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EDUCATION AND THE PROVISION OF SUB-
PROFESSIONALS IN THE COMING TEN
YEARS IN IRAN
(1967-77)
(With Implications For Curriculum Change)

By

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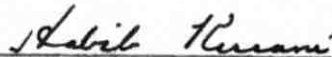
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EDUCATION AND THE PROVISION
OF SUB-PROFESSIONALS
IRAN

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INTRODUCTION

Most nations today are development-minded. Some nations which are marked for their technological achievements explore the outer space and aspire to conquer other planets; the old traditional societies work for modernity, and newly-independent countries make efforts to secure national unity. In all these different types of countries the world-wide slogan is development.

Development in Iran is crystallized in demands for social modernization and economic progress. Education as a social process cannot stay distant from such demands. Modernized education must have dynamic attributes, move with time, and reorient and readjust itself to emerging needs of a changing environment.

This study is oriented towards examining the role of education in social and economic development through forming individuals who are able to survive in the modern technological world. Mere adoption of the material and external aspects of modernity does not make a society modern. Once a nation is grasped by the will

to change and modernize, it can achieve its objectives. Education is one of the most effective means which can make people ready to utilize their resources at full capacity and march towards modernity and prosperity.

ABSTRACT

Purpose of the Study:

This study aims at identifying and estimating the technical needs of Iran at the medium level in the coming ten years. Attention is focussed on the shortage of sub-professionals in the light of recent social and economic developments. The study is based on the assumption that education is the most important single factor in achieving rapid social and economic progress, hence the major deficiencies in the Iranian educational system which impede the provision of sub-professionals are examined in this study.

Statement of the Problem:

Although since 1925, especially after World War II, education has attracted great attention and concern in Iran, there are still large deficiencies which must be removed speedily if progress in the sphere of society and economy is to be sustained.

The major problem of the existing educational system in Iran is an overdose of academic

education at the secondary level which is beyond the needs of the country, and an extremely low rate of growth of vocational and technical education which is crucial for economic development.

Owing to industrial development and agricultural reform, great needs are felt for technical personnel and the shortage of such personnel is increasing steadily. Yet hundreds of thousands of young people rush to the academic secondary school which mainly leads to white collar jobs. Such an education is a matter of the bygone past, but its image still persists in the minds of the youth.

It is paradoxical that while a number of "intellectuals" remain unemployed, there are great needs and openings for technical personnel. Many development plans and projects launched in recent years by the Plan Organization have had to be delayed for the shortage of skilled hands.

Everybody wants to enjoy the modern commodities of life, but few actually like or can engage in producing these commodities. Iran can not afford to train for various skills out of formal educational institutions. Consequently

education can and must offer some of the skills needed for economic development. Education must also nurture modern attitudes.

Method of the Study:

The method employed in this study is descriptive and analytical. Data given by the Plan Organization and the UNESCO are collected and utilized. Literature which pertains to the social and economic value of education is made use of. The idea of economic implication of education is of recent origin in Iran, and this sets limits to references made from Iranian sources.

Summary of the Study:

The study includes 6 chapters. In the first chapter the historical, geographical, and socio-cultural background of Iran is given. The educational background is divided into three parts: traditional education which prepared people mainly for life hereafter, education for bureaucracy which started in the mid-nineteenth century, and education for social and economic development which is of recent origins.

Chapter II deals with the present social and economic conditions of Iran. Since 1953 the country has taken strides toward modernization and industrialization. Two developmental plans were implemented with relative success. In 1963 Land Reform changed drastically the village life. Peasants now own and till their own land. In order to produce more, these peasants need the advice and help of thousands of extensionists, machinery repairmen, medical workers, and teachers.

Regular investments in industries have created new technical needs. Huge factories and plants are to be founded in the coming decade. Many technologists and technicians are needed to operate these factories. Industrialization and modernization of agriculture bring their peculiar problems in any developing country. Most people aspire to enter the technological age, but their traditional mentality creates barriers to social and economic objectives.

Chapter III deals with the function of schools and the question whether schools should only preserve the status quo or be geared to meet-

ing the emerging needs, thus modifying and reshaping the culture. In this chapter the existing school system is delineated and its shortcomings are discussed.

In Chapter IV the shortage of technical sub-professionals in the coming decade is estimated in the light of the outputs of the existing schools. The writer comes out with the conclusion that in the coming ten years there will be a shortage of over 200,000 technical sub-professionals such as technicians, foremen, supervisors, medical assistants, primary school teachers, junior officials, clerks, urban and industrial trades, etc., unless education is reoriented.

Schools have a significant role in producing skills and attitudes. But in Iran the curriculum of the secondary school, which must be the greatest producer of sub-professionals, is more than three-quarters of a century old. How can an old-fashioned curriculum be effective in a modernizing society? Chapter V is devoted to the analysis of the secondary school curriculum and its irrelevance to modern needs.

On the basis of shortages of sub-profes-

sionals examined and estimated in Chapter IV, and the deficiencies of the curriculum examined in Chapter V the writer offers some suggestions at the end of this study.

CHAPTER I
SOCIAL AND EDUCATIONAL DEVELOPMENT
IN IRAN

This chapter falls in two sections; the first gives a general background picture of Iran in terms of its physical, historical, and social-cultural settings, and introduces the people and their language. The second section describes the educational development in Iran. The second section is divided into three sub-sections: (1) traditional education; (2) education for bureaucracy; and (3) education for social and economic development.

A. General Background

1. The Physical Setting: Iran is situated between 26 and 40 degrees North, and 44 and 64 degrees East. It is bounded on the north by the Soviet Union and the Caspian Sea, on the east by Afghanistan and Pakistan, on the south by the Persian Gulf, and on the west by Iraq and Turkey. Iran has an area of 1,645,000 square kilometers

(628,000 square miles). It lies upon the great highway of Asia, leading from China, Central Asia, Afghanistan and Pakistan to Russia and Iraq. This great highway was traditionally called the Silk Route and was of great commercial importance before the opening of the Suez Canal.

Broadly speaking, Iran can be divided into five major regions: upland districts with unirrigated farming, other upland districts where oasis cultivation only is possible because of insufficient rainfall, inland depressions, and two narrow lowland coastal belts, one in the north along the southern shores of the Caspian Sea with its thick forests and heavy rainfall, and the other along the northern shores of the Persian Gulf with its hot climate and inhospitable hinterland.

"Iran has a continental climate, with wide annual variations in temperature. Humidity is very low over most parts of the country. Precipitation averages 25 centimetres (10 inches) a year on the plateau; on the higher ranges it is heavier, and in the Western and central Caspian areas it reaches 150 centimetres (60 inches)

annually."¹

There are few rivers of any size in the country; the only navigable one is the Karun which can be used by small vessels for over 100 kilometers.

The fertile and populous areas of the country lie for the most part along the lower slopes of the mountain ranges and the Caspian littoral; consequently the northern and north-western parts of the country are densely populated as compared with the southern and south-eastern parts.

2. Historical Setting: An elaborate review of the history of Iran is beyond the scope of this study. Yet there are major historical events that affect all aspects of individual and social life in a given nation. The writer will touch upon the high points in the historical development of the country.

¹The Iranian Co-ordinating Committee of the World Congress of Ministers of Education on the Eradication of Illiteracy (to be referred to hereafter as ICC), Presenting Iran (Teheran: Printing Office of Ministry of Culture and Arts, 1965), p. 3.

Around 2000B.C. a series of invasions by Indo-Iranians led to the conquest of the then primitive people of Iran. These invasions were followed by such groups as the Medes, Persians, and Parthians. These new comers gave up nomadic life and settled in villages.

After a long and arduous struggle for gaining supremacy the Persians came out victorious and established the Achaemenid Dynasty in 550 B.C. The reign of this dynasty lasted for about two centuries. During this period Zoroastrianism became the state religion. This religion emphasized constant struggle between good and evil, and also supported divine rule of the king. Rural settlement took the place of nomadism.

In 331 B.C. the Greeks, under Alexander of Macedonia, conquered the Persian Empire and ruled Iran for about seven years. Social classes appeared more distinctively at this period.

"There were three classes, first noble families which had their own feudal kingdom, second minor feudal lords who had allegiance to feudal lords above them, last peasants and other subjects."¹

¹Arasteh, A. Reza, Man and Society In Iran (Leiden E.J. Brill, 1964), p. 13.

The major dynasty after the Achaemenians was the Sassanian Dynasty which reigned in Iran from 226 to 641 A.D. The Sassanian monarchs considered themselves the offsprings of the Achaemenians, and patterned their empire on the model of their ancestors. In the Sassanian period Zoroastrianism became stronger, and landowning religious-groups, warriors, and bureaucracy appeared on the social scene.

The Sassanian Dynasty was overthrown and defeated by the Arabs in 642 A.D. The Arabs ruled for about two centuries in Iran. Iranians accepted Islam, but some Zoroastrians refused to do so and migrated to India. The Arabs reduced previous class distinctions and became the patrons of Persian scholars and literary men, many of whom wrote in Arabic. But as they differentiated between Arab and non-Arab population, several local revolts arose around 800 A.D. against Arab rule in Iran. Numerous local autonomous dynasties were established, and the Shi'a sect of Islam grew in opposition to the orthodox Sunni sect.

Around 1050 local dynasties disappeared under the Seljuqs who were recognized by Baghdad

as having complete sovereignty over Iran. Arts and sciences developed at this period, and Nizamiyyeh, partly secular colleges, were established by Nizamul-Mulk, a fine administrator, in this period.

Mongols and Timurids ruled in Iran from 1200-1500. Their era started with bloodshed and devastation and ended with scientific and literary progress. Many of later Mongol rulers were assimilated in Persian culture and began to patronize poets and scientists.

After 3 centuries of Mongol rule, Persian nationalism was revived by the appearance of the Safavid Dynasty whose rule lasted for two and a half centuries. In this period the Shi'a belief became the state religion and clergy gained in power. Although the adoption of ^{the} Shi'a sect as the state religion raised many disputes and struggles with the Ottoman Empire, it created national unity in Iran. During the Safavid period the first contacts with European powers such as the British, the Dutch, the French and the Portuguese were made. Merchants and guilds appeared on the economic scene of the country.

Toward the end of the eighteenth century the Qajar Dynasty rose to power. During the reign of this dynasty, which lasted until 1925, Iran lost a great part of her territory, and Anglo-Russian rivalry of interests in Iran reached its climax. Nasir al-Din (1848-1896) sought to Westernize the country but he did not maintain reforms for the fear of overthrowing the status quo. In the Qajar period large landlords and tribal khans or leaders became very powerful; some efforts were made to establish^a modern army and modern schools and colleges, but these efforts were not consistent and coordinated. Under Amir Kabir, Nasir al-Din's chancellor and advisor,^a few administrative reforms were introduced, but these reforms ended with Amir Kabir's tenure.

Towards the end of the nineteenth century the Constitutional Movement began in Iran as a revolt against the inefficient administration, Muzaffar ud-Din's extravagance, and his chancellor's repressive government. In 1909 the Constitutional Movement gained final victory after a lot of bloodshed. But after a few years World War I broke out, during which Iran became the

scene of conflicting Anglo-Russian and Turko-German influences. This state of affairs continued for a few years and the country plunged into a state of anarchy. General dissatisfaction of people with Qajar monarchs, the need for a strong ruler to put an end to chaos existing throughout the country paved the way for Reza Shah who came to power in 1925 and was crowned the following year as the founder of Pahlavi Dynasty.

3. The Social-Cultural Setting. Values Underlying the Social System In Iran: In order to understand a culture, one must understand the motives behind social behavior. In general, motives spring from the contradictory forces in man's nature and from the diversity of his environment. Man interacts with his environment in search for equilibrium; his continual demands for sustenance and self-fulfilment makes his culture.

"Iranian culture, like any other culture, can be interpreted as having developed out of the human situation and as giving one answer to man's

existential problem. The persistence of alarming social conditions have, however, prompted people to seek their own security in such protective mechanisms as: dominance through external authority, submission to magical power, Covert religious power, speculative thinking, artistic creation, and the discovery of self."¹

The interactions of Iranian people with diverse circumstances in their long history have created and fostered individualism, coupled with submission and fatalism.

As one might expect, a society which suffered from frequent invasions and unstable administration has fostered a strong sense of individualism. Until the Constitutional Movement in 1906, social relationships were not based on constitutional laws, so people had to rely on their own resources to protect themselves, and this has naturally reinforced individualism.

In traditional Iran those who found security through dominance valued power more than any

¹Ibid., p. 54.

thing else. This dominance-seeking behavior was to be perceived in all stages of social hierarchy. At the bottom of this hierarchy was the head of the family, who exercised absolute authority over his wife, children, and all his dependents.

Although submission may seem, at first glance, in sharp contrast with dominance, it appeared in varying degrees in the general population. The village chief bowed to the landlord and praised whatever action or word the latter might give, a junior official acknowledged the superior rank and the infallible wisdom of his chief, and at the bottom of the social scale the peasants and tribespeople were compelled to show loyalty and obedience to those who were above them.

Fatalism as a resigned way of accepting fate's verdict was very common in traditional Iran. The majority of people were simple-hearted peasants, and nothing in the real world could convince them that the existing social relations might change, thus they believed that fate had arranged everything for them. This attitude was fostered by landlords and their agents in rural

areas, and by some poets in urban areas. Even today in some city buses, taxis, and shops in Teheran one would find a small plate on which it is written:

"God will guide the ship wherever He likes
No matter if the captain tears up his
clothes"★

4. The People and Their Language: According to the latest census in 1966 the population of Iran amounted to 25 million. The various groups inhabiting Iran today are in many cases the descendants of the invaders who had come to conquer but who remained in Iran and became assimilated in the Iranian population. Today this population is composed of Persians, Kurds, Giliakis, Mazanderanis, Lurs, Bakhtiaris, Baluchis, and non-Iranian segments such as Turks, Arabs, and Turkomans.

The least assimilated groups in the population have been those who remained nomadic and retained their own languages and customs, even to

★ The second verse in common Persian means "No matter if the captain makes many efforts".

the point of defying the central government. These nomads form approximately one-tenth of the population, and most of them are in the south and west of Iran.

There are two major language groups, Persian and Turkish. Those who speak Persian or a related dialect constitute three quarters of the population. Turkish spoken in Iran is somewhat different from Turkish spoken in Turkey; it is more or less similar to that spoken in the Soviet Turkistan and Azarbaijan.

B. Educational Development In Iran:

Educational development in Iran can be divided along three lines: traditional education, education for bureaucracy, and education for social and economic development. This division is also chronological in nature as the society moved in time, but the three types overlap today.

1. Education in The Traditional Iranian Society: Traditional education predominated during the pre-Islamic period and continued during the Islamic period up to the mid-nineteenth centu-

ry. Its main aim was to prepare for the life hereafter.

"In pre-Islamic Iran education was limited to the children of the nobility, and was intended to bring up the child as a useful citizen for the country and prepare him to serve the king. This can be inferred from Zoroastrian prayers at Sassanian time: "O Ahuramazda (the God of Good) grant me a child who will be able to serve my home, my country, to serve Thee and my just king."¹ Education was conducted by religious people and was based on the following principles:

- 1- "Service to the country and the king.
- 2- Service to family and parents.
- 3- Self-fulfilment and advancement."²

Before the Sassanian period the home, Fire Temple, or palace schools were the only educational institutions in the country, but the Sassanian Period witnessed the establishment of a few

¹Sadiq, Issa, The March of Education In Iran, (Teheran: University Press, 1959), (in Persian), pp. 54-60.

²Ibid., p. 63.

schools, and a university in the south of Iran. Education started at the age of five or seven and ended at fifteen when any Zoroastrian would be expected to assume adult responsibilities.

The program of education contained three major topics moral education, religious instruction, and physical education. Reading, writing, and arithmetic were taught. Physical education was greatly emphasized and consisted of the art of fighting, horse-riding, spear throwing, hunting, swimming, and golf or cricket playing.

The university referred to above is the only institution of higher education which existed at the Sassanian period at Gundi Shapur in Khuzistan. "It was originally founded by Nestorian Christians who had fled from the Byzantine persecution at the end of the fifth century A.D.; these Christians were permitted to set up a medical school which was later on enlarged to include courses in history, literature, philosophy, astronomy, geometry, and military science."¹

After the Arab conquest all education was

¹I.C.C., Op.cit., p. 61.

entrusted to Moslem clergy who established two types of school, the maktab and the madraseh. The maktab was an elementary school for boys, where instruction was given in reading, writing, arithmetic and the Koran. To maintain its religious character, the maktab was often held in the local mosque. The madraseh was a secondary school or college, primarily for training priests, where students were taught Arabic, theology, religious jurisprudence, and similar subjects.

Maktabs were mainly supported by private contribution and religious foundations. They were accepted schools for both upper and middle class urban youth, the children of landlords, government employees, shop-keepers and businessmen. "The curriculum of the maktab system was limited in many ways. Three R's, the Koran, and classical Persian texts were taught. The maktabdar (teacher of maktab) taught in a rote manner and maintained strict discipline by applying physical punishment freely. Buildings were seldom adequate, nor were classrooms conducive to study."¹

¹Arasteh, Op.cit., p. 23.

Classical education could continue in the madraseh. The few who had this opportunity freely selected their area of study and their teachers. After completing the courses offered in the local madraseh, a student could make his way to a Nizamiyyeh, a sort of higher college established in the eleventh century. These colleges had partly a secular nature, and the most famous one was the one in Baghdad where al-Ghazali taught.

"Records from the Safawid Dynasty reveal that in Isfahan, the capital city, with a population of about 600,000 then, there existed by the seventeenth century: 160 mosques, 100 maktabas, and 46 colleges of theology."¹

But in spite of the existence of so many maktabas and madrasehs which continued their activities until nearly the end of the nineteenth century, "Education did not reflect the dynamic era of flourishing Islamic civilization. The eager spirit of intellectual curiosity and scientific inquiry, so characteristic of the lively days of Islam, had totally disappeared, leaving

¹I.C.C., Op.cit., p. 62.

behind an empty shell of tradition."¹

Although education was not denied to the members of the lower classes, the princely class and the landed and mercantile gentry always had greater access to it for economic and social reasons.

Making education available for the lower classes existed in early Islamic era in Iran, and could have led to more social mobility, but in the course of time all the vigor of Islamic teachings had gone, and education became the monopoly of narrow-minded clergy.

This clergy became more or less knowledge sellers, and as tuition fees were not standard, and were arranged privately between the maktab teacher and the parent, in rural areas and in poor urban areas, poverty prevented many people from having access to education. Moreover, owing to pseudo-religious and cultural restrictions, girls were excluded from all organized learning. The third factor which handicapped educational growth was that the majority of maktab teachers believed that some people were **born** gifted while

¹Arasteh, Op.cit., p. 24.

others were not, and it was useless to try to educate the unfit.

"These circumstances - educational discrimination against the poor, the less able, and girls - were responsible for an extremely high rate of illiteracy in Iran."¹

Despite the fact that great attempts have been made since the rise of Reza Shah to implement mass education, the rate of illiteracy is still very high in Iran, and a herculean effort is required to efface the vestiges of past negligence.

2. Education For Bureaucracy: In traditional Iran education was limited to few individuals who could afford to pursue it for their own enlightenment. Such an education produced scholars who were familiar with the classics and philosophical speculation. These scholars could expect to enter the field of politics or teach subjects like history, philosophy, and literature. Consequently

¹Banani, Amin, The Modernization of Iran, (California, Stanford University Press, Stanford, 1961), p. 85.

people in key government positions were not really trained in the business of conducting government, though some remarkable individuals emerged from among them by chance or by personal motivation as good statesmen and administrators.

In maktabas and to some extent in madrassahs the social implications of education were absent. Education was mainly concerned with religious matters and preparation for life hereafter. In a word, education had no direct bearings on the daily tasks that a person was expected to perform, nor did it take into consideration his social needs.

The first attempt to introduce Western-type schools in Iran was made by missionaries in the mid-nineteenth century. In the beginning the children of Christian minorities attended these schools, but afterwards a number of open-minded Moslems allowed their children to attend. Some of these schools developed into institutions of national reputation. It is of interest to note, however, that the educational activities of such missionaries coincided with Western political and economic interests in Iran.

By 1800 Napoleon's success in Europe threatened England's power, particularly in the defense of the Indian Sub-continent. As Iran had been considered by the British as the gateway to India, England had special vested interests in Iran. On the other hand, Russia's traditional aspiration for reaching Warm Waters encouraged it to exercise political pressures on Iran. By 1800 Napoleon sent several envoys to Iran to win its friendship and support for his attack on Russia. These interests on the part of the various European powers led to many agreements and treaties with Iran in the beginning of the nineteenth century; most of these agreements were in favor of European powers.

When Napoleon was defeated and exiled to Saint Helena in 1816, Britain and Russia, free from European troubles, turned to the East, and Iran became a focus for Russo-British rivalry. Russia sought to realize its territorial ambitions in Iran, and Britain tried to gain political and economic concessions and obtain a base at the gate of India. And in the absence of a third power, both of them were successful to a large extent.

"When Iran was defeated by Russia in 1828,

it lost its traditional status among the community of nations. Its sovereignty became contingent upon British and Russian interests. Since that time every international event has affected political life in Iran, which in turn has led to administrative reorganization."¹

Such developments on the political and economic levels in Iran made the government realize the importance of an educated bureaucracy. This led to the establishment of a number of higher educational institutes for producing trained government personnel. The motive underlying this attempt was to produce modern administrators capable of coping with Anglo-Russian ambitions.

On ascending the throne in 1848, Nasir al-Din Shah encountered widespread civil disorder, an undisciplined army and a depleted treasury. He had, as advisor and chancellor, Amir Kabir Taghi Khan who was a remarkable administrator. Utilizing the knowledge he had gained from previous experiences in Turkey and Russia, Amir Kabir

¹Arasteh, Reza, Education and Social Awakening in Iran, (Leiden: E.J. Brill, 1962), p. 20.

mobilized the troops and subdued the riots. This was followed by army reorganization, in the process of which Amir Kabir perceived the value of developing well-trained administrators who could be charged with government responsibilities. To realize this purpose, Amir Kabir established Dar al-Funun in Teheran in 1851.

a. Dar al-Funun and Its Significance as the Cornerstone of Modern Administration in Iran:

The establishment of Dar al-Funun is a landmark in the Iranian educational development, as for the first time a college on European lines was set up which was secular in nature, where would-be civil servants and professional men could be trained. Dar al-Funun was a polytechnic school where courses in artillery, infantry, cavalry, military engineering, medicine, surgery, physics, mathematics, mineralogy, and chemistry were given.

The course of study at Dar al-Funun was for six years or more. It offered practical and technical subjects, but later on the curriculum was modified to include a liberal arts program

and foreign languages primarily French, English, and Russian. The medium of instruction was French as this language was already familiar in Iran since Napoleonic period. Tuition was free and students had their meals at the college and also received some pocket-money.

In order to keep Anglo-Russian hands off the educational spheres, Amir Kabir sought educational assistance from Austria, probably because Austria had no political ambitions in Iran. Amir Kabir employed Austrian professors with good salaries.

Dar al-Funun made two major contributions to modern life in Iran. First, its success in training civil servants encouraged various government departments to set up colleges for training their own personnel, leading to an improved administration. Second, it introduced modern communication media such as telegraph, telephone, and newspaper into Iran. Schools established by various government departments such as the School of Political Science, the College of Agriculture, the School of Fine-Arts, and Teacher Training College developed in the course of time and form-

ed the nucleus of the University of Teheran which was established in 1934.

Another contribution of Dar al-Funun was in the form of accelerating the desire for modernization in all aspects of public life and in fostering an attitude toward change. During its forty years of existence as a polytechnic school, Dar al-Funun graduated 1,100 men, most of whom went to government services. But many of these graduates were dissatisfied with the political conditions in Iran. The more active and sophisticated ones, inspired by modern Western ideas, published newspapers and joined various political activities.

This new attitude, though slow at the outset, grew with time and affected, among others, the clergy, merchants, and heads of guilds. Finally when coupled with general discontent, such an attitude led to the Constitutional Movement and the establishment of constitutional monarchy in 1906.

The downfall of the Qajar Dynasty and the rise of Reza Shah in the 1920's increased the centralization of administration, consequently educational reforms became more concerned with

administrative needs. This does not seem surprising, as the country was in a state of near chaos. Besides a country which lacked enough educated people to meet the governmental needs could do nothing better than expand education for training bureaucrats.

Although in 1910 a Ministry of Education was set up and the Parliament passed a law to organize a system of public education, progress remained very slow. "By 1922, the date of Reza Shah's Coup d'etat, Iran possessed only 440 primary schools with 43,000 students, 46 government secondary schools with 9,300 students, and one college with 91 students. In that year probably less than one per cent of the girls received any education at all."¹

Reza Shah's two significant contributions to Iranian education are the secularization of education, and its remarkable expansion, especially among girls.

By 1942, the date of Reza Shah's abdication, the number of schools had increased to six times the 1922 figure; the number of institutes

¹I.C.C., Op.Cit., p. 62.

of higher learning had risen from one to twelve, and included agricultural, technical, military, and teacher's training colleges in addition to the University of Teheran. Reza Shah was the first to send regularly substantial numbers of students abroad to study each year.

It must be mentioned that at the time of Reza Shah's reign the secondary school curriculum was based on French lines. There are several reasons for the choice of the French system of education as a model. First France was geographically too far to have destructive political interests in Iran, and the world of 1925 was not as small as it seems today. Second, French centralized system of education appealed to Reza Shah who was interested in a centralized system of administration. Third, most Iranian educational officials had studied in France, and the French system of secondary education was familiar to them. The earlier travels of the Qajar monarchs such as Nasir al-Din and Muzaffarud-Din to France had made Iranian intellectuals well acquainted with French civilization.

The secondary school curriculum thus mo-

delled on French lines prepared secondary students for college study which, in turn, led to government service. A few vocational and technical secondary schools were also established at the time of Reza Shah, but they did not become popular for reasons which will be dealt with later on in this study.

3. Education For Social And Economic Development: Education as a means of social and economic development is relatively a new idea in Iran. In fact education as such has not yet received full recognition by many Iranians. However, the economic experts of Iran, in the process of planning for social and economic development, came to realize the importance of education in this respect. That is the reason why educational planning in Iran can be examined only within the context of general planning for economic growth. Consequently the writer thinks it proper to give a general background of Iranian developmental plans, then examine their impact upon education.

After World War II owing to the expendi-

tures of Allied Forces in Iran, the amount of foreign exchange increased substantially. The existence of this exchange saving coupled with general social awakening encouraged the authorities to consider developmental plans.

"In 1946 a Plan Committee was set up. The Committee made a plan for the realization of which \$1,930 million was needed. This plan was too ambitious, so ^a foreign loan through the International Reconstruction and Development Bank was sought. The framework of the Committee's Seven-Year Plan passed in Parliament in 1948. In 1949 an agreement was signed with Overseas Consultants, Inc. according to which 32 per cent of the Plan budget would be lent by the Bank."¹ But soon after the arrival of the Bank representatives the oil industry was nationalized and negotiations with the Bank representatives were adjourned, nevertheless the Seven-Year Plan, after undergoing certain modifications, came into being.

The first two years were spent on estab-

¹Plan Organization, The Report on the Implementation of the Second Seven-Year Plan, (Teheran: 1964), (in Persian), pp. 1-2.

lishing the Plan Organization which took the place of the Plan Committee, and the reorganization of State-owned factories which became, since then, under the charge of the Plan Organization.

In 1951 the oil controversy reached its climax, and income from oil, which was allotted to development plans, was cut off. The political development of the period between 1951-1953 and its international repercussions are beyond the scope of this study, yet it must be mentioned that the political and social climate of this period was not favorable for putting into action social and economic plans.

After the settlement of the oil problem and the reestablishment of oil revenues in 1954, the first Plan was dropped and a new Seven-Year Plan was worked out. The objectives of the Second Plan were the following:

"Increasing production and exports, provision of commodities, improvement of agriculture and industry, discovery and exploitation of natural resources, improvement of communications, public health, public education, and standard of living."¹

¹Ibid., p. 3.

In practice the implementation of the Plan met with two major barriers: first, lack of experience on the part of the plan makers and absence of reliable data, and second, the absence of general support for change on the part of traditional forces. Consequently attempts were made to equip the Plan Organization with necessary data, and an elaborate effort of publicity was undertaken.

Statistics and valid information about the existing economic sectors and their needs and problems were lacking; so was demographic and educational material. Experts in the fields of engineering, agriculture, health, and education were very scarce. Although during the course of the Second Plan (1955-62) several experts were trained, a great shortage for technical personnel persisted.

One of the great achievements of the Second Plan was that the general public, social forces, political parties, and government authorities all have come to recognize the significance of social and economic development as a national goal.

a. The Educational Objectives of the Second Seven-Year Plan, The Expansion of Literacy and Technical Education: Upon collecting data for the Second Plan, it was found that the rate of illiteracy was unusually high. Before it was a common knowledge that illiteracy was a major Iranian problem, but such knowledge was vague. But the research conducted by the Plan Organization produced data concerning illiteracy and the number of primary school age-group which remained out of school. Enrollment in vocational and technical schools was so thin that statisticians did not bother to include it in the collected data. This being the case it was natural that the expansion of primary, vocational, and technical education should be given priority. Consequently the Second Plan set the following objectives for education:

"1) To increase public education at the primary, secondary, and higher levels in order to reduce the rate of illiteracy and prepare teachers for primary and secondary schools; 2) completing universities and sending students abroad to study in the fields most needed for economic develop-

ment; 3) extention of agricultural education through building and equipping agricultural education centers; 4) expansion of vocational and technical education through laying out appropriate schools and work shops, provision of technical equipment and machinery, and training vocational and technical instructors." ¹

TABLE 1

SCHOOL ENROLMENT 1954-55
AND 1961-62 ²

Type of Schools	No. of Schools		No. of Students	
	1954-55	1961-62	1954-55	1961-62
Primary	6,273	10,852	769,166	1,554,554
General Secondary	632	1,184	112,675	300,855
Teacher Training	33	53	2,622	4,260
Total	6,938	12,089	884,463	1,859,669

¹Ibid., p. 57.

²Ibid., pp. 57 and 59.

Table 1 shows that over a period of seven years the number of students at the various levels more than doubled, and that the rate of increase at the secondary level was greater than that at the primary and teacher training levels. During the period of the Second Plan only one model workshop of vocational school was built in Teheran, whereas the number of general secondary schools nearly doubled, and this delay in growth has affected the developmental projects as will be examined later on in this study.

b. Educational Objectives of the Third Plan (1962-67): Although the Third Plan did not neglect the expansion of education, for the first time the significance of quality in education was emphasized as the following lines reveal:

"The improvement of the educational system is not a limited conception. It does not mean merely the end of illiteracy We must have a literate people, and we must have a skilled people."¹

¹Division of Economic Affairs, Plan Organization, Education, Third Plan Frame, (Teheran: 1961), p. 23.

In the light of the above concept of education the Third Plan had the following objectives:

"60 per cent of 7-13 age-group would be attending schools in 1967, the expansion of general secondary education would be controlled by requiring entrance examination and establishing tuition fees, vocational and technical education would have a very much greater place in the system, pre-vocational education would form an integral part of the curriculum of the first cycle of secondary schools, teacher training and retraining would be emphasized, and at the university level quality not quantity would be the watchword."¹

At the end of the Third Plan period some of the above objectives were not fulfilled. Although tuition fees were established at general secondary schools, no entrance examination was required, and pre-vocational education was not introduced into the curriculum of the first cycle of general secondary schools. This led to haphazard expansion of secondary enrolment which

¹Ibid., pp. 23-28.

seems to be beyond the planners' control as Table 2 illustrates:

TABLE 2

SCHOOL ENROLMENT 1965-66¹

Type of School	Boys	Girls	Total
Primary	1,442,005	739,628	2,181,933
Education Corps	297,414	65,399	365,813
General Secondary	337,549	156,189	493,738
Vocational and Technical	12,643	2,581	15,224

Secondary education is of prime importance for producing technical personnel, yet it is noted that this is the weakest point in the Iranian educational system as far as educational planning is concerned. According to the estimate of the Third Plan a total enrolment of 400,000 general secondary students was expected in 1967². But as Table 2

¹Toussi, M.A., Present Educational System in Iran, (Teheran: The Ministry of Education, 1966), p. 24.

²Division of Economic Affairs, Education, Op.cit., p. 24.

shows in the school year of 1965-66, that is, two years before the end of the Third Plan period, secondary enrolment was 493,738. This increase, which apparently defied planners' control, was made at the expense of vocational and technical education the enrolment of which was only 15,224, a bit higher than 3 per cent of general secondary enrolment. The enrolment of vocational and technical schools in 1962-63 was 9,117¹ students, so in three year's time it increased to 15,224 students. This shows the same rate of increase as in the case of general secondary enrolment. As was mentioned before at the outset of the Third Plan, the planners intended to restrict general secondary education and expand technical education, but facts and figures show that increase in both types of education was at the same rate.

On the other hand, the Third Plan frame was worked out before the establishment of the Education Corps, so the enrolment of the Education Corps schools, which amounts to 365,813 children,

¹Behrouz, J., (ed.), Iran Almanac 1963 and Book of Facts, (Teheran: 1963), p. 382.

cannot be considered as the Third Plan achievement. Consequently the expansion of primary education amounts to 30 per cent, whereas that of secondary education is over 55 per cent as Tables 1 and 2 show.

National and individual aspirations, and socio-cultural considerations have so far set various limitations to educational planning. But one thing must be made clear: if Iran wants to march towards modernization and industrialization as the three developmental plans have stressed, it will be in great need of technical men in the coming ten years. The more Iran engages and invests in agriculture and industries, the more the shortage of technologists and technical personnel will emerge as a serious barrier.

Education should basically aim at spanning a bridge between individual interests and social and economic needs of the country. This orientation will underly the methodological concern of the rest of this study.

CHAPTER II

THE PRESENT SOCIAL AND ECONOMIC STATUS OF IRAN

The purpose of this chapter is to describe the present social and economic status of Iran, since World War II. Special attention will be given to the impact of the War upon various aspects of Iranian life.

A. General Social and Economic Background:

Before the outbreak of World War II Iran had friendly commercial and diplomatic relations with most countries of the world. In order to carry out its economic activities, it benefited from a number of commercial and technical agreements with several European countries.

Raza Shah who was determined to implement a number of administrative, social, and educational reforms, declared Iran to be neutral from the outset of the War. The government consequently did its best to maintain friendly relations with all countries with which Iran had political and

commercial ties. One of these countries was Germany which had large exchange agreements with Iran, and ranked first among countries with whom Iran traded. Besides, a number of German technical experts were employed in Iranian industrial institutions.

The idea of seeking a third European power, apart from Britain and Russia, to help with economic and social development of the country was not new in Iran. As was mentioned in Chapter I, Amir Kabir sought the educational assistance of Austria in the establishment and operation of Dar al-Funun in 1851. The two rival powers, Britain and Russia, had colonial ambitions in Iran, the former as a potential colonial neighbour and the latter as an actual geographical neighbour with about 1,500 miles of common borders. Consequently Amir Kabir felt it unwise to seek educational assistance from either of these two countries.

When Reza Shah came to power in 1925, great changes had already taken place in Russia and the Soviet regime had been established in that country, but this regime did not appeal to Reza Shah and many Iranians. The old suspicion

about Russian policy still persisted in Iran. On the other hand, Britain had remained the same colonial power, looking on Iran as a base for the defense of India. Under such circumstances Reza Shah turned to a third European power, that is, Germany the technological progress of which could assist Iran's young industries.

After the German invasion of the Soviet Union in 1941, the presence of German technical experts in Iran was deemed a threat to allied countries; and under such a pretext Britain and the Soviet Union invaded Iran in August 1941. In fact both Britain and the Soviet Union needed the roads and railways of Iran for transporting ammunition from the Persian Gulf to Russian territory.

Thus World War II engulfed Iran, and the government lost control of the situation in many respects. Panic and lack of leadership caused the country to plunge into a sort of anarchy. The young Crown Prince of Iran, after the abdication of Reza Shah in 1941, ascended the throne of a country which was occupied by foreign troops and split up by tribal khans and opportunists.

Upon the assumption of his duties, the

new Shah issued a decree of amnesty to political prisoners, and as a result a number of leftists, who were imprisoned during the rule of Reza Shah, were set free. The Tudeh Party (communistic in inclination) was revived and other parties came into existence; with this a left wing and a right wing movement appeared and political debates in the press as well as in public places generated new concern for social, economic, and international developments. This period after the War is considered by some as being very destructive, and by some others it is considered a period of social awakening in Iran. One thing remained certain in this period; there was great confusion in all walks of life and the country was unprepared for embarking on any developmental plans.

In 1953 Iran regained its stability and started to initiate development plans. But even as late as that, "The social situation in Iran was grim. Illiteracy was high and health standards were low; the vicious circle of stagnation and poverty was in full swing, the feudal system stifled progress in villages where the overwhelming majority of the masses was concentrated, the

red tape ridden and nepotistic administration machinery effectively prevented government inspired action."¹

Although many dams were built, several factories were established, and education expanded during the Second Seven-Year Plan (1955-62), what the country achieved was rather small in comparison to its potential. The construction of dams and provision of water did not lead to more distribution of wealth, because the profits went to landlords, and peasants did not work wholeheartedly because of their little share of the products. The country could not make any significant strides forward as 75 per cent of its population did not have a part in its plans. Under such conditions the result of economic projects made the rich richer, and the poor still poorer. Consequently a kind of revolution was necessary to change the old landlord-peasant relationships, and give incentives to peasants to participate in social and economic development. This revolution came in 1963.

¹Namazie, M.B., General Trends in Social Development of Iran, (Teheran: Plan Organization, 1967), p. 1.

1. The Sixth of Bahman Reforms: On the Sixth of Bahman 1341 (January 26th, 1963) His Imperial Majesty the Shah submitted a Six Point Program of reform to a national referendum. The result was an overwhelming vote of approval. This reform program consisted of the following bills:

- "1. Land Reform.
2. The sale of shares in government-owned factories to underwrite land reform.
3. The nationalization of forests.
4. The participation of workers in the profits of factories.
5. Electoral reform (the participation of women in both voting and running for legislative membership).
6. The creation of Literacy Corps."¹

Of the above items number 1 and 6 are of direct relevance to this study and will be treated under separate sub-sections dealing with agriculture and educational expansion.

¹I.C.C., Op.cit., p. 109.

B. The Present Economic Status of Iran:

The three major industries in Iran today are agriculture, oil, and mining, manufacturing, and construction. Although the population of urban areas is rising faster than that of rural areas because of rural-urban migration, about 75 per cent of the population still lives in rural areas.

"Nearly 60 per cent of the labor force is employed in agriculture, yet agriculture contributes only about 23 per cent to the gross national product, while petroleum contributes 17 per cent to the gross national product."¹

Almost 50 per cent of government revenues comes from the oil industry. "Iran's gross national product rose from \$3,360 million in 1958 to \$5,030 million in 1964. In 1964 the national per capita income was estimated at \$221, and rural per capita at \$55. The 1964 gross national product consisted of the following main items: agriculture 23 per cent, oil 17 per cent, trade 12 per cent, mining, manufacturing, and construction

¹Ibid., p. 70.

21 per cent, government 9 per cent, and other 18 per cent."¹

As a result of developmental plans, industry has grown rapidly since World War II. Iran now produces a wide range of consumer goods, but as yet produces little of the machinery and technical equipment which are needed in modernizing the agriculture and developing the emerging industries. Exports consist mainly of crude and refined oil products, agricultural and handicraft products. The oil industry and agriculture deserve special attention as important sectors of the economy.

1. The Oil Industry: Speculation concerning oil started in Iran in 1901 when an Australian named William Knox D'Arcy was given exclusive exploration and exploitation rights for sixty years throughout Iran except the northern provinces. In 1908 D'Arcy's investment, with the help of other British financiers, came to fruition. One year later the Anglo-Iranian Oil Company came into existence.

¹Ibid., p. 71.

In 1913 the Abadan Oil Refinery was built and the exports of oil started. The production of crude oil rose steadily "It started with 274,000 tons per annum in 1914 and rose to 32 million tons annually by 1950".¹

In 1951 the Iranian oil industry was nationalized, and the National Iranian Oil Company (N.I.O.C.) was established. A long and controversial dispute over oil rights followed, and the case went to the Hague International Court of Justice. At last the issue was settled in 1954 with the conclusion of a new agreement between Iran and a newly-established oil consortium in which eight major companies became share-holders. Of these eight companies 5 were American, one British, one Dutch, and one French.

Under the new agreement the Consortium was given the rights of exploration, drilling, refining, and transportation in a specific area of Southern Iran. This area was called the Agreement Area. "The N.I.O.C. was recognized as the owner of the fixed assets in the Agreement

¹Ibid., p. 87.

Area, and the Consortium was granted the right to unrestricted use of them during the period of the agreement, that is, 25 years"¹.

The N.I.O.C. received the rights to supervise the Consortium's operations so that Iran's interests would be safe-guarded, and it assumed responsibility for the internal distribution of oil products as well as for establishing and operating medical, health, educational, training, and welfare centers throughout the Agreement Area.

Oil revenues have been increasing since 1954. In 1950 before oil was nationalized, the revenues amounted to \$44 million, and in 1956 in spite of a decrease in production amounting to 5 million tons, revenues amounted to \$151 million annually. In 1967 owing to particular agreements with Italian and American companies for exploitation of oil outside the Agreement Area, and in the continental shelf, oil revenues amounted to \$600 million per year.

But revenues are not the only profits

¹Ibid., p. 87.

that accrue from the oil industry. A large sum of foreign exchange is brought into the country by the Consortium, and about 10 per cent of Iran's total foreign exchange savings comes from the oil industry.

The bulk of the oil revenues is devoted to developmental projects to diversify economic activities. The share of the Treasury from the oil revenues decreases year after year in favor of the Plan Organization whose share in 1967 was 80 per cent.

Another major contribution of the oil industry is the training of skilled manpower, not only for its own needs, but also for other economic sectors. The N.I.O.C now runs the Abadan Institute of Technology, the Teheran Institute of Accounting, two commercial and two technical schools, the Abadan Nursing School, and three Artisan Training Schools. "The total enrollment of these institutes and schools was 1158 students in the school year 1964-65."¹ It is of interest

¹Department of Planning and Studies, Bureau of Statistics, Ministry of Education, Educational Statistics in Iran, (Tehran: 1966), pp. 73 and 81.

to note here that some of these schools and institutes existed before the nationalization of oil, but their enrolment was very thin because technical and vocational education in the oil areas was run by the authorities of the Anglo-Persian Company. The government had practically little or no supervision on their educational activities. The British experts tried to keep Iranians away from technological studies in order to perpetuate their own existence.

At present the situation is different from what it was in 1951; it is safe to say that technical and vocational schools run by the NIOC are now among the finest and best-equipped ones throughout the country. Enrollment in these schools is rising steadily. The NIOC has worked out certain plans to guarantee self-sufficiency as regards the number of technical personnel needed for running the oil industry. "As a result of the training schemes of NIOC the number of foreign employees in the Iranian Oil Industry fell from 800 in 1960 to 360 in 1964, out of a total industry payroll over 42,000."¹

¹I.C.C., Op.cit., p. 101.

Another major impact of the oil industry was in the form of a construction of a petrochemical complex which will be complete in 1968 at a cost of \$100 million. This complex will produce plastics, detergents, synthetic fibres, synthetic rubber, sulphur, and fertilizers.

This huge factory will, to some extent, bring to life more diversity in Iranian expanding economy. In order to run this complex successfully several hundreds of technical men will be needed in the coming years. It is the task of education to meet these needs by reorienting its aims and modifying its procedures.

Then comes the question of natural gas which is abundant in Iran. In earlier times most of this gas was burnt for lack of knowledge on how to use it or lack of export facilities. But it has been recently agreed that the Soviet Union will build an iron and steel mill near Isfahan in exchange for Iran's natural gas which will go to the southern Soviet Republics through gas pipes. This iron mill will be ready for use around 1972. Its initial capacity will be 300,000 tons a year. Provisions are being made to increase the capacity

of the mill to one million tons in later years. The fact that Iran imports now about 500,000 tons of iron and steel annually, reveals the tremendous impact that the iron works will have on Iran's economic and industrial development. The iron works scheme also includes the construction of a machine tool plant and a factory for producing tractors and agricultural equipment.

To meet the technical need of the iron works at high level the Industrial University of Aria Mehr was founded in 1965. This university covers the fields of electricity, mechanics, metal industries, petrochemicals, industrial mathematics, physics and industrial management. This university is planned to accommodate 15,000 students by 1971-72. In the light of the country's economic and industrial progress, especially in the field of heavy industries, the establishment of Aria Mehr Industrial University is a good sign of educational planning in Iran, but to the best knowledge of the writer proper provisions have not been made so far for meeting the technical needs of the iron works at the level of sub-professionals. Thousands of technicians, technical

workers, supervisors, and foremen will be needed
the
for the running of/iron and steel mill.

2. Agriculture: Agricultural development will be dealt with in two periods: a) agricultural practice and rural conditions before Land Reform; and b) after Land Reform.

a. Agricultural Practices and Rural Con-
the
ditions Before/Land Reform of 1963: Villages, as concentrated settlements, existed in pre-Islam Iran. "The nature of the country and the mode of its settlement by the Avestan people were such as to demand concentrated rather than dispersed settlements..... Further, the tribal nature of society in early times determined that the village made up of a clan should be the model of settlement."¹

Muslim conquerors, for administrative reasons, preferred to deal with groups rather than with individuals. Consequently village life received encouragement during the Arab rule in Iran. The majority of peasants owned their own

¹Lambton, Ann K.S., Landlord and Peasant in Persia, (London: Oxford University Press, 1953), p. 2.

land, but as time went on the burden of taxation caused smaller landowners to become dependent on the relatively rich landowners. This resulted in the emergence of a powerful class of landlords and a system of feudal rural relationships.

Although in the course of time there were many changes within the landowning class such as the establishment of government assignees, military or civil, essentially the same pattern of peasant exploitation survived up to the twentieth century.

Before Land Reform the landowning class could roughly be divided into the following groups:

First those whose holdings went back several generations. Secondly tribal khans who had acquired by purchase, government grant, or hereditary transmission estates in the outskirts of their tribal territory. Thirdly the religious classes, who became an important element in the landowning class in Safavid times (1500-1750). Fourthly the relatively new recruits who could be divided into three groups: 1) the bailiffs (mubashir, Kadkhodas or village chiefs) of the large landed proprietors; 2) government officials,

civil and military; 3) merchants and contractors who invested their money in land for economic reasons or in order to acquire political and social prestige.

Through political and social influence the landowning class exercised its control over all branches of government to uphold its privileges and power.

As having more villages brought more power in political affairs such as intervention in elections and in the appointment of governors and mayors, landlords tried to have more villages so as to have more votes; thus the development of the villages was completely out of question. In fact some fifteen or sixteen years ago, a Member of Parliament proudly stated that his landed property was as large as Switzerland.

Most of landlords were absentees, living either in metropolitan cities in Iran, or in Paris and London. Hence they had no concern for the development of villages where they had never lived, nor did they ever expect to live. In their absence they had agents in villages, who collected dues. Some of these agents became big landlords.

"Between the landowner as a class, no matter what his origin, and the peasant there is a wide gulf.... The attitude is on the whole one of mutual suspicion. The landowner regards the peasant virtually as a drudge, whose sole function is to provide him with his profits and who will, if treated with anything but severity, cheat him of his due".¹

It was generally believed in landowning circles that if peasants were to have anything better than the minimum, they would become insolent. Education, hygiene, and housing improvement were regarded as unnecessary. In fact many landlords had some so-called religious preachers at their service, who would speak eloquently about the eternity of the existing relations, stressing the holiness of the bonds between peasants and landlords, and stating that any violation of such bonds would bring God's anger upon the peasants.

As for sharing crops the common practice was like this: There were five elements in pro-

¹Ibid., p. 263.

ducing crops: land, water, seed, draught animals, and labor. Each of these five elements had a share of one-fifth of the crop produced by the peasant. The first two elements were always the landlord's. Poor peasants could not afford to buy seed, nor could they set aside some seed of their thin share at harvest time. Consequently the happiest peasant who had a couple of oxen would share two-fifths of the crop, and the poorest would get only one-fifth. Considering the backward methods of cultivation, the peasant could not till a large piece of land, so this share of one-fifth could only keep him at the subsistence level.

Such was the situation of the Iranian peasant before the Land Reform of 1963.

b. Agricultural Conditions After Land Reform: The Reforms of 1963 were a landmark in the life of the country. Before the Reform practically 75 per cent of the population was deprived of human and political rights. Peasants could not elect their representatives freely to the Parliament or village councils, and a number of

landlords spoke vicariously for peasants and even voted on their behalf. Thus peasants were at the mercy of landlords and were forced to save landlords' whims and political ambitions. Such relations led to stagnation of political and economic life.

After World War II, owing to educational expansion and the improvement of health standards, the rate of population increase became greater than before, but the agricultural production did not rise at the same rate. Peasants who were shaken from their apathy by the impact of the War and the mass media would not put up with old relationships in rural areas; and many of them left their villages and rushed into cities in search for jobs and better life. Thus agricultural production decreased, while cities were not prepared to accommodate these newcomers. Consequently in many dry post-War years Iran was forced to import wheat, and this clearly exhausted the savings of foreign exchange and created handicaps to industrial development.

The Land Reform of 1963 has changed the village scene radically. The Reform bill required

that the owners of villages come to agreement with the peasants who worked on their land in one of three following ways:

"1) Landlords could grant a thirty-year lease to the peasant; 2) sell him the land on terms agreed on by both sides; or 3) divide the land between themselves and the peasants in the same proportion as that in which the crops had previously been shared."¹

At first ownership was limited to 200 hectares, but later this was extended to 500 hectares in cases where mechanized farming had been introduced.

A change in agricultural life resulting from the bill was that the Iranian village ceased to be a safe place for the landlord or his agent to visit; in consequence of the three above-mentioned alternatives, the second one, namely selling land to peasants turned out to be most favorable. So "A second bill authorized the transfer of shares in government-owned factories to former landowners in compensation for lands

¹I.C.C., Op.cit., p. 110.

which they had passed to the government which in turn had transferred them to the peasants."¹ This second bill had another advantage, as the government-owned factories were turned to private companies, thus extending and encouraging private enterprises.

c. Educational Impact of Land Reform:

Can illiterate peasants play an important role in the social and economic development of the country? Does mere ownership of land by peasants lead to productivity? Can traditional ignorant peasants manipulate their environment effectively?

In order to help the newly set-free peasants of Iran to adjust themselves to new changes, the Education Corps program came into existence; and shortly afterwards the Health Corps and Extension and Development Corps were established under the initiative of His Majesty the Shah.

The function of the Education Corps was to take education to the remote villages. In Iran the distance from one village to another is very

¹Ibid., p. 111.

great. In the past social, political, and geographical barriers made any introduction of education to the sparse villages very difficult. So rural areas could not make use of educational opportunities as much as urban areas could.

"In the academic year 1964-65 the total primary school enrollment in urban Iran was 1,189,731 students, whereas in rural areas the enrollment was 841,002 students".¹ The urban enrollment was approximately one and a half times that of rural. Considering the fact that rural population is nearly three times that of the urban, this means that urban people were enjoying $4\frac{1}{2}$ times as much shares in schools as rural population. Hence the mission of the Education Corps was to give education to millions of rural children and also provide rural adults with literacy. "In the school year 1965-66, 365,813 rural children were studying in 11,133 Education Corps schools where 11,795 Education Corpemen were teaching."²

¹Department of Planning and Studies, Op. cit., p. 3.

²Toussi, M.A, Op.cit., p. 24.

"The Education Corps program has four categories of objectives: educational, economic, social, and political. The educational purpose is to provide a minimum of educational opportunities for all children of Iran. The economic objective is directed towards the provision of a better standard of living and the improvement of agricultural practices. Socially, the program has to fill a special gap which has occurred in the village through the elimination of the landlord. The political objective centers on the accomplishment of national unity and fostering the spirit of community among rural people."¹

The function of the Health Corps is to increase health standards in villages, and to help peasants to form hygienic habits, and give medical help where and when necessary.

The Extension and Development Corps' function is to introduce modern agricultural techniques in rural Iran, and help peasants to grasp the importance of mechanized agriculture and keep whatever machines they possess in good conditions.

¹Birjandi, Amir, The Education Corps Project in Iran, (Tehran: Ministry of Education, 1964), pp. 10-17.

The Education, Health, and Extension and Development Corps carry out their activities under the close cooperation of the Army and the Ministries of Education, Public Health, and Agriculture respectively.

Although health and modern techniques are of great significance to rural development, the writer is convinced that the impact of education is even greater, as the peasant, like any other citizen, can come to understand the value of health habits and modern techniques through education. Hence health and technology can be considered as corollaries of educational expansion.

3. Mining, Manufacturing, Construction, and Emerging Services:

a. Mining: Mines are the property of the state in Iran and mining operations are therefore a state monopoly. However, it is possible to obtain prospecting and mining licences under certain conditions.

Mining has not developed as compared with oil for various reasons. "The majority of mines have proved either too uneconomical to operate,

or were too inaccessible for profitable and commercial operation. World prices for many of the non-ferrous metals have been dropping in recent years, as a result of which many lead and chromite mines have had to close down."¹

The quantity of mining exploitation is very small. In 1962, 42,400 metric tons of iron were exploited, 198,000 metric tons of coal, 4,983 metric tons of copper ore. The only case of steady increase could be seen in the case of baritine which is needed in the oil industry.²

b. Manufacturing and Construction: Although Iran does not have heavy industry yet, at least three major factories will be opened in the coming ten years: the iron and steel mill, the petrochemical complex, and the aluminium complex.

At present the main industries of Iran consist of oil, spinning and weaving, carpet weaving, tobacco, alcoholic and soft drinks, che-

¹Behrouz, J., (ed.), Iran Almanac 1966 and Book of Facts, (Teheran: 1966), p. 374.

²Ibid., pp. 374 and 375.

micals , fertilizers, food processing, canning, tyres, rubber products, tanning and leather goods, matches, soap, and detergents. Recently a few assembly plants have been established to build buses and cars the engines of which come from abroad and the body and other equipments are made in Iran. The production of these plants is small as yet, but the production of consumer goods has been remarkably increasing in recent years.

"In 1954, there were 1,300 industrial units (excluding oil and tobacco monopoly) employing 75,000. By 1963 they had increased to 10,060, employing 139,000. At this time, the oil industry, tobacco monopoly, railways, and fisheries employed 85,000. In the same year the contribution of manufacturing and various industries (excluding oil) to gross national product was 12.5 per cent."¹

Construction activity of the private sector enjoys a relative prosperity in Iran. This is, to a large extent, due to the high rate of rural-urban migration, which was about 44 per cent

¹Ibid., pp. 332 and 333.

of total internal migration in 1967. Thus cities are in constant demand of housing projects conducted either by the Ministry of Housing and Development or by private construction companies.

c. Emerging Services: As the subsistence economy of Iran moves towards cash economy, services such as banks, insurance companies, advertising agencies, and newspapers and magazines emerge and increase in number.

In 1928 the National Bank of Iran was established, before this there was only one bank system in Iran, the Imperial Bank which was a British concern. But in 1966, Iran had a total of 27 commercial banks of which eight were state-owned, ten private Iranian enterprises, eight were mixed (Iranian-foreign) capital banks, and one was an entirely foreign-owned concern. "In 1966 these banks employed about 23,500 employees."¹

There are 10 major insurance companies in Iran; one is a State-owned company, 7 are private enterprises, one is Russian and one is British.

¹Ibid., p. 462.

The State-owned insurance company was established in 1935, and seven private companies were established between 1935 and 1965. The main features of the state-owned insurance company, named Bimeh Iran, are insurance of workers under the title of Workers' Social Insurance, and Insurance of governmental employees, and at last in 1967 the most important scheme drawn up to insure farmers in case of disability and death, provided that farmers are members of the rural cooperatives.

There are about 60 advertising agencies, 11 of which are important as regards capital and activities. Twenty years ago, newspapers were the only means of publicity in Iran, gradually cinemas, radios and televisions, and public places are used for publicity purposes.

Printing and blockmaking industries have made remarkable progress because of the growth of publicity work. During the recent ten years, the number of printing houses has increased by five times.

The first newspaper appeared in Iran with the establishment of Dar al-Funun in 1851, but "Freedom of press and expression was established

in 1941 with the landing of Allied troops in Iran. Most of the political parties had their own publications and the number as well as circulation of newspapers increased. This period lasted until 1948 when left-wing papers were suppressed. There was a slight relaxation under the Mossadeq regime but with his fall in 1953 the number of newspapers shrank again. This number was further limited in 1963 when the new press law was issued."¹

In the absence of accurate circulation figures of Iranian newspapers and periodicals, the following are optimistic estimates of the circulation of the non-government publications:²

Daily Newspapers	200,000 a day
Weekly Newspapers	50,000 a week
Weekly Magazines	200,000 a week
Monthly Magazines	20,000 a month
Almanac	50,000 a year

"In 1959, the United Nations released estimates and statistics about the Iranian press according to which every 1,000 Iranians have five newspapers, one magazine and 5.4 other periodicals.

¹Ibid., p.219.

²Ibid., p. 220.

CHAPTER III

EDUCATION AND THE PROVISION OF SUB-PROFESSIONALS IN IRAN IN THE COMING TEN YEARS

A. A Rationale for Human Capital Formation in Iran and the Significance of the Coming Ten Years:

A glance at the present economic and social status of Iran reveals the significance of educational efforts in the life of the country in the coming decade. Owing to Land Reform and the projects undertaken by the Education, Health, and Extension and Development Corps, the social and economic life of the country is undergoing drastic changes. Only four years after Land Reform Iran has been able to export its surplus wheat, while before Land Reform it often had to import wheat. A great amount of sophistication is finding its way into rural areas where medieval patterns prevailed only a few years ago. The freed peasant was jolted out of his century-old apathy and inertia, he began to sit up and take

notice; he is in the process of changing his attitudes toward life. He demands more education and health services than ever before.

The establishment of thousands of cooperative societies and of Agricultural Credit Bank will help peasants to modernize agriculture at speedy paces. The exploitation of iron and steel mill, petrochemical complex, and aluminium plant in the coming ten years will create a new era of production of more sophisticated articles. All these changes will make the need for technical and semi-technical personnel more critical than ever before.

Up to 1967 three economic plans were implemented; in the coming ten years two more plans will be worked out with more emphasis on industrialization. Heavy industries are expected to be completed in the coming ten years, augmenting the already existing shortage of technical personnel.

The country must now prepare itself to face modern needs and problems, and the role of education is very crucial in such a preparation as more time is needed to train engineers and

technicians than building factories. Education must adjust itself to new conditions and break away with the kind of traditional ties which tend to hinder social and economic development.

The advanced countries are advancing so rapidly that developing countries have a short time to catch up with them or at least shorten the distance, otherwise a country like Iran will probably be unable to communicate technologically with the advanced countries in the coming decade.

B. Education and Human Capital Formation:

In speaking of education as a social agent two main viewpoints must be examined. Some culture-minded educators adhere to the belief that education is an agent for transmitting the cultural heritage. They emphasize the cultural and humanitarian aspect of education. "This group argues that since all cultural traditions have roots, cultural continuity is possible only if education preserves this heritage by passing on the truths worked out in the past to the new generation, thus developing a common cultural

background, and loyalties."¹

There are reform-minded educators who argue that investment in education should have social and economic value. They emphasize the current needs of the culture rather than transmission of past heritage. In their opinion, "Education can and does play a creative role in modifying and even reshaping the culture in which it functions."²

At the outset these two approaches may seem somewhat contradictory, and economic and educational planners in developing countries may be confronted with confusion as to which priority should be given. But once the social objectives of a country are clearly set and defined, then it will be easier to span a bridge between these two approaches. It is interesting to note that neither of the two above-mentioned viewpoints excludes the significance of the culture on educational aims. This is defensible as education

¹Taba, Hilda, Curriculum Development, (New York: Harcourt, Brace and World, Inc., 1962), pp. 18 and 19.

²Ibid., p. 22.

does not function in vacuum; culture and education are interrelated, but overemphasis on past heritage may impede present and future progress and isolate education from its social context, while too much emphasis on current needs may disrupt cultural continuity.

One may, for example, wonder whether a learned person can ever become a happy citizen if he cannot use his knowledge and be useful to others in one way or the other. In consequence any kind of knowledge or skill must have some social significance in modern times. Harbison and Myers put it as follows:

"In reality there need be no conflict between the economists and humanists. If one of the major goals of nearly all societies is rapid economic growth, then programs of human resource development must be designed to provide the knowledge, the skills, and the incentives required by a productive economy. If one rejects the notion that investments in education must be productive, then he should be prepared also to reject the goal of rapid economic growth.... The development of man for himself may still be considered the

ultimate end, but economic progress can also be one of the principal means to attain it. And human resource development systems can be designed to increase production of essential goods and services and the same time preserve and enhance the freedom, dignity, and worth of the individual."¹

As Iran has already emphasized social and economic development, one of the major roles of education must be to provide enough personnel to face the needs that arise from such an emphasis. Of course Iran cannot overlook the significance of literate citizens in social reconstruction, and the nation-wide campaign against illiteracy and the expansion of primary and secondary education demonstrate Iran's awareness in this regard. "In the 15 years prior to 1960 Iran increased its primary school enrollment 4 times, secondary enrollment 11 times, and university enrollment 4 times."²

¹Harbison, F. and Myers, C.A., Education, Manpower, and Economic Growth, (New York: McGraw-Hill Book Company, 1964), p. 13.

²Ibid., p. 77.

Nearly all this expansion was primarily geared to guaranteeing human rights of the population, and the needs for technical and managerial personnel, which form the base for present technical growth, remain largely unaltered.

It is the belief of this writer that the expansion of primary education in Iran must go on even at a greater rate, though some revisions of the curriculum are necessary as will be illustrated later in this study.

Secondary education, on the other hand, which is the main producer of sub-professionals must undergo several changes.

Before delineating these changes it is important to chart a picture of the existing schools at the secondary level with specific attention given to their relevance to the training of sub-professionals. The following are the main types:

1. Academic Secondary Schools: General secondary education consists of two cycles; the first provides general courses common to all students, and lasts for three years, and the second

offers special courses in literature, mathematics, natural sciences, and for girls home economics, and lasts another three years. This type of education serves mainly as preparatory for university education.

When the Ministry of Education was established in 1910 secondary education was considered as a means for training teachers for the new primary schools as well as for preparing students for higher educational institutions. During the administrative reforms of Reza Shah, a third function was added to the role of secondary education, that of preparing lower government personnel.

To achieve this threefold purpose of secondary education, a uniform secondary school program was established. "The job of revising the secondary school program was entrusted, for the most part, to individuals who had been trained in France. Their blind imitation of the French system of education, and even more, their limited understanding of the purpose of education severely damaged Iranian education. They valued knowledge per se more than its applicability, theory more than practice, and the lecture method in

preference to the laboratory approach."¹

The present program of the secondary education was started as late as 1921; it is overcrowded with subject-matter, and rarely relates to the life and experiences of the students, especially to those for whom secondary education is terminal.

"In the school year 1965-66, 493,723 students were enrolled in general secondary schools, of whom 20,000 graduated, less than 3,000 were accepted at Iranian universities and about 1,000 joined foreign universities. The uncertainty of the future of the remaining 16,000 each year forms the major weakness of the secondary school program."² These youths face great difficulties in obtaining employment. Many of them participate in the university entrance examination for several years, that is the reason why the number of applicants for university matriculation far exceeds the annual number of secondary school graduates.

¹Arasteh, A., Education and Social Awakening, Op.cit., pp. 65 and 66.

²Roqlain, A Report On the Secondary Education of Iran, (Teheran: The Ministry of Education, 1966), (in Persian), p. 5.

Thus competition for university admission becomes tougher year after year and chances for success grow weaker.

After losing hope of university education, such graduates search for employment in government offices which are already overcrowded. On the other hand their theoretical background does not qualify them for the new jobs opened by industry and commerce. Many of such graduates after failing the university entrance examination and trying for government jobs end up in the teaching profession. Had they arrived at a decision early enough in their studies to become school teachers, they could have joined a normal school after the first cycle of the secondary level, and thus saved themselves and the country valuable time and money. At present in teacher training centers a one-year course is given to secondary school graduates before they can be employed as primary school teachers, while the normal school trainees receive a two-year course after completing the first cycle of the general secondary school. These two types of primary school teachers enjoy the same status and salary upon graduation, whereas secondary

school graduates study two years more than normal school graduates.

2. Vocational and Technical Schools: By the middle of the nineteenth century the commercial system of Iran which was mainly centered in small home-made crafts (known as bazaar) began to feel the competition of foreign-made goods, and the government became aware of the rapid progress of European industries. Iran's first industrial effort was in the form of a reaction against European industrial expansion which threatened handmade home articles. Amir Kabir was the first Iranian leader who tried to stimulate economic and industrial changes in Iran, but his effort did not last long; he was removed from office before he could do much. After that the continual Anglo-Russian rivalry and instigations in Iran, and the outbreak of World War I blocked the economic and industrial advancement which had just started.

After the rise of Reza Shah, his attempts to introduce technical changes gained popularity. "Reza Shah's centralization policy required mo-

dernization, industrial development, and improved transportation and communications. Many of the new industries and businesses, however, became government monopolies, especially tea, textiles, tobacco, wool, opium, cotton, and the export of carpets."¹

The government monopolies of the above-mentioned products raised funds for further economic and industrial expansion. Thus new organizations such/^{as}the National Railroad system, the Post, Telegraph, and Telephone Office, the Iranian National Bank, and many textile factories were established. All these organizations needed semi-professional staff, supervisors, foremen etc., so special institutes for training needed personnel were founded. Vocational and technical schools were required to meet the technical needs and skilled manpower of the newly-founded industries. Such schools are associated with the name of Reza Shah who invited a group of Germans to set up modern vocational schools in Iran. The first school of this type was estab-

¹Arasteh, A., Man and Society in Iran, Op.cit., p. 35.

lished in 1926 and was named the Higher Technical Institute of Teheran. Applicants with a secondary school diploma in mathematics could enroll at this Institute for a course of 3 years. At present practical training is emphasized, especially in mechanical and electrical fields. Owing to the high standard of instruction graduates from this Institute can find good positions with good salary. Since World War II this Institute has been staffed exclusively by Iranian professors and instructors.

Vocational schools at the secondary level were established in Iranian metropolitan cities during the 1930's. These schools, known as senior vocational schools require an elementary school certificate and give a six to seven year course of study. In the first four years general education plus Persian and German are offered. German is still the traditional foreign language taught in Iranian vocational schools. Mathematics, physics, and some industrial subjects like metal work, mechanics, chemistry, and woodwork are also offered. The last two or three years are devoted to more practical training in electrical, mecha-

nical and carpentry work.

In addition to these senior vocational schools there are junior vocational schools whose applicants must have the elementary school certificate. The course at these schools lasts for three years, and it produces skilled workers.

After World War II the need for technical training in Iran became so critical that the Ministry of Education, with the help of the Unesco, established a modern industrial institute named the Higher Institute of Technology for training industrial arts teachers. The graduates of this institute are trained to teach metallurgy, foundry work, electrical repair, auto mechanics, cabinet and furniture making, and masonry in junior vocational schools.

The best vocational schools, however, are conducted by the National Iranian Oil Company. The Abadan Vocational School gives vocational and technical training at several levels. Courses in commerce, secretarial training, mechanics, electricity, and petroleum engineering are offered. The Abadan Higher Institute of Petroleum Industry which was established in 1940 produces both pro-

professionals and sub-professionals. It offers a four year program to candidates who have secondary school diplomas. Those who complete the first two years without very good standing join sub-professional personnel, but those with better standing continue through ^{the} second cycle of study and specialize in petroleum industry, oil machinery, and other technical fields, and graduate with B.Sc. degrees.

Last but not least comes the new Teheran Technical Institute, one of the best of its kind, which prepares technical specialists and engineers. It also trains vocational teachers and conducts in-service training. The candidates are required to have a secondary academic or vocational diploma, and are given courses in draughting, dye making, tool production, auto mechanics, building construction, piping and ventilation, refrigeration and air-conditioning, auto engineering, Diesel engineering, and factory administration, etc.

In spite of all these vocational and technical schools and the efforts of all government departments in strengthening such schools, vocational education is still not popular in Iran.

Although the employment prospects of vocational school graduates is more promising than that of their counterparts of the academic schools, enrollment in vocational schools remains very thin.

"In the school year 1965-66 the enrollment in 109 vocational and technical schools was 15,224 students, whereas the enrollment in 1,554 general secondary schools was 493,735 students".¹ The enrollment in the general or academic secondary schools was 32.4 times that in the vocational schools. There are approximately 29.5 students per teacher in academic secondary schools, while in vocational schools this ratio falls to 12 students per teacher.

3. Semi-Professional Institutes: These institutes are oriented toward provision of government personnel at medium level, and as such private enterprises do not make use of their services. The following are the major semi-professional institutes which exist in Iran:

- 1) The Ministry of Post, Telegraph, and

¹Toussi, M.A., Op.cit., pp. 24-25.

Telephone conducts a relatively big center to train specialists for both Ministry positions and technical positions. The curriculum includes both theoretical and practical courses in addition to foreign languages. The theory of radio, principles of telephone construction and mechanics also form parts of its curriculum. The greatest part of the activity of this center is focused on pre-employment training.

2) The Institute of the National Iranian Bank trains its employees in banking skills. This Institute offers two levels of training; at elementary level, it offers courses in banking, accounting, and commercial law. At higher level, it offers courses in advanced banking, accounting, economics, and correspondence. In 1963-64 it had an enrollment of 258 students.

3) The Ministry of Roads runs the Institute of National Railways; it provides technical training to its personnel for maintaining railroads and performing services. Any new recruit must receive a six-month training before being able to hold a technical job.

4) The Police Training Institute, which

has recently received the status of university, trains police officers, traffic experts, and gives training to new recruits.

5) The Ministry of Defence besides training aviaional military officers and infantry, cavalry, and artillery officers, and army constructions and engineering corps, conducts one of the best institute for training artisans and draughtsmen in the country.

6) Training for auditing, taxation, budgeting, customs, and administrative and commercial laws is conducted by the Ministry of Finance and the Ministry of National Economy.

7) The Ministry of Education runs Normal Schools for training primary school teachers and a number of tribal and agricultural schools for training agricultural and tribal teachers. The Ministry also conducts teacher training centers where a one-year course is given to would-be primary school teachers who are recruited from among the general secondary school graduates.

"In 1965-66 there were 25 one-year teacher training centers with 2,895 pupil enrollment, 19 normal schools with 1236 students, and 127 boys

and girls enrolled for tribal education."¹

The schools and institutes described in this Chapter can hardly produce sufficient technical personnel for the modern needs of Iran. Such schools with their curricula might have been successful half a century ago when Iran was a completely non-technical agrarian country. But today with rapid progress towards modernization and industrialization, schools must produce technical men for activating the economic movement of the country.

Chapter IV is an attempt to show the emerging needs of the country in the light of recent social and economic developments. It will reveal the fact that education must have social and economic value. Educating people academically without training them to be able to manipulate their environment or be skilled in the world of practical reality is a luxury that Iran as a developing country cannot afford to pay for.

¹Ibid., pp. 23 and 24.

CHAPTER IV
EDUCATION AND THE SHORTAGE OF
SUB-PROFESSIONALS

Introduction:

"Our biggest human shortage lies in the category of foremen (those who partly perform skilled work and partly supervise) and skilled workers. We need them for industrial production, construction, agriculture, and other purposes. The key point is that while we require thousands of top-level personnel, the intermediate ones I have just mentioned must be found by the hundreds of thousands."¹

The above quotation from His Majesty's book shows the significance of human capital formation at the medium level for Iran. The shortage of sub-professionals, especially in the area of technical skills, has been the main topic of several publications in recent years. The report of Overseas Consultants in 1949 highlighted such

¹His Imperial Majesty Mohammad Reza Shah Pahlavi, Mission For My Country, (London: Hutchinson and Company, 1961), p. 253.

shortages in an elaborate study. Since then Iranian leaders and planners focussed their attention on this problem, trying to find solution to it. The Plan Organization, being aware of this fact, is in the process of working out a manpower plan for securing optimal economic and social benefits from the available human resources in Iran. But certain attitudes and deep-seated social values such as high prestige for desk jobs and low prestige for manual work set limits to labor utilization and necessary skill formation.

At the outset of the Third Plan (1962-67) the planners looked with anxiety to forthcoming shortages and stated: "Although shortages of skilled workers promise to be even greater in the Third Plan period in the light of the Second Plan experiences, appropriate measures for modification and expansion of training programs can be taken to substantially reduce such shortages."¹

But the planners did not state explicitly how such measures can be taken without modifica-

¹Division of Economic Affairs, Manpower, Third Plan Frame 1962-67, (Teheran: Plan Organization, 1961), p. 2.

tion of the secondary school curriculum. Thus shortages of technical skills persisted during the period of the Third Plan. Mr. Roclain's visit to Iran in 1966 as the head of the French Institute of Labor Studies and Vocational Guidance, culminated in a report on the shortcomings of vocational education in Iran. He stated, "The needs of Iran as regards highly qualified experts and top-level technical personnel are rather secured, but in the area of the medium level skills there is a large gap that must be filled."¹ This shows that shortages of technical skills were as acute in 1966 as in 1961. Many developmental plans cannot be implemented until further technical workers are produced. But as time goes on, new investments in the economy are made and new opportunities open, leading to increasing pressures in these areas.

Paradoxically the shortage of technical sub-professionals in Iran is accompanied by unemployment. New investments by the Plan Organization generate new job opportunities, whereas the

¹Roclain, Op.cit., p. 7.

product of the secondary school, for the lack of proper skills, does not fill the emerging jobs. Urban unemployment is particularly acute, because agricultural investment does not increase job opportunities; on the contrary as agriculture becomes more modernized, ^{some} agricultural labor force becomes released and rushes into urban areas, augmenting urban unemployment.

A. Definitions and Limitations:

The term sub-professional stands for all the people who are trained in entrepreneurial, managerial, and technical skills at the medium level. These people occupy jobs between top-flight personnel and unskilled or semi-skilled workers. Between engineers and simple workers engaged in running a factory there is a number of foremen, inspectors, supervisors, technicians, draughtsmen, accountants, and book-keepers who constitute what is considered in this study as sub-professionals. In medical institutions there is a number of nurses, laboratory assistants, and technicians who fall in this category. Teachers of primary schools and nursery schools are likewise included in this category.

The International Standard Classification of Occupation (I.S.C.O.)¹ gives four major occupational classes which, in turn, are sub-divided into 45 occupational categories. Class B and C of this classification include thirteen categories as follows:

Class B:

1. Science and engineering technicians and draughtsmen
 - a. Technicians, engineering
 - b. Technicians, research laboratory
 - c. Technicians, industrial laboratory
 - d. Laboratory assistants
2. Surveyors
3. Medical and dental technicians
4. Nurses
5. Workers in transport and communications
 - a. Deck officers, engineer officers, and pilots, ships

¹International Labor Office, Geneva, 1958, as quoted by Parnes, H.S., Forecasting Educational Need for Economic and Social Development, (Paris: OECD, 1962), pp. 77 and 78.

- b. Aircraft pilots, navigators, and flight engineers
 - c. Radio-communication operators
 - d. Inspectors, traffic controllers, and despatchers
- 6. Non-working foremen
 - 7. Primary and nursery school teachers
 - 8. Salesmen of insurance and securities

Class C:

- 1. Clerical workers
- 2. Sales workers
- 3. Skilled manual workers
- 4. Skilled service and recreation workers
- 5. Athletes, sportsmen, and related workers

The educational requirements defined for each of these two classes are as follows: "Class B: Occupations for which two or three years of education beyond the secondary level (12 years) may be required. Class C: Occupations for which a secondary school education (either technical or academic), or its equivalent would normally be required."¹

¹Ibid., p. 26.

The Iranian classification of occupation¹ gives nine major classes but in these classes there is no clear-cut distinction between professionals and sub-professionals. Class A of this classification covers 78 types of jobs, from full university professors and scientists to primary school teachers, circus actors, athletes, and radio singers. Class B covers legislators and directors of government and private offices. Class C includes clerical personnel of all types such as typists, stenographers, teletypists, accountants, computing machine operators and also their respective directors. In this classification the nature of occupations as regards formal education and special training is not clearly defined. In the first four major classes, for example, the holders of Ph.D. degrees are included along with primary school graduates. Consequently one is not informed specifically of the educational qualifications and requirements of each class.

¹Census Center of Iran, Plan Organization, National Census of Population and Housing, Demographic, Social, and Economic Characteristics of the Population, (Teheran: 1967), pp. 6 and 8.

Technicians and laboratory assistants in Iran receive a two-year course beyond secondary education. Primary school teachers study either at normal schools or receive a one-year course after completing secondary education. In technical and senior vocational schools students take a six or seven-year course after completing primary education. Consequently technicians, vocational school graduates, and primary school teachers can be considered as sub-professionals and fit into the definitions made by the I.S.C.O. Clerical personnel and junior government officials, too, are usually required to have secondary school diplomas, so they fall into the category of sub-professionals.

Secondary school teachers in Iran are trained either at teachers' colleges or are recruited from among university graduates who are given a one-year training course before being appointed as secondary school teachers. Those who complete ^{the} teachers' college course are awarded degrees which are equivalent to university degrees. Thus secondary school teachers cannot be considered as sub-professionals in this study.

Considering the needs of Iran in the coming ten years, some of the skills mentioned by the I.S.C.O. are not to be considered in this study as urgently needed. Such skills as piloting aircrafts and ships or flight engineering may be required in the distant future but not in the coming ten years.

This shows that neither the I.S.C.O. classification nor that of the Plan Organization of Iran can serve the purposes of this study. Thus, the writer, using both classifications, works out his own and adopts it as comprising sub-professionals in Iran. The author's classification falls into three main categories as follows:

1. Technical Personnel, such as technicians, laboratory assistants, nurses, foremen, supervisors, transport and communication workers, agricultural extentionists and assistants, urban and industrial trade workers such as skilled metal workers, machine operators, fitting and repairmen, tool-makers, electrical installation workers, construction machine operators, and radio and television repairmen, laboratory technicians, and nurses, etc.

2. Administrative and Clerical Personnel, covering both government and private enterprises such as junior government officials, skilled service workers, typists, accountants, staticians, and welfare workers.

3. Primary School Teachers; In what follows shortages in each of these three categories will be worked out and the numerical results summarized in Table 7.

B. The Shortage of Technical Personnel:

According to the Plan Organization, "The National Manpower Survey of 1958 showed that in that year there was a shortage of 26,000 skilled workers, which would increase to 39,000 in 1960 and to 61,000 in 1963. In the Third Plan period (1962-67), owing to employment opportunities opened by fixed investments, 200,000 jobs would require trained persons, and certain skills and occupations were deemed critical."¹

¹Division of Economic Affairs, Manpower, Plan Organization, Op.cit., p. 12.

TABLE 3
 SKILLED MANPOWER REQUIREMENTS
 AND SUPPLY (1962-67)¹

	Requirements	Supply	Shortages
Agriculture	5,300	5,300	-
Social Sciences	51,250	11,770	39,775
Physical Sciences	400	325	100
Urban & Industrial Trades	35,550	5,780	28,770
Clerical	11,000	3,000	8,000
Medicine and Pub- lic Health	15,000	6,300	8,700
Engineering	5,600	3,065	3,905
Transport & Com- munications	3,400	2,170	1,230
Total	<u>126,000</u>	<u>37,710</u>	<u>90,480</u>

Supply figures in Table 3 were calculated on the basis of 1962 outputs. In some areas of skills such as social sciences, physical sciences, and engineering there is greater job mobility

¹Ibid., p. 15.

than in other areas, so a 10 per cent wastage factor was included in the estimates.

Table 3 shows that in 1967 there was a shortage of more than 90,000 skilled workers; this is the basic table upon which the author's estimates will be built up in the later parts of this study.

In Table 3 shortages listed under the three following categories: 1) urban and industrial trades; 2) clerical; and 3) transport and communications clearly fall in the category of sub-professionals as specified earlier in this study. The total shortage in these three categories amounts to 38,000 workers.

In the other categories such as social sciences, medicine and public health, and engineering the figures given in Table 3 include professionals as well as sub-professionals, so these figures should be broken down in order to find out what proportion of them falls in the sub-professional fields. According to Harbison the proportion of sub-professionals to professionals in medicine and public health should be 10 to 1. Harbison specifically refers to Iran in the fol-

following words: "In Iran, for example, the proportion of doctors to nurses is 10 to 1, where it should be 1 to 10."¹ In this statement there is no mention of laboratory assistants and technicians; if these two categories of medical sub-professionals are considered in computing the aforesaid proportion, the proportion of nurses, laboratory assistants and technicians to doctors will in fact turn out to be more than 10 to 1. Nevertheless, the writer adopts this proportion of 10 to 1 in the field of medicine and public health as well as in the fields of engineering, social sciences, and physical sciences. No doubt in other skills this proportion is more or less different, but in the absence of a definite proportion in this regard Harbison's suggestion will be utilized in working out our estimates.

Thus approximately 90 per cent of the shortage given in Table 3 in the following four categories: 1) social sciences; 2) physical sciences; 3) medicine and public health; and 4)

¹Harbison, F., Educational Planning and Human Resource Development, (UNESCO: 1967), p. 15.

engineering, falls in the category of sub-professionals. This amounts to about 47,000 persons.

However, it must be noted that the Third Plan from which Table 3 is taken was worked out before the Land Reform of 1963; in consequence the planners did not take into account the impact of the Reform on agricultural technical needs. This is the reason why the figure in Table 3 pertaining to agriculture does not show any shortage. In this study shortages in the field of agriculture will be estimated in the light of the developments which have taken place since 1963 as elaborated below.

After the establishment of the Education Corps and the recognition of its constructive activities in expanding education in rural areas, the Health Corps and the Extension and Development Corps came into existence. The Health Corps is designed to promote health standards in rural areas. Under this program young physicians, pharmacists, and dentists who are drafted for military service are sent to villages to help people to improve their health. The Extension and Development Corps is designed to bring about

the benefits of modern agricultural techniques and methods of raising livestock and farm products.

Along with the activities of the above-mentioned Corps, a movement for establishing rural cooperative societies is gathering momentum. "According to the statistics reported in October 1965 by the Rural Cooperative Organization, 4,499 cooperative societies were registered with a total membership of 697,275 persons and an aggregate capital of Rls. 561 million."¹ Rural areas are in need of agricultural extensionists, medical workers, and cooperative workers, whereas urban areas are in need of industrial trade workers such as metal workers, machine operators, tool-makers, plumbers, wood workers, chemical workers, electrical installation workers, and construction machine operators. All these developments since 1963 make it obvious that certain shortages in skilled occupations will occur in the coming ten years. Such shortages will be estimated as follows:

¹Iran Almanac 1966, Op.cit., p. 326.

In 1967 the total population of Iran was 26,676 thousand, 16,275 thousand (61%) of whom lived in rural areas, working on 18 million hectares (45 million acres) of land. In order to implement Land Reform, these people must be given technical, medical, and educational services.

Of 5,300 agricultural workers given in Table 3, 1,700 were considered as extension workers. These 1,700 extensionists were trained during the Third Plan period, which means 340 extensionists annually. The question that arises here is: Can 1,700 extension workers introduce agricultural innovations and modern techniques to nearly 17 million peasants? If we turn 17 million peasants to 3 million farm working families, assuming each family consists roughly of six persons, then each 180 families will enjoy the advice of one extensionist. In term of acres, each extensionist must cooperate with farmers to modernize agriculture on approximately 27,000 acres of land. This is quite impossible, and will take generations to show results.

The writer estimates that for each 10,000 acres of land one extensionist, one pest expert,

one irrigation expert, and one fertilizer expert will be needed. This will give a figure of 18,000 agricultural workers at the medium level. The annual output of extensionists during the Third Plan period was 340, and in ten years' time it will be 3,400. The difference of need and supply will give a shortage of 14,600 extensionists.

Giving each 1,000 rural people one medical assistant in ten years' time will require 17,000 medical workers. Such assistants will have the responsibilities stated in the Health Corps Plans, helping peasants to form healthy hygienic habits and applying some preventive health measures such as inoculation and vaccination. Efforts to cure diseases shall be left to medical doctors whose shortage is beyond the scope of this study. Training medical assistants will, to some extent, compensate for the physicians' immobility, as now medical doctors seldom live and work in rural areas where they are most needed.

At present institutes where medical assistants can be trained in substantial number are non-existent. In 1965 there were two institutes run by the Ministry of Public Health for training

medical assistants and laboratory assistants. The total enrollment of these two institutes was 124.¹ Thus the figure 17,000 given above represents the need or shortage of medical assistants.

Moving now to the area of urban and industrial trades, Table 3 shows a shortage of 28,770 workers in such fields. Considering urbanization trends and rural development this shortage will be increasing and persisting in the coming decade.

As urban population is increasing at the rate of 4.4 per cent annually, in ten years' time the shortage of urban and industrial trade workers will increase by 44 per cent, and the estimated figure of 28,770 will rise to more than 41,000. Two factors must be taken into consideration in estimating the shortage of urban and industrial trade workers. First, the qualifications of the existing workers are open to question; many of these workers need skill improvement through on-the-job training. At present to obtain the service of a qualified television specialist is more

¹Bureau of Statistics, Op.cit., p. 82.

difficult than making an appointment with a heart specialist. Second, owing to the introduction of electricity, housing facilities and water pipeline into rural areas, some of urban and industrial trade skills will be needed in villages in the coming ten years. Technical schools in 1965 had a total output of 1401 graduates.¹ If the scope of the existing technical schools is not increased, the total output of such schools in the coming decade will be 14,000, and the shortage of industrial trades will become around 27,000.

As was mentioned earlier in this section 4,499 cooperative societies have so far been established, covering 695,275 farm families. In order to extend cooperative societies to all villages about 18,000 societies will be needed. Assuming that operating a cooperative society requires skill in accounting, book-keeping, budgeting, and administrative and technical knowledge in general, the writer estimates that at least one sub-professional worker will be needed

¹Ibid., p. 57.

for running one society which is supposed to take care of investments and purchases of 170 farm families. Thus around 18,000 cooperative workers will be needed to run 18,000 cooperative societies.

According to the Manpower Survey of 1958¹ in each three years the shortage of skilled workers increased by 50 per cent; considering this trend in the case of engineering technicians and transport and communication workers, the shortage in these two fields given in Table 3 will rise to approximately 11,000 and 4,100 respectively in the coming decade.

Based on the above reasons our calculations of the amount of the shortage of technical sub-professionals in all fields is given in Table 4. It should be kept in mind while reading Table 4 that the figures denoting supply are based on the assumption that no new sources will be opened for the production of sub-professionals in the coming ten years other than those which were available in 1966.

¹Supra; p. 97.

TABLE 4

ESTIMATED SHORTAGES OF TECHNICAL SUB-PROFESSIONALS
1967-77 (AUTHOR'S ESTIMATE)

Occupations	Annual Outputs Base on 1966	Outputs by 1977	Requirement by 1977	Shortages
A. Agriculture (Extensionists)	340	3,400	18,000	14,600
B. Cooperative Workers	-	-	18,000	18,000
C. Urban and Industrial Trades	1,400	14,000	41,000	27,000
D. Medicine and Public Health	350 ¹	3,500	24,800	21,300
E. Technicians (Engineering)	-	-	11,000	11,000
F. Transport and Commu- nications	-	-	4,100	4,100
Total	<u>2,090</u>	<u>20,900</u>	<u>116,900</u>	<u>96,000</u>

¹Bureau of Statistics, Op.cit., pp. 81-84.

The existing schools and institutions cannot produce enough technical men to meet the shortages estimated in Table 4. There are not enough technical institutes where agricultural extensionists, technicians, and cooperative workers can be trained in substantial number. For example the annual output of agricultural schools was 218 graduates in 1964-65¹, and nearly all of these graduates were employed as teachers in rural areas.

the
Most of /estimates in Table 4 are tentative, nonetheless in some areas even tentative estimates seem to be impossible as no clear and detailed statements about the economic and social objectives in the coming ten years ahead are available. If, for example, the number of factories which are to be established by 1977 and their required personnel and their productive capacity or the length of roads to be constructed were given, the writer would have a more solid ground to base his estimates on.

¹Ibid., p. 57.

It is certain, however, that three big industrial units, that is, the iron and steel mill, the petrochemical complex, and the aluminum plant are going to be fully established by 1977 and will need thousands of technicians and other sub-professional personnel, but as heavy industries are new in Iran, there are no reliable data concerning the requirements of technical personnel for running them as yet.

C. The Shortage of Administrative Officials and Clerical Personnel:

In examining the shortage of administrative and clerical personnel attention is drawn to the need for retraining and skill improvement. In this area Iran is not confronted with serious shortages, but a great number of government and private employees need on-the-job training. This is illustrated in Table 5.

Table 5 gives the number of workers that need in-service training up to 1967.

TABLE 5

TRAINING OF EMPLOYED WORKERS
(1962-67)¹

	Minimum requirements	Number to be trained	Shortages
<u>Administrators:</u>	<u>20,500</u>	<u>5,700</u>	<u>14,800</u>
Government	10,500	3,200	7,300
Private	10,000	2,500	7,500
Employees Other Than Adminis- trators	<u>36,000</u>	<u>27,000</u>	<u>9,000</u>
Total	<u>56,500</u>	<u>32,700</u>	<u>23,800</u>

In the area of trained clerks and accountants shortages do exist as shown in Table 6.

¹Division of Economic Affairs, Manpower, Plan Organization, Op.cit., p. 32.

TABLE 6
MANPOWER REQUIREMENTS AND SUPPLY
(1962-67)¹

	Requirements	Supply	Shortages
Clerical	11,000	3,000	8,000
Statistics	350	150	200
Accounting	1,950	180	1,770
Welfare Services	250	145	105
Total	13,550	3,475	10,075

In the absence of government employment trends and the rate of expansion of private enterprises, estimating the shortages of workers in the two above areas for the coming ten years seems very hard, if not wholly impossible. However, judging from past trends one can produce some estimates. In 1956 the number of government employees totaled 207,140². According to 1965

¹Ibid., pp. 15 and 17.

²Iran Almanac 1963, Op.cit., p. 144.

estimates this number rose to 297,000¹. Thus past trends show a 50 per cent increase per ten years in the number of government employees. Accordingly if the number of officials and clerks to be trained remains constant in the coming decade, shortages will rise to about 40,700 in 1977. This figure is incorporated in Table 7.

D. The Shortage of Primary School Teachers:

Although the shortage of teachers is great at both primary and secondary level, only the shortage of primary school teachers will be examined in this study.

According to the definitions of terminology given earlier in this chapter, primary school teachers fall in the category of sub-professionals because the education that they receive is equivalent to secondary school education as regards duration of time. In the case of normal school graduates the period of the course is even one year shorter than the secondary school course.

¹Iran Almanac 1966, Op.cit., p. 601.

Assistant teachers are offered a two-year course after completing primary education.

There are three main reasons for the shortages of primary school teachers in Iran: first, the salary is low; second, there is little or no prospect of promotion; and third, there is the obligation of working in small towns and villages.

Although the salary of teachers has been recently raised, at present it amounts to Rls. 5000 (about \$66) per month in the case of teachers who hold the secondary or normal school diploma. To hire a two-room apartment in the poorest part of Teheran will cost no less than Rls. 2000, and this can illustrate the purchasing value of \$66. Other government officials with the same educational background as the primary school teacher apparently receive the same salary, but they receive fixed overtime allowances, proportionate overtime, status allowances, responsibility allowances, and new year bonuses, etc. The new year bonus is sometimes equivalent to the salary of one month. Teachers are the only government employees who have none of the above allowances and bonuses.

There is little or no prospect of promotion for teachers in two respects: first, teachers in general do not get their regular promotion for the simple reason that they are great in number; second, the primary school teacher's counterpart in other government offices may ascend to higher positions because of diversity of opportunities and relative dearth of educated people, whereas the only higher position open to the teacher is the directorship of the primary school which brings no change in his salary. In Iran the salary of the primary school principal is the same as is the salary of teachers with the same rank, while in other government offices there are additional status and responsibility allowances for the director.

The third factor is that the primary school teacher may have to work in villages or small towns, while few of his counterparts have to do so. This factor becomes more accentuated when the teacher's children grow old enough to enter the secondary school or university, and a small town or a village can hardly offer the kind of amount of education that the teacher

thinks is proper to his children.

Consequently teaching, especially at the primary school level, is not a popular job in Iran where the teacher may be the target of a great deal of criticism for his failure to make students happy and useful citizens. The rigid curriculum leaves no room for the teacher's initiatives, but many parents cannot realize that the teacher himself is the victim of the current curriculum.

Primary school teachers do not have good educational background, and this obviously reduces their professional capabilities. Over 75 per cent of them do not have normal school or secondary school diplomas.¹ This does not mean that 3/4 of primary school teachers are unqualified. In the teacher training centers of Iran a number of primary school teachers are trained to be assistant teachers. These trainees are recruited from among primary school graduates and are given a two-year course of training. They are usually

¹Amiri, M.A., Educational Status in Iran, (Teheran: Plan Organization, 1965, mimeographed in Persian), p. 2.

appointed as teachers of the first four grades of the primary school.

No educational program can ever succeed without a sufficient number of qualified and well-trained teachers. To prepare good teachers two factors must be taken into consideration: first, a body of competent and enthusiastic individuals must be given incentives to join the profession each year, and second, good teacher training centers with programs suited to current needs should be established. As long as the status of teachers is not improved and their welfare is not well guaranteed, new recruits will not be eager to join the teaching profession. And as education expands more teachers will be needed. In consequence teacher training programs require continuous attention.

At present primary school teachers are trained in Normal Schools and through ^aone-year course in teacher training centers. In 1965

× there were 19 Normal Schools with 1,234 students,

× one Tribal School with 127 students, and 25 one-year teacher training centers with 2,895 student

enrolment.¹ The total enrolment in all the above teacher training centers was 4,255; and the total output of these centers amounted to 3,638 teachers in 1965. It is obvious that the number of teachers trained annually coupled with the high rate wastage that will be discussed later will never be sufficient to cope with the rapidly growing number of primary school population.

The Third Plan aimed at increasing the school attendance at the primary level to 60 per cent in 1967.² Nevertheless this goal has not been fulfilled because of shortage of teachers.

According to the census of 1966, 60 per cent of the age-group 7-13 constitutes 2,906,440 children.³ Figures for the same year showed the primary school enrolment at 2,547,746 children. The enrolment shows a shortcoming of 358,694, unless one assumes that in one year's time, that is, at the end of the Third Plan period, the enrolment increased by this amount, which seems unlikely to be the case.

If the objective of 60 per cent of primary

¹Toussi, M.A., Op.cit., pp. 23 and 24.

²Division of Economic Affairs, Manpower, Plan Organization, Op.cit., p. 24.

³Census Center of Iran, Op.cit., p. 1.

school age attendance remains the same in the coming decade, which is neither logical nor desirable, around 87,000 teachers will be needed.

This is an unrealistic assumption because of the desire of the Government to apply universal compulsory primary education as early as possible. However, the targets for the Fourth Five-Year Plan have not yet been made public and in their absence it is not possible to calculate the needs in teachers for the increased proportion of school-age children. Once the targets are published the estimates we present here will have to be revised according to the methods followed in the following pages.

The shortage of 87,000 teachers mentioned earlier is computed in the following manner:

At the end of the Third Plan period there was a shortage of 37,000 teachers, which included both primary and secondary school teachers. As the ratio of primary teachers to secondary teachers in Iran is 4 to 1, the shortage of primary school teachers was 28,275. Forty-five per cent of the total primary school teachers who are on the job have not received any training at all, so they must be given in-service training. This

means another shortage of 23,240 trained teachers.

In the coming ten years, considering the rate of population growth which is 2.6 per cent annually in Iran, there will be an increase of 26 per cent in the 7-13 age-group, which means an increase of 756,664 children of primary school age. Adding this figure to 358,694 school age children who were out of school in 1966 will give 1,115,358 children who will need schooling.

Teacher-pupil ratio in primary schools is 1/31 in Iran, so there will be another shortage of about 36,000 primary school teachers by 1977.

The existing Normal Schools and teacher training centers with their thin enrolment can hardly produce teachers in sufficient numbers. Moreover the rate of teacher wastage at the primary level is very high.

A study conducted by the Bureau of Planning and Studies in 1965 revealed that 2019 primary school teachers left their jobs in that year.¹ In the same year the total output of teacher training centers was 3,638 teachers, thus

¹The Bureau of Planning and Studies, The Causes of Wastage of Elementary School Teachers, (Teheran: 1965, in Persian), pp. 4 and 6.

the annual number of trained teachers who remain on the job should be computed 1,619 annually and in ten year's time this will amount to 16,190, while the need is over 87,000.

Having computed the shortage of sub-professionals in three major areas of technical personnel, trained administrative and clerical personnel, and primary school teachers, the writer can summarize his estimates for the coming decade in Table 7.

TABLE 7
THE SHORTAGE OF TECHNICAL PERSONNEL, TRAINED
ADMINISTRATIVE & CLERICAL PERSONNEL, AND
PRIMARY SCHOOL TEACHERS 1967-77
(Author's Estimates)

Fields	Require- ments by 1977	Supply by 1977	Shortages
A. Technical Personnel	116,900 ¹	20,900	96,000
B. Administrative and Clerical Personnel	40,000 ²	-	40,000
C. Primary School Teachers	87,000	16,000	71,000
Total	243,900	36,900	207,000

1 and 2 are extracted from Tables 4, 5, and 6 and elaborated.

Although a shortage of more than 200,000 skilled sub-professionals seems very great, with an effective revision and reorientation of educational programs to meet such a shortage is quite possible in the coming 15 or 20 years. Enthusiasm for technical work actually exists, but it is not encouraged and directed into proper channels.

In a study conducted by the Bureau of Planning and Studies in 1966, 440 out of 620 subjects exhibited tendencies for medicine, university or secondary school teaching, and engineering respectively.¹ These three fields are among the most critically needed ones in Iran. But the fact is that these young aspirants aimed at the top level in these fields. If they are given proper incentives and guidance, they may lower their ambitions and be trained as sub-professionals in these fields.

¹Bureau of Planning and Studies, A Research On Educational and Occupational Aspirations of the Youth, (Teheran: Ministry of Education, 1966, in Persian), p. 22.

E. The Impact of University Education on the Pro-
vision of Sub-professionals:

Although university education may seem, at first glance, beyond the scope of this study, the writer thinks it proper to examine it briefly for the help it can give to the training of sub-professionals.

"In 1965-66 there were seven governmental and one private universities and a few colleges in Iran. Their total enrolment was 28,982 students of whom 13,913 students were studying at the University of Teheran."¹ Iran had in the same year about 17,000 university students abroad. In addition, there were 1,478 students in vocational and technical colleges, 1,000 students in Advanced Teacher Training colleges, 199 at the Abadan Institute of Petroleum Engineering, 99 nursing, and 295 at the Higher Institute of Accounting. There were also 245 students enrolled at Higher Institute of Nursing in Teheran, Meshed, and Shiraz. Table 8 shows the distribution of students among different colleges of Iranian universities.

¹Toussi, M.A., Op.cit., p. 22.

TABLE 8

THE ENROLMENT OF DIFFERENT COLLEGES OF
IRANIAN UNIVERSITIES 1964-65¹

Colleges	Enrolment	
	Teheran	Provinces
Arts	4,132	1,941
Medicine	2,266	2,549
Pharmacy	407	178
Dentistry	340	-
Law	1,931	-
Veterinary	253	-
Science	1,313	435
Engineering	815	168
Agriculture	389	414
Theology	542	88
Fine Arts	633	-
Administrative Science and Commerce	575	-
Nursing	282	75
Midwifery	35	37
Total	13,913	5,885

¹Bureau of Statistics, Op.cit., pp. 78-82.

An examination of the enrollment of students in colleges in the provinces is heartening as far as the provision of technical personnel is concerned, because the tendency is toward joining sciences and technology, whereas the University of Teheran has an enrollment of 7,238 students in Arts, Law, Fine-Arts, and Theology. This difference is due to the fact that provincial universities have been established more recently when the pressure for technical needs was greater.

As Table 8 shows the attempt to escape technical work at university level is not so acute as it is at secondary level. It is noticed that as soon as a college of engineering, science, or medicine is established anywhere in the country, it immediately becomes filled to capacity with students, quite unlike the case in secondary vocational and technical schools which have always been underpopulated in Iran.

Technical education at the university level has direct bearings on the training of sub-professionals; if there are more technical personnel at the higher levels, the training and re-

training of medium skilled personnel will become easier and more practicable. But the great expenses incurred upon establishing and running colleges of medicine, engineering, or technology sometimes tempt educational planners to open arts colleges instead, and this ultimately impedes the provision of technical personnel both at top and medium levels.

Another point that must be explored about university education is the question of Iranian students abroad, whose knowledge and skills are needed for social and economic development.

"Of more than 15,000 Iranian students who studied abroad in 1961-62, 12,000 were enrolled in higher educational faculties, and of whom 3,507 students were enrolled in engineering, and 3,987 in medicine."¹

Some of these students, especially those studying in the United States and other economically advanced countries, are not too enthusiastic to return home upon graduation. They become attracted to better job opportunities and higher

¹Division of Economic Affairs, Manpower, Plan Organization, Op.cit., p. 97.

salaries and thus deprive their own country of whatever skill and knowledge they acquire.

Dr. Prothro, the AUB Dean of Arts and Sciences, calls this phenomenon import/export of scientific talents, and admires Iran's efforts in investing its savings in education by sending thousands of students abroad.

He argues "this importing and exporting of talents is sometimes thought of as one-way brain drain which is a threat to developing countries, but I look upon it as a natural part of the growth of science, which knows no national boundaries."¹

The writer does not agree with what Dean Prothro thinks in this respect, because investment in the regular sense of the word must have some return, whereas the above-mentioned students are supported and their education is paid for by Iran, hence their talents belong to Iran. Now if they stay and work in the United States after graduation, ^{the} investment made in their education is lost, and as far as Iran is concerned this is

¹The Daily Star, Beirut, Lebanon, November 28, 1967, p. 5.

a serious waste of talent.

The problem of the return of these students is the problem of the developing countries that must try to solve it, not that of the United States, England, Germany, France, or other advanced countries.

F. The Allocation of Resources and Distribution of State Budget:

"In 1964 from the total budget of the Ministry of Education which was 8720 million rials (76.5 rials = \$1), 51 per cent was allocated to primary education, 22.3 per cent to general secondary education, 3.5 per cent to vocational and agricultural education, 0.4 per cent to teacher training, and 0.12 per cent to adult education. The total budget of higher education, including Teacher Training Colleges, was 1,513 million rials."¹

The budget of the Ministry of Education cannot be given in the context of general state budget for the lack of data; however the follow-

¹Bureau of Statistics, Op.cit., pp. 5-9.

ing set of figures gives the proportion of funds allotted to each sector out of total budget.¹

Economic Affairs	39%
Social Affairs	25%
Military Affairs	22%
General Affairs	7%
Miscellaneous	7%
Total	100%

The budget of Social Affairs includes eight categories of expenditures as follows:

1. Education
2. Culture and Arts
3. Physical Education, Scoutism, and Youth Affairs.
4. Public Health
5. Housing and Urban and Rural Development
6. Workforce and Manpower Studies
7. Social Security
8. Cooperative and Social Welfare

¹A Few Words About the Budget of 1966 (no writer or publisher. Teheran: 1966, in Persian), pp. 12 and 13.

But the budget of education can be computed in the context of gross national product of 1964. The gross national product of 1964 was estimated at \$5030 million, and the budget of education was 2.2 per cent of that product. Adding to this the budget of higher education and the annual allocation in the Third Plan for vocational and technical training one comes up with the figure of three per cent of gross national product spent on education.

Although spending three per cent of national income on education is a great effort on the part of Iran for improving its education, there are a few points in the distribution of educational budget which set limits to the provision of technical personnel in general and that of primary school teachers in particular.

First, the allocation of resources to the vocational and technical education and the teacher training programs is insufficient. Three and a half per cent for vocational and technical education and 0.4 per cent for teacher training programs can hardly remove the shortages of technical men and teachers that Iran is confronted with.

Second, a comparison of funds allotted

for various colleges of the University of Teheran once more supports the writer's earlier contention that the expensiveness of establishing and running medical and engineering colleges sometimes encourages educational planners to establish arts colleges which are less needed. Many graduates of arts colleges cannot find employment in which they can utilize their specialized knowledge; in consequence they may engage in occupations which have very little to do with their special fields.

The School of Medicine of the University of Teheran has a budget three times as much as that of the College of Arts¹, whereas the enrolment of the College of Arts is two times as much as that of the College of Medicine as Table 8 shows.

The thinness of the budget of technical education and teacher training programs is one of the causes of the shortage of technical personnel and teachers. The allocation for university education is twice as much as that of second-

¹Division of Economic Affairs, Education, Plan Organization, Op.cit., p. 88.

ary education; this will ultimately lower the qualifications of secondary school graduates in both joining the university and entering a job.

The enrolment in secondary education is increasing so rapidly that the educational authorities are thinking of devising some barriers to it through requiring entrance examination and fees. This is a good sign for controlling the increasing enrolment in secondary education, but why shouldn't similar devices be used in the case of university education?

Although the university entrance examination is quite tough in Iran, tuition fees are low and range from \$50 to \$100 per annum, and the tendency is towards elimination of fees. This is a sign of inconsistency in educational policies. Raising fees at the secondary level and lowering them at the university level will not establish social justice and equality of educational opportunity, because in Iran, as elsewhere, those who reach university education are generally better off than those who stop at the primary or the secondary level.

If the surplus of general secondary

school graduates is not needed in a modernizing country like Iran, neither is the surplus of university graduates in the fields of arts, law, fine-arts, etc., who will subsequently remain unemployed or underemployed if their number increases beyond reasonable limits.

Concluding Statement:

In Chapter IV the shortage of technical personnel was identified and estimated in the coming ten years. The lack of proper incentives and unbalanced distribution of ^{the} educational budget were also examined.

As most sub-professional people receive education at the secondary level, it is the curriculum of secondary education that must be revised and improved for meeting shortages of skills. If the negative attitude towards manual work is to be changed, one of the major tools is the curriculum. It is true that man receives education in streets, churches, mosques, city buses, and in his working place, nevertheless the significance of the school, particularly in his formative years of childhood and adolescence,

is tremendous.

The two remaining chapters will serve this purpose, namely, education for social and economic improvement. First the curriculum of the secondary education and its impact on the **shortage** of technical personnel will be examined, then some suggestions will be given for the improvement of the curriculum and the general educational system so as to meet the emerging needs.

CHAPTER V

THE CURRICULUM OF THE IRANIAN SECONDARY SCHOOL AND ITS IMPACT ON THE SHORTAGE OF SUB-PROFESSIONALS

The purpose of this chapter is to examine the secondary school curriculum in two areas: a) general secondary education; and b) vocational and technical education. This examination of the curriculum will be related to the shortage of technical sub-professionals as dealt with in chapters III and IV.

A. Description and Analysis of Secondary School Curriculum in Iran:

Introduction:

The secondary school curriculum which is in vogue in Iran is academic in nature, accounting for 97 per cent of the secondary school students. This curriculum prepares students for university studies, and is concerned primarily with theoretical education rather than with technical, commercial, and professional education.

Thus it does not seem to contribute efficiently to manpower resource development in the specific areas of economic activities.

The initiators of this curriculum in the late nineteenth century and those who revised it in 1921 had the aim of modernizing government departments and the production of civil servants in mind. But at present graduates of general secondary schools cannot all be employed in government offices, and at the same time Iranian universities cannot accommodate all secondary school leavers.

The values and aims of education have remained unchanged since the turn of the present century, whereas the society has undergone many changes. This has created an educational lag where education is not in pace with the changes in the country. The Overseas Consultants have the following to say in this connection:

"The existing school system has been relatively successful in accomplishing the aims of its founders three quarters of a century ago, which were to produce a distinguished intellectual elite and to establish an instrument by which

the thoughts and actions of the common people might be effectively manipulated. The existing system is anachronistic and unsatisfactory because of a changed social philosophy rather than because of technical failure of the schools."¹

Thus the Iranian secondary school produces what it is supposed to, but its production is not on demand in society. So the principal weakness in the educational system of Iran is in its educational philosophy which is not consistent and not in harmony with its social and economic objectives.

1. The Aims and Contents of Education In Secondary Schools: As stated, "The curriculum of the general secondary school serves a twofold purpose: it prepares the pupils to continue their further academic studies, and it also equips them with adequate general information necessary for wholesome living in the society."²

¹Overseas Consultants, Inc., Report On Seven Year Development Plan For The Plan Organization of The Imperial Government of Iran, (New York: 1949), Vol. II, p. 82.

²Toussi, M.A., Op.cit., pp. 8-9.

The above aims, stated broadly, can hardly be translated into concrete classroom activities. What is useful to the student for wholesome living in the society? The words "useful" or "adequate" as stated in the aims of secondary education are relative value words. They must be useful or adequate to someone or somebody. Fifteen per cent of general secondary school graduates join universities, they can use their acquired knowledge for university studies, the remaining cannot generally engage in any kind of productive activities unless they get special training. Now that such training is inevitably necessary, why shouldn't part of it be given at the secondary school along with academic subjects?

Tables 9 and 10 show the contents of curriculum in the academic secondary school.

TABLE 9

TIME TABLE FOR THE FIRST CYCLE OF
GENERAL SECONDARY SCHOOLS¹

Subjects	Number of Hours Per Week		
	Grade VII	Grade VIII	Grade IX
Persian Language & Literature	6	6	5
Foreign Language	4	4	4
Arabic	2	2	2
Religious Instruction	2	2	2
History and Geography	3	3	3
Natural Science and Hygiene	2	2	2
Physics	1	1	2
Chemistry	1	1	2
Mathematics	4	4	4
Home Economics (for girls) Handicrafts (for boys)	3	3	2
Physical Education	2	2	2
Drawing	1	1	1
Calligraphy	1	1	1
Total	32	32	32

¹Ibid., p. 9.

TABLE 10

TIME TABLE FOR THE DIFFERENT BRANCHES OF SECOND
CYCLE OF GENERAL SECONDARY SCHOOLS
(IN HOURS PER WEEK)¹

Subjects	Literature			Mathematics			Natural Sciences		
	Grade X	Grade XI	Grade XII	Grade X	Grade XI	Grade XII	Grade X	Grade XI	Grade XII
Persian Language & Literature	6	6	7	5	5	5	5	5	5
Mathematics	2	2	-	7	7	10	3	3	2
Physics	1	1	-	4	4	6	4	4	4
Chemistry	1	1	-	3	3	3	4	4	4
Natural Science and Hygiene	2	-	-	2	2	-	5	5	9
Foreign Language	5	5	6	4	4	4	4	4	4
Arabic	4	4	4	-	-	-	-	-	-
Social Studies: Hist. & Geog.	6	6	8	2	2	-	2	2	-
Logic & Philosophy	-	2	5	-	-	2	-	-	2
Religion & Moral Instruction	1	1	-	1	1	-	1	1	-
Drawing & Manual Training for Boys; Home Economics for girls	2	2	-	2	2	-	2	2	-
Physical educ.	2	2	2	2	2	2	2	2	2
Total	32	32	32	32	32	32	32	32	32

¹Ibid., p. 10

As Tables 9 and 10 show the nature of the curriculum in the secondary school is academic with very little practical value and implication in the life of the student upon graduation. The humanities (Persian, Arabic, foreign languages, history, religion) occupy by far the largest single portion in terms of weekly periods. The humanities cover 47 per cent of the total weekly instructional periods in the first cycle and 41 per cent in the second cycle. Science and mathematics occupy 33 per cent of the total instructional period in the first cycle and 43 per cent in the second cycle. There are no elective courses in either of the two cycles; if a student fails in two courses, he must remain in the same grade and repeat all the thirteen courses for another year.

As the graduates of the first cycle do not receive practical training, the only opportunity open to them is to enter the second cycle; and those who complete the second cycle aspire for university education, none of the two cycles is terminal.

The Persian language and literature are

based on classic texts in most cases. The student may know many poetic passages by heart, but he can hardly write an application for a job. Letter-writing and correspondence which are necessary in the daily life of any educated person have not found their way in teaching Persian.

Foreign languages and Arabic are taught in a rote manner; the student may be able to memorize many words for meeting the requirements of a course, but he cannot communicate in Arabic or a foreign language though he would have studied such a language for six years.

There are four big centers for teaching English, French, and German: The Iran-America Society, the British Council, Institut Franco-Persan, and the Irano-German Institute. The Iran-America Society is the biggest of all having an enrollment of several thousands. These centers are run by foreigners and Iranians. Each year thousands of Iranian students register in these centers to learn to speak foreign languages. In the Iranian secondary school the grammar of modern languages is taught, but it seems that ability in communicating in foreign languages has not yet

been recognized in the curriculum and methods of instruction.

If in the case of foreign languages such educational facilities exist, in the case of Arabic they do not exist. After six years of studying Arabic in the literary branch and three years in other branches, students can hardly speak Arabic, even in a broken way.

In teaching physics, chemistry, and natural sciences, laboratory methods are not used in the majority of secondary schools. The student may learn sophisticated atomic theories in physics, but he hardly gets to know how the light switch in his room functions. ^{The} / theoretical method of teaching physics not only leads to impracticability of the student's knowledge, but it also accentuates the shortage of technical personnel such as radio and television specialists and all those people whose jobs are connected ^{with} / electricity in one way or another. The smallest disorder in electrical appliances or the slightest dislocation of one wire means that a repairman must be sent for.

Mathematics, though theoretical at advanced levels, can be related to the student's

daily life. The way mathematics is taught in the Iranian secondary school can only lead to university studies. To keep and arrange a simple account-book is beyond the power of the student after 10 years of studying mathematics. By this the writer does not mean every secondary school graduate should become an expert accountant; the rudiments of accounting and book-keeping can be taught in school as a reserve for later life. Then when the student cannot succeed in the university matriculation, he can engage in a kind of job after a short period of special training.

In history the events of the past are presented in the form of military expeditions and ambitions. The causes and effects of local and world wars are not analyzed. In going through the past, a Persian student may learn that the Persian Emperor Xerxes attacked Athens and set the fire to/Acropolis, and then Alexander of Macedonia invaded Persia and set fire to Persepolis. These two historical events in themselves cannot broaden the learner's intellectual horizon, unless the motives of the two Emperors, the political and economic implications of their ex-

peditions be analyzed and probed. The two above-mentioned events are far-off happenings; the causes and effects of the two Wars of the present century, too, have not been elaborately analyzed in the Persian history, though both of them had a tremendous impact on the life of Iran.

Home economics for girls and handicrafts for boys seem to form the greatest burden for school administrators for the lack of equipments. Besides, students enrolled in academic schools, under the influence of cultural patterns, aspire for university education, so they do not anticipate whatever practical education is provided for them. The shortcoming of equipments and the lack of a well-organized practical education foster their negative attitude towards manual work.

Physical education, which is supposed to facilitate physical development of the youth and foster cooperation and group-work in them, is not handled properly in the Iranian secondary school. This is, to a large extent, due to the fact that more than 50 per cent of school buildings are rented houses and small in area.

"In the school year 1964-65 out of 1,109

public secondary schools, 93 vocational and technical schools, and 50 Normal Schools and teacher training centers, 663 buildings belonged to the State, some of which were not built to face the educational needs of schools. Other secondary schools were rented properties."¹

Rented buildings for schools are generally small in area and the rationale for choosing them is the number of rooms which can be used as classrooms. Considering the dearth of land in Teheran and other big cities, the area of rented schools is very small, hence physical education cannot be given on the school premises. Of course there are schools with large courtyards where some games and sports can be conducted, but such schools are very few in number. Consequently the hours allotted to physical education have practically turned into humble indoor activities in many secondary schools.

2. Major Defects of The General Secondary School Curriculum: The major defects of the general secondary curriculum, in the light of the

¹The Bureau of Statistics, Op.cit., p. 7.

stated aims and the description of individual items, can be summarized as follows:

a) The curriculum does not prepare students for facing the practical needs of life; nor does it foster attitudes and abilities to engage in an independent productive business.

b) The curriculum is uniform. In spite of the fact that students are different as regards their native and acquired capacities, the curriculum requires that all the youth of the country should study the same subjects and for the same number of years. Formal examinations and regulations safeguard the implementation of the curriculum. Individual differences and variations of local needs are not considered in the curriculum. "It makes no allowance whatsoever for variations of needs between individuals, regions, individual schools or between the fluctuating demands of the labor market. The sons of a Baluchi tribesman, an Abadan engineer, a Mazandaran farmer, and a Teheran deputy must follow exactly the same curriculum."¹

¹Overseas Consultants, Op.cit., p. 103.

c) The curriculum seems to prepare the individual for a fixed society rather than to educate him for a dynamic life in a changing environment. The economic status and means of production are rapidly changing in Iran, consequently a static curriculum cannot meet the emerging needs of various economic sectors. The curriculum aims at preserving the past society, while it must also aim at improving the present society.

d) The curriculum is based on an elite education, while the expansion of secondary education shows it must also be oriented to the needs of masses.

"The French system of education, as adopted in Iran, has been essentially authoritarian... and based upon a theory of the encyclopedia of knowledge. The French justified their advocacy of an authoritarian administrative structure and teaching methods on the grounds that those best qualified to lead obviously should lead, and that it was natural for the intellectual elite, the relatively few people with native capacity to be highly educated in any society, to guide

the affairs of the masses."¹

It goes without saying that an intellectual elite will build the curriculum to suit its own frame of reference if the general public is not represented in curriculum construction.

"At present about half a million students of 13-19 age-group are studying at secondary schools in Iran."² This cannot be considered an elite education, this is a relatively mass education. As these half a million students come from various social strata, the needs of ^{the} masses deserve to be given credit in the curriculum, not only those of the few.

B. The Curriculum of Secondary Vocational and Technical Schools:

The aim of vocational and technical schools is to train skilled workers, technicians, foremen, supervisors, and technical personnel in general. These schools and their graduates are most needed

¹Ibid., p. 83.

²Toussi, M.A., Op.cit., p. 24.

at the present stage of economic development in Iran. Except for some deficiencies which will be discussed later in this section, these schools prepare students for the practical needs of life.

Boys' vocational schools offer a three-year course, and get their applicants from among the primary school graduates, provided that they are not over 17 years of age. "In 1965-66 there were 48 vocational schools with a total enrollment of 9289 students."¹

The vocational schools offer courses in masonry, building, metalwork, tinwork, smelting, auto-mechanics, and carpentry. Graduates from the vocational schools can either find employment or continue their education at technical schools. The curriculum of vocational schools is based primarily on practical training, and shopwork occupies an important place in the time-table as Table 11 shows.

¹Ibid., p. 11.

TABLE 11

TIME-TABLE FOR VOCATIONAL SCHOOLS¹

Subject	Number of Hours Per Week		
	First Year	Second Year	Third Year
Mathematics	4	4	4
Physics	-	1	1
Chemistry	-	1	1
Persian Language	3	2	2
Religion	1	1	-
Social Science	1	1	1
Book-keeping	-	-	1
Foreign Language	4	4	4
Sports	2	2	2
Geography	1	-	-
Hygiene	1	1	-
Technical Subject	3	2	2
Technical Drawing	4	4	4
Technical Mathematics	-	2	2
Shopwork	24	23	24
Total	48	48	48

¹Ibid., p. 11.

The technical schools are more advanced than the vocational schools. Their applicants must have completed the first cycle of general secondary schools before admission, and the courses offered in technical schools are the same as those in vocational schools, but at a higher level. These schools offer a three-year course in welding, auto mechanic, casting, wood-working, building, electricity, and metal-working. The technical schools are of two types, for boys and for girls. "In 1965-66 there were 21 boys' technical schools with a total enrollment of 4,215 students."¹

Table 12 shows the emphasis on practical training in the technical schools.

¹Ibid., p. 12.

TABLE 12

TIME-TABLE FOR BOYS' TECHNICAL SCHOOLS¹

Subject	Number of Hours Per Week		
	First Year	Second Year	Third Year
Physics	2	2	2
Chemistry	1	1	1
Foreign Language	4	4	4
Mathematics	3	3	3
Persian Language and Religion	3	2	2
Hygiene	1	2	2
Physical Educa- tion	2	2	2
Geography	1	-	-
Social Science & Labor Law	1	1	1
Technology	2	3	3
Technical Draw- ing	4	4	4
Technical Arith- metic	2	2	2
Practical Train- ing	22	24	24
Total	48	48	48

¹Ibid., p. 12.

The girls' technical schools provide a three-year course of training for technical work and appropriate trades. Courses in home economics, secretarial work, decoration, dyeing, spinning, assistant nursing, and dress making are offered. There are also technical schools for girls which offer courses exclusively in secretarial work such as typing, shorthand, correspondence, book-keeping and filing, and business machine operation, etc.

Other types of technical schools are agricultural, commercial, and business secondary schools. "The total enrollment of all vocational, technical, agricultural, secretarial, commercial, and business schools was 15,224 students in the school year 1965-66."¹ This enrollment is very thin in comparison with the enrollment of general secondary schools, which amounts to half a million. The thinness of this enrollment will form the concern of the remaining part of this section.

¹Ibid., p. 24.

1. Major Defects of the Curriculum and Program of Vocational and Technical Schools: Although the skills acquired in vocational and technical schools are most needed for the economic development, and the graduates of such schools will mostly engage in urban and industrial trades the shortage of which was discussed in Chapter IV, there are certain deficiencies which hinder the growth and usefulness of such schools.

a) The curriculum is uniform, it does not give allowance to individual needs. Four hours are devoted to technical drawing per week in nearly all types of vocational and technical schools, while this course may be useful only to those who will engage in surveying. Welding, auto-mechanic, and electricity do not seem to be in need of this much technical drawing. Foreign languages occupy the same number of weekly periods as in general secondary schools, while knowing a foreign language perfectly does not necessarily increase one's practical skill, unless he employs some of his leisure time in reading technical books written in technologically advanced

countries. In the absence of a good library system, which is the case in most Iranian schools, too much emphasis on foreign languages won't be of great help.

The uniformity of the curriculum can be extended to local and regional level. Shiraz and Isfahan which are textile producing areas have the same curriculum of metal work and woodwork as Meshed which produces sugar. Consequently it is not surprising that, "33 graduates of the Meshed vocational school have been employed, 8 as policemen and 25 in sugar plant in the past fourteen years."¹

With the emergence of new factories the vocational and technical schools must readjust themselves to new needs, but they seem to go on with their fixed curriculum, without attempting to identify the needs of the area in which they function.

b) The procedure of admission to vocational and technical schools is inadequate. Only

¹Overseas Consultants, Op.cit., p. 95.

in the case of girls' technical schools entrance examination and aptitude tests are applied. For other vocational and technical schools no such examinations are required and students apply mainly because they do not have the academic or financial ability to pursue their studies in general secondary schools. Most parents and a good number of teachers think that studying in a vocational or technical school does not require particular aptitude and intelligence, so they transfer students who have repeated the same grade in academic secondary schools to technical schools.

c) Vocational and Technical schools are terminal. No mechanism has so far been devised to enable the graduates of such schools to pursue higher studies if they so desire. Even the least able individual does not feel content at remaining in the same occupation all his life. This is one of the many reasons why several young people are reluctant to join vocational and technical schools in Iran.

d) The holding power of vocational and technical schools is scant and the rate of dropout is very high. "Only 30 per cent of the entering students to vocational schools complete their studies. The dramatically poor completion rates appear to be affected by another major factor - the relative poverty of the students, the majority of whom cannot afford to remain in school for a three year period. Many leave as soon as some kind of employment opportunity presents itself."¹

Poverty alone cannot be held responsible for the high rate of dropout. There are other deficiencies which were identified and highlighted by a UNESCO Mission in 1960. According to the observations of the UNESCO Mission², a vast majority of vocational and technical teachers lacked experience in industry and had little knowledge of teaching methods. There was a serious shortage of textbooks, and the equipment was found to

¹Division of Economic Affairs, Manpower, Plan Organization, Op.cit., p. 45.

²Ibid., p. 44.

be of poor quality, ill-selected and in short supply. The curriculum was found to be unbalanced and bore little relationship to industrial requirements. All these factors plus the cultural patterns which give low status to manual work have led to a thin enrollment in vocational and technical schools in Iran.

CHAPTER VI

THE FUTURE PROSPECTS: THE NECESSITY OF REVISION IN EDUCATIONAL CURRICULA

What should the aim of education be in a changing society? A statement by L.J. Lebret goes as follows:

"There has always existed in humanity an aspiration for a better status which could be obtained through having more, knowing more, and being more or being of more value."¹

Before the age of technology "having more" was difficult to attain, and "knowing more" was limited to investigating and exploring the ideas of the past, and that much concern for the past obviously slackened the rate of progress. "Being more" was the specialty of the leading social strata to whom the ultimate values were embedded in the system of nobility and later on in that of the bourgeoisie. In reality "knowing more" and

¹Lebret, L.J., dynamique concrete du developpement, (Paris: Economie et Humanisme, Les Editions Ouvrieres, 1960), p. 33.

"being more" in the past depended, to a large extent, upon "having more" which in turn depended on hereditary lineage.

Although even today "having more" plays a big part in "knowing more" and "being more", this part is diminishing. Modern technology has drastically changed the conditions of production, and old relationships have collapsed in the majority of human societies.

"The problem of our time is to augment the production sufficiently enough so that finally the whole humanity, in the process of supply and demand, will be able to have more, know more, and be more."¹ In order to fulfill such a task the resources of a country should be utilized effectively. Most precious among resources available in any country are human beings. If adequately prepared, man can bring all physical resources under command and make use of them for the welfare and prosperity of all.

Here lies the vital role of education in all societies. If education in modern times fails

¹Ibid., p. 34.

to train people for a productive life, it will negate its raison d'etre and will turn into a tool for preserving the status quo.

A. Conceptions of the Function of the School and Curriculum:

Society's concept of the function of the school determines what kind of curriculum the school will have. As far as the curriculum of the Iranian secondary school is concerned two phenomena must be examined. On the one hand there are great needs for technology, on the other hand there are certain deep-seated cultural traditions which emphasize speculative and academic values. There is a clash between these two sets of values, and education must be called upon to reconcile between the two.

In either of these two approaches it is agreed that education must have aims. But beyond this point, differences crop out. "One of the first points of conflicts concerns whether educational aims should have a fixed, immutable quality or whether they should be flexible and

subject to continual reconstruction".¹ In Iran where rigid landlord-peasant relationships, more than twenty centuries old, have been seriously challenged, educational aims cannot remain fixed. The function of shaping and reshaping the culture will ultimately be accomplished, even in the face of resistance of traditional forces, but the rate of this process differs from one country to another. It is the contention of this writer that bringing this function to the attention of concerned people will have impact upon this rate.

Culture moves in time; new relationships, attitudes, and habits emerge, and old patterns prove to be impractical and are bound to merge into previous trends; what remains is the question of adjustment and readjustment to new needs and circumstances. Can education and curriculum stay neutral in this process of adjustment and readjustment? The answer to this question is certainly in the negative.

¹Brubacher, John S., Modern Philosophies of Education, (New York: The McGraw-Hill Company, Inc., 1962), p. 234.

In Iran an educated individual, regardless of his level of proficiency was, half a century ago, considered socially competent and economically productive. "By sole virtue of being educated, the individual was considered as productive as any member of any occupational grouping in the society. This was so because, regardless of other occupational responsibility, the primary role of the educated man in the division of labor was to preserve the cultural heritage, especially the 'sacred literature' of Iran by mere knowledge of that heritage and to carry out those duties which were associated with the preservation of that heritage."¹ But mastery of the Iranian cultural heritage alone removes neither individual needs nor social and economic needs in the modern times. Our time requires specific skills and knowledge; and an individual with complete mastery of the cultural heritage cannot eke out his bread unless he directs his knowledge into the productive channels of the society. From 1921, the time of

¹Jacobs, Norman, The Sociology of Development, Iran as an Asian Case Study, (New York: Frederick A. Praeger, Inc., Publishers, 1966), p. 153.

revision of the Iranian secondary school curriculum, to October 1965 the enrolment of primary schools rose by 60 times, of secondary schools by 55 times, and of universities by 480 times. With this rapid educational expansion 'the sole virtue of being educated' cannot provide the individual with a decent living.

Traditional Iranian education, which teaches people to read and write in general but to do nothing much in particular, must be replaced by a system which will prepare people for specific skills as well as give them some acquaintance with the cultural heritage. This is a tactful reconciliation or a compromise between the two approaches mentioned earlier, that is, cultural and social and economic approaches to the curriculum. This can give the Iranian curriculum modern attributes and at the same time guarantee cultural continuity.

The changes of the modern technological world have great impact upon all aspects of Iranian life. Mass media, transportation improvement, the expansion of education, and many other new things have created remarkable sophistication and

physical and psychic mobility among the people. The common man wants more education for his children, more health services, and more commodities. He is not satisfied with bare means of life as he used to fifty years ago. It is interesting to note that only forty years ago when a Persian pilgrim wanted to visit religious shrines in Iraq or visit the Kaaba, he would bid farewell to his relatives and write down his will as he had a faint hope to be able to return home and survive diseases and primitive means of transportation. But today nearly all of the Iranian metropolitan cities are connected with one another by regular air flights, and it takes one hour to go from Teheran to Baghdad, and two hours to go to Jedda.

New schools are built, new factories, hospitals, banks, shipping services, insurance companies, private enterprises are established year after year. The Plan Organization, relying on increasing oil revenues, regularly invests in agriculture, industry, and manpower development. Large amounts of loans are awarded to private enterprises to increase their level of production.

All these attempts and efforts show that the country is advancing toward modernization and industrialization. The people, too, are changing; their levels of aspirations are heightening at rates unprecedented in the Iranian history. What should the aim of education and the function of the curriculum be in such a rapidly changing environment? To adhere closely to the cultural heritage or to respond to the emerging needs of a changing society?

One may wonder whether educational development is possible without taking economic needs into consideration upon working out the curriculum. In order to establish schools, train teachers, and provide equipments funds are needed and such funds cannot be raised without economic productivity. Consequently education must provide technical personnel capable of activating the economy so that the economy may provide funds for educational development. Thus only proper interaction between the economy and education can guarantee the welfare of the society at large.

The following suggestions are based on

this assumption, that is, the interdependence of economy and education in a changing society.

B. Suggestions for the Revision of Educational Program, the Improvement of Secondary School Curriculum:

Secondary education is the backbone of social, economic, and administrative development. It produces government officials, teachers, technical personnel, sub-professionals, and university recruits. Any negligence in secondary education will, in the long run, affect both primary and university education. Such an emphasis on secondary education does not mean that primary education is not important. On the contrary, primary education is significant for two reasons, first modernization cannot be complete without a literate people, second the expansion of primary education, though important in itself, has a great impact upon secondary education.

Consequently the writer will focus his attention on the expansion of primary education, and the improvement of secondary curriculum.

Primary education has been successful in teaching the three R's and slight changes in its curriculum will make it able to produce the proper kind of population for secondary schools.

Before propounding the program of primary education and the curriculum of the secondary schools, the writer thinks it proper to say a few words about the educational structure in Iran, because this is connected with any suggestions pertaining to curriculum development and improvement.

"Article 19 of the Supplementary Constitutional Law provides for the institutions of schools at the expense of the State. It specifically puts all primary and secondary schools, colleges and universities under the general direction and supervision of the Ministry of Education whose main responsibilities are:

1. Proper expenditure of public funds.
2. Execution of laws pertaining to the promotion of education.
3. Preparation for and execution of compulsory primary education and promotion of second-

ary and higher education.

4. Organization and establishment of provincial departments and district offices of education.

5. Promotion and strengthening of education and cultural relations with other countries."¹

All matters concerning education throughout the country are planned, decided upon, and executed by the Ministry of Education; hence it is safe to say the system is highly centralized. Although since World War II many private schools have been established, they, too, form part of the system. Their principals are appointed by the Ministry. These principals are paid by the Ministry and it is their responsibility to see to it that all the governmental regulations and laws are executed properly.

The curriculum of the secondary school consists of the whole range of courses offered in a school. The type and the amount of courses and even the allocation of time for each course is determined and prescribed by the Ministry of Education. The curriculum is usually made upon the

¹Toussi, M.A., Op.cit., pp. 3 and 4.

recommendation of the Secondary Education Department in the Ministry. A special committee in that department is appointed to design the curriculum and submit it to the Research and Curriculum Department. A High Curriculum Committee in this department deliberates on all suggested curricula.

The final approval of any change in the curriculum is referred to the High Council of Education which is presided over by the Minister of Education. There are ten voting and ten honorary members in the Council, all of whom are appointed by the Minister for four years. Their appointment must obtain royal confirmation before being valid. Voting members of the Council consist of "a Moslem jurist, a principal of a secondary school, a chancellor of a university, a secondary school teacher, a university professor, and five members appointed from among the country's leading scholars and scientists."¹

No doubt the existing administrative organization is overcentralized and technically ineffi-

¹Ibid., p. 5.

cient. The Ministry of Education is entrusted with the supervision of all educational matters throughout the country. But what can be done? Many educational experts, including Overseas Consultants, have recommended a decentralized educational system for Iran.¹

Although such recommendations may seem attractive at first glance, this writer thinks they are not feasible at the present level of development of Iran. Most of the advocates of decentralization have the case of the United States and Britain in mind. The United States has had a system of local government since its emergence as an independent country in 1776, and Britain has a long tradition of local government, so it is natural that these two countries possess decentralized systems of education. But in Iran, with no previous experience of local government, there is no guarantee that a decentralized system of education will work. The case of Japan in post-World War II years may be offered in support of the above statement. After the War Japan,

¹Overseas Consultants, Op.cit., p. 133.

influenced by the United States Education Mission in 1948, decentralized its educational administration by creating school boards. The system of elected local school boards did not work as well as expected. "Obviously, superimposing a foreign school plan on another culture without taking into consideration the peculiarities of that culture does not solve existing problems; in many cases, it creates new and more serious social conflicts and dislocations."¹

Furthermore, any change in the organizational framework of education depends, to a large extent, on the general political development in the country.

C. Conclusions and Recommendations:

Within the context of the existing state of affairs the following steps for the improvement of the secondary school curriculum can be taken.

¹Kazamias, Andreas M. and Massialas, Byron G., Tradition and Change in Education, A Comparative Study, (Englewood Cliffs: N.J., Prentice-Hall, Inc., 1965), pp. 91 and 92.

1. The High Council of Education with its present composition does not represent all social forces. In the absence of the representatives of the Chamber of Commerce, the National Iranian Oil Company, the Plan Organization, professional and labor unions, major industries, and important private enterprises, curriculum improvement can only be partial. Representatives of the above mentioned organizations must be represented on curriculum boards and they should be chosen from among people who possess first-hand knowledge about the shortage of skilled manpower. With the cooperation of conventional members and the new recruits, a permanent committee for curriculum evaluation and revision should be established. The main job of this committee would be to collect data through visiting factories, government and private offices, schools, agricultural enterprises, and other establishments. Then on the basis of such data, the committee should be able to identify problems, estimate shortages, and relate these to curriculum improvement.

Such a committee should also have the responsibility of investigating the underlying

reasons of school shortcomings and deficiencies and their impact on the shortage of technical personnel. It may prove advisable to have representatives of student councils on this committee to represent half a million secondary school students.

Without waiting for the findings of such a committee and on the basis of what came earlier in this study the following recommendations can be made:

2. The secondary school curriculum should be revised in such a way as to incorporate more fully vocational and technical education; time allotted for academic subjects may be reduced in favor of practical subjects.

As some cultural values and the image of education as providing white collar or desk jobs are handicaps to this purpose, a system of comprehensive high schools with elective courses seems to be highly desirable.

In such a school each student will have both general and specialized courses. General courses will transmit cultural heritage and values,

and specialized courses will serve individual abilities, interests, and purposes. A comprehensive system of high schools may have several advantages. First, it may solve, to a large extent, the unpopularity of vocational and technical education. The common attitude among most Iranian secondary school students and their parents is that the academic secondary school is the apex or the crown of secondary school system, as it produces leaders. If this was true in the past, it is not true at present. The separation of various secondary schools may have fostered this attitude. Second, students exposed to manual productive work and dignity of manual dexterity, may form a positive attitude toward it in the course of time. Third, vocational and technical students will have access to general education and be able to pursue their studies at the university, whereas now most vocational and technical schools are terminal. Few students and parents are interested in a program which seems to be a blind alley, blocking the hope of further advancement. Fourth, at present the vocational and technical schools are underpopulated and this obviously increases

cost per student, while in a comprehensive school vocational students can sit side by side with academic students for general courses and academic students can sit with vocational students for specialized courses. Thus a good deal of the budget can be released and devoted to the general improvement of the school.

This recommendation cannot be fulfilled in one or two years, but, in the long run, it may alleviate the burden of the uncontrollable expansion of the academic secondary education.

3. The necessity of a vocational guidance program was first expressed by the Overseas Consultants in 1949. In 1958 in the Meshed Conference of Education some decisions in this respect were made. But on the whole a modern system of guidance has not been established as yet.

At present some of the large industrial firms have a recruitment office whose staff travels around the country each year, interviews students, and explains to them something of the professional or trade requirements for positions in their industries. This is a costly business

and limited in scope;

A modern guidance program has many objectives two of which are paramount, "Informing students about employment possibilities so that their interest is awakened and they are guided into positions for which they are fitted by temperament and ability; and correcting student difficulties, primarily in social orientation, so that a high percentage of potentially good material which otherwise might be rejected and wasted is in fact salvaged."¹

Many young students rush and stick to the academic secondary school because they are not aware of the employment value of their academic diploma. After completing their secondary education and failing the university entrance examination, they become disillusioned and find out that their diploma is of little worth for finding employment. For the majority of secondary school graduates the University of Teheran, with its tall iron railings, becomes the subject of nightmare and daydreaming. Many of them do not really know

¹Overseas Consultants, Op.cit., p. 115.

what job opportunities have become available in the country owing to recent economic development.

A guidance program can be of great help to these students; it can span a bridge between the individual aspirations and social needs, make the individual understand his possibilities and limitations, and avoid later frustration after experiencing failure.

4. Building incentives is another way of directing talents and abilities into useful channels.

In Iran the high-prestige occupations are not usually those most critically needed for social and economic development. As Harbison puts it, "Landlords, lawyers, government officials, owners of large family enterprises and often military leaders enjoy both high status and political power. They are the elites. And access to their ranks is likely to depend largely upon political and family connections rather than demonstrated competence or high intellectual ability."¹

¹Harbison and Myers, Op.cit., p. 92.

the
Although in Iran landlords, owing to/Land Reform of 1963, are fast disappearing from the rank of elites, the allocation of incentives is far from being appropriate. First, some deep-seated cultural values attach high prestige to desk jobs, and second, the relative insecurity of private professions and low emoluments of sub-professional jobs are at the roots of this phenomenon. The feeling of insecurity stems from the fact that the government has always been the greatest employer, thus even those who can successfully conduct their private businesses, try to obtain some sort of government positions first for social prestige, second for protecting their private enterprises.

The status of engineers and scientists engaged in productive activities pertaining to their field of specialization is lower than that of their counterparts who have secured government positions. The status of technicians, agricultural assistants, nurses, school teachers, and other sub-professional groups is even lower, because their salary is low and they have little opportunity to rise to the professional ranks.

This wide gulf between the status of professionals and sub-professionals must be narrowed down if demand for technical jobs and teaching is to be encouraged.

Engineers, technicians, and teachers who work in remote villages must receive more salary and allowances than their counterparts who choose to remain in metropolitan cities and enjoy the advantages of urban life.

For attracting students to vocational and technical schools proper incentives must be given. "Able students will be attracted to the profession only when they can be offered a high financial return for their services upon graduation, good living conditions, and a high degree of future security."¹

Technicians and laboratory assistants are now at the mercy of their managers, and even damage and injury caused by their profession are hardly compensated by their employers. Thus many young technicians, especially in government departments, take part in the university entrance

¹Overseas Consultants, Op.cit., p. 129.

examination year after year in order to rise to the rank of professionals and enjoy more security.

The same attitude can be detected among most male primary school teachers who do their utmost to leave the profession which has failed to provide them with a decent living and hope for promotion.

Another major handicap to building incentives is the undue importance attached to a degree regardless of the proficiency of its holder. "It is the certified level of exposure that is of primary importance in determining how one's education will be evaluated. And by extension it is the degree and not the subject-matter or efficiency of one's performance that makes or breaks one's career."¹

Thus the student cannot be blamed for his strivings to obtain a diploma or a degree, even though he may not acquire skills for job performance.

Credit should be given to those who can

¹Jacobs, Norman, Op.cit., pp. 157 and 158.

practically command the requirements of a job, not to those who are supposed to do so but actually cannot.

5. The expansion of primary education has received a great deal of attention in recent years. Traditionally, the primary school has concerned itself with the fundamental three R's, and has been relatively successful in doing so. But the purposes of primary education should be broadened so as to meet the needs of modern times. Reading must not be taught as memorizing of words and sentences. The skill of getting ideas must be developed. Language must be considered as a tool for interpreting the present and exploring the past. Arithmetic is useful when it leads to practical computations of everyday life concerns. Arts and handicrafts which, at present, exist nominally in the curriculum should create and foster positive attitudes toward manual work. The dignity of manual work can be grasped by the child when he uses his hands in making something. This is of prime importance in early childhood, then when the child leaves the primary school and

joins a secondary school, he will not be reluctant to engage in a manual vocation or study at a vocational or technical school. Such an emphasis on manual work may ultimately change the common attitude in most developing countries where most educated persons are reluctant to make their hands dirty in putting them to use.

The major contributions of elementary education to social life in developing countries were described by the Karachi Plan for Extension of Primary Education¹ as follows:

- a. as a purveyor of the basic concepts of progress and rationality.
- b. in awakening aspirations
- c. in discovering latent talents
- d. in reducing social dualism
- e. by creating a literate electorate
- f. in improving consumption patterns

In 1961, the UNESCO submitted a twenty-

¹Frutschi, M.C.A., (ed.), Human Resources and Economic Development, (California: Stanford Research Institute, 1963), p. 11, quoted from "The UNESCO Conference of Ministers of Education of Asian Member States, Tokyo, 1962."

year educational plan to the Ministry of Education which will provide education for every Iranian child of school age by 1982, and the Ministry has approved this plan. However, owing to the shortage of teachers and funds, this plan has been more or less forgotten. The lack of cooperation between the Ministry of Education and the Plan Organization has also caused the plan to fall into oblivion. If the UNESCO plan for the extension of primary education seems too ambitious, the target year may be extended in the light of existing resources and future possibilities; but the target year must be stated explicitly so that planning for teacher training and school building may be possible.

6. The necessity of a harmonized educational planning seems far from being universally recognized in Iran. The Plan Organization, under the pressure of human resource requirements, makes plans to meet the shortages of technical skills; and these plans are often short-range, covering seven or five years. But educational planning cannot be much effective in such short periods.

Hence the establishment of a comprehensive planning body is highly desirable. In such a body the representatives of economic sectors and educational institutions may share common experiences and needs, thus humanitarian values of education may not be sacrificed to immediate economic needs, and economic value of education may not be overlooked in favor of unrealistic aspirations.

Fortunately there are signs that general awareness of the necessity for educational revision and planning is increasing in Iran. The establishment of the National Commission of Education in 1965 is one of these heartening factors. The Commission has set six objectives for the new system of education as follows:¹

a) Social Objective. To extend the equal educational opportunities to every man and woman in the nation.

b) Economic Objective. To train the needed technical and professional manpower required for a progressive industrial revolution of the

¹Toussi, M.A., Op.cit., pp. 35-36.

nation.

c) Political Objective. To educate the citizens of Iran for active and effective participation in the social and political life of the country.

d) Cultural Objective. To cultivate the aesthetic talents of the citizens in order to enable them to enrich the cultural heritage of the nation.

e) Physical Development Objective. To train and develop the body and ensure the physical health and vigor of the nation.

f) Moral and Spiritual Objective. To create a positive social philosophy in harmony with the essence of 1963 revolution.

In order to achieve the stated objectives a set of twenty principles have been proposed, most of which are in line with modern philosophy and current needs of Iran such as equal educational opportunities, objective evaluation, considering local and individual needs, tailoring the educational programs according to economic and

social needs, emphasis on vocational and technical education etc.

Concluding Statement:

After discussing the educational development in Iran, its cultural, social, and economic development, and the points of weakness in its educational system, this writer has reached the conclusion that the future of Iran depends, to a large extent, on its efforts in human resource development and modernization of education.

The key to social and economic development is man himself. It is an error to consider that most underdeveloped countries are endowed with meagre natural resources. The important reason of underdevelopment lies in the realm of the human resources and the social institutions which restrict man's freedom and use of skills. When man is properly educated he will make best use of his resources no matter how limited, otherwise he may have to suffer in the midst of natural abundance as in the case of many African and Asian countries. It is the duty of education to provide needed skills and foster attitudes for

change toward betterment in all walks of life.

Iran is rich as regards natural resources, and its people have broken the chains of feudal relationships and ignorance. Its education is expanding rapidly. It remains only to direct talents into productive channels in order to ensure the prosperity, welfare, and happiness of its coming generations.

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