200	250	250	350	500	500	500	500	500	500	500	500	500	500
12.	Technical - Al Dura				50	200	300	350	350	400	450	550	550	550	550
13.	Technical - Al Gant				50	150	250	265	325	350	350	350	350	350	350
14.	Technical - Al Dewania				50	150	200	225	250	300	350	350	350	350	350
15.	Technical - Salahdaen				50	135	185	225	250	300	350	350	350	350	350
16.	Technical - Duhok			50	100	200	250	300	350	400	450	450	450	450	450
17.	Technical - Al Samwa			50	100	200	100	300	350	400	425	425	425	425	425
18.	Technical - Kurbla					50	50	150	200	200	300	300	300	300	300
19.	Technical - Kute							100	150	200	300	300	300	300	300
20.	Technical - Diyala							50	100	175	300	300	300	300	300
	TOTAL	7825	8080	8550	9355	10505	11035	11435	11835	12235	12835	12835	12835	12835	12835

SOURCE: S. Ibrahim & B. Yhya, 1982, p. 38

The Plan for Accepting Students for Agricultural Specialization

1981-1995

	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1993-95
Agricultural Technology - Baghdad	800	800	750	750	750	750	750	750	750	750	750	750	750	750
Agricultural Technology - Askl Kulk	306	325	325	325	325	325	325	325	325	325	325	325	325	325
Agricultural Technology - Kumet	240	240	251	259	259	259	259	259	259	259	259	259	259	259
Agricultural Technology - Mussab	550	550	450	450	450	450	450	450	450	450	450	450	450	450
Agricultural Technology - Al Shatra	150	200	300	300	300	300	300	300	300	300	300	300	300	300
Agricultural Technology - Al Hawlja	220	250	300	300	300	300	300	300	300	300	300	300	300	300
Agricultural Technology - Kute	325	325	300	300	300	300	300	300	300	300	300	300	300	300
Agricultural Technology - Bhlsaad	325	325	300	300	300	300	300	300	300	300	300	300	300	300
Agricultural Technology - Numrod	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Agricultural Technology - Kufa	150	200	300	300	300	300	300	300	300	300	300	300	300	300
TOTAL	3366	3515	3576	3684	2584	3584	3584	3584	3584	3584	3584	3584	3584	3584

SOURCE: S. Ibrahim & B. Yhya, 1982, p. 40

The Plan for Accepting Students for Administration

1981-1995

		1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1993-95
1.	Administrative - Rissofa	1400	1400	1400	1400	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
2.	Administrative - Kurh	450	500	540	600	700	700	700	700	800	800	800	800	800	800
3.	Technical - Basrah	440	450	450	500	600	600	600	600	600	600	600	600	600	600
4.	Technical - Kirkuk	350	300	350	400	400	400	400	400	412	412	412	412	412	412
5.	Technical - Mosul	340	400	450	500	500	500	500	500	500	500	500	500	500	500
6.	Technical - Sulimaniyah	240	314	339	450	500	500	500	500	500	500	500	500	500	500
7.	Technical - Hillah	290	350	400	450	500	500	500	500	500	500	500	500	500	500
8.	Technical - Rumadi	190	300	250	325	350	350	350	375	350	500	350	500	500	500
9.	Technical - Arbil	220	300	350	400	350	350	350	375	400	400	400	400	400	400
10.	Technical - Najaf	200	260	250	275	350	350	350	375	400	400	400	400	400	400
11.	Technical - Aumara	90	200	250	300	300	325	325	340	400	400	400	400	400	400
12.	Technical - Nassryia	100	150	200	250	350	350	350	375	400	400	400	400	400	400
13.	Technical - Diwani				100	275	312	312	335	350	350	350	350	350	350
14.	Technical - Salahdaen				100	275	325	325	340	350	350	350	350	350	350
15.	Technical - Duhok			100	163	325	325	325	340	350	350	360	350	350	350
16.	Technical - Samawa			100	163	325	325	325	340	350	350	350	350	350	350
17.	Technical - Kurbla					136	250	312	310	350	350	350	350	350	350
18.	Technical - Kute						150	300	340	350	350	350	350	350	350
19.	Technical - Diyala							150	300	50	50	50	50	50	50
	TOTAL	4310	4824	5429	6324	7736	8112	8479	8845	9212	9212	9212	9212	9212	9212

SOURCE: Dr. B. Yhya & Dr. S. Ibrahim, The Development of Technical Education in Iraq, 1982, p.39

APPENDIX E_9

The Number of Student Admitted to Technical Medicine

1981-1995

	INSTITUTE/YEAR	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1993-95
1.	Technical Medicine - Baghdad	470	500	500	500	500	500	500	500	500	500	500	500	500	500
2.	Technical Medicine - Sulimaniyah	100	125	175	210	220	220	220	240	230	230	230	230	230	230
3.	Technical Medicine - Basrah	175	175	175	220	220	220	220	240	240	250	250	260	260	260
4.	Technical Medicine - Mosul	150	175	175	210	210	220	220	230	230	250	250	260	260	260
5.	Technical Medicine - Najaf		100	150	210	210	210	220	230	230	240	240	260	260	260
6.	Technical Medicine - Kirkuk					100	125	150	150	150	150	150	150	150	150
7.	Technical Medicine - Al Hila						100	125	150	150	150	150	150	150	150
8.	Technical Medicine - Arbil							100	125	150	150	150	150	150	150
	TOTAL	895	1075	1175	1350	1460	1595	1755	1855	1880	1980	1980	1980	1980	1980

SOURCE: S. Ibrahim & B. Yhya, 1982, p. 39

APPENDIX F_1

Government Student Mission During 1922-1932

YEAR	LEBANON	U.K.	U.S.A.	GERMANY	EGYPT	FRANCE	SWEDEN	OTHERS	TOTAL	% OF STUDENTS SEND TO WESTERN COUNTRIES
1922-23	6	2	-	-	-	-	-	1	9	22
1923-24	120	5	2	1	-	-	-	-	128	7
1924-25	14	2	1	1	-	-	-	-	18	22
1925-26	7	12	3	-	-	-	-	-	22	68
1926-27	12	9	3	-	-	-	-	-	24	50
1928-29	-	-	-	-	-	-	-	-	37	-
1929-30	11	12	-	-	9	1	2	-	35	43
1930-31	-	-	-	-	-	-	-	-	136	-
1931-32	44	43	9	-	11	-	-	3	110	47

SOURCE: Akrawi, 1942, p. 139

APPENDIX F_2

Percentages of Students Admitted to Higher Education Relative to Secondary School Graduates

	SECONDARY SCHOOL GRADUATES			STUDENTS ADMITTED TO HIGHER EDUCATION			
YEAR	MALES	FEMALES	TOTAL	MALES	FEMALES	TOTAL	%
1970-71	10249	4361	14610	9558	2378	11936	81.7
1971-72	15155	6422	21577	11173	2945	14118	65.4
1972-73	13878	6557	20435	10068	4179	14247	69.7
1973-74	15325	7682	23007	11812	5779	17591	76.6
1974-75	-	-	-	13889	5980	19869	-
1975-76	21497	10560	32057	14027	6613	20640	64.4
1978-79	3186	1527	4713	15860	6956	22816	-

SOURCE: Ministry of Education, 1979, pp. 23-26

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