An Exploratory Study of the Role of Armed Forces in Education: Iran, Israel, Peru, and Turkey

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FOREWORD

Inadequate numbers of technically skilled personnel and substantial population elements that are poorly educated and often also socially unintegrated frequently handicap developing nations in their efforts to raise economic standards and to ensure political and social stability. The armed forces of an underdeveloped country often represent one of the few available elements that possess technical and administrative skills and an organizational structure that can assist in the national development process. Various governments have therefore drawn their armed forces into educational efforts with a broader scope than the meeting of military needs alone. Such programs have not been limited to underdeveloped nations. Many nations with advanced economies have also embarked on programs to prepare servicemen on active duty for gainful occupations on return to civilian life. These programs conducted by the armed forces often provide vocational training and basic education.

This paper is a limited exploratory study of the educational programs of the armed forces of Iran, Israel, Peru, and Turkey. The purpose of the study is to determine the potential of armed forces in such roles and programs and to provide, if possible, courses of actions that will assist in improving US advisory and military assistance programs.

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An Exploratory Study of the Role of Armed Forces in Education: Iran, Israel, Peru, and Turkey

ABBREVIATIONS

AID	Agency for International Development
ICA	International Cooperation Agency
JUSMMAT	Joint US Military Mission for Aid to Turkey
MAAG	Military Assistance Advisory Group
MAP	Military Assistance Program

ABSTRACT

This is an exploratory study of the educational programs of the armed forces of Iran, Israel, Peru, and Turkey based on public data available in the Washington, D. C., area. The study is concerned primarily with programs designed to raise literacy and basic education levels, teach nonmilitary vocational skills, and further national identity. The armed forces educational programs in each country are examined with reference to their relations to other national manpower programs, the scope and methods of instruction, and their general social, economic, and political effects.

On the basis of a comparative analysis, it is tentatively concluded that the armed forces in developing countries do represent a potentially effective medium for raising educational levels and skills and for furthering national identification and social integration. For maximum effectiveness, such programs must be coordinated with and integrated into the national development plans and programs and must operate to supplement the civilian educational system. Further, methods of instruction now in use need further study. Future research needs are outlined, particularly in regard to increasing the effectiveness of indigenous armed forces educational programs.

Chapter 1

INTRODUCTION

PURPOSE

To identify and analyze the role and programs of indigenous armed forces of selected countries in education and manpower development. The purpose of the analysis is to determine the potential of armed forces in such roles and programs and courses of action to improve the conduct of such programs.

SCOPE

This is an exploratory study of the education programs of the armed forces of Iran, Israel, Peru, and Turkey. The research for the study was limited to data sources available in the Washington, D. C., metropolitan area.

The armed forces education programs of each country are examined with reference to their relation to other in-country manpower programs; their scope and methods of instruction; and their general social, economic, and political effects. This paper is concerned with education programs that are aimed at imparting skills and knowledge for use after completion of military service. Education programs intended primarily to develop skills to meet military needs are not examined, although it is recognized that many of these skills are readily usable in civilian pursuits.

BACKGROUND

During the past 5 years, US programs for military assistance to other countries have placed emphasis on training and civic action. Included within the area of civic action are programs for reducing illiteracy and raising the levels of basic education achievements. These programs are a recognition that among the major constraints on the economic development of many nations are illiteracy and the scarcity of skilled craftsmen, technicians, and managerial personnel. Social development in these countries is frequently handicapped by a general lack of social integration and national identification. In recent years an increasing number of underdeveloped countries, with US urging, have used their armed forces for assistance with these problems. However, the few

publications bearing on the subject are mostly limited to brief descriptions of the armed forces programs.*

The armed forces bring together large numbers of a country's young and potentially productive men and (in some instances) women. In most underdeveloped countries the national service period is the only time when many individuals, particularly those in rural areas, are in direct and continuous contact with organs of the central government. Under these conditions the military service period appears to offer an opportunity for the development of a sense of national identification and social integration. Beyond this, the high degree of institutional discipline that in many countries is unique to the military and the experience of permanent military personnel as leaders and technicians make the armed forces a vehicle for modernizing the society by breaking down traditional attitudes and improving the literacy and technical skills of those who have not previously received an adequate education.

SELECTED CASES

This study seeks to assess the effectiveness of the armed forces program of Iran, Israel, Peru, and Turkey as supplements to civilian programs in the reduction of illiteracy, the creation of job skills, and the development of national identification. These countries were selected for several reasons. All four countries are currently handicapped by a lack of qualified teachers, particularly in rural areas. Each country has used its armed forces, albeit in a different manner, to assist in coping with the problem and its consequences. Israel and Turkey are among the few countries that practice universal conscription and actually induct more than 80 percent of the eligible age group. Iran and Peru, like most countries, rely on conscription for their armed forces but induct less than 50 percent of the eligible age group. Another factor in the selection of the four countries was the ready availability of data.

In the four case studies, emphasis is placed on the content and organization of the armed forces educational programs, their relation to national educational needs, and the coordination of military and civilian programs. Where the data permit, costs and implications of the military-operated educational programs on the role of the armed forces in the national political system are also considered. In the concluding chapter the military programs studied are compared and evaluated and detailed conclusions are presented.

*See David F. Gates, "An Annotated Bibliography of Materials on the Role of Armed Forces in National Development," RAC-TP-249, Research Analysis Corporation, Jan 67.

Chapter 2

IRAN

NATIONAL BACKGROUND

Economy

The economy of Iran is basically agrarian. Agriculture directly engages 60 percent of the population and accounts for 40 to 45 percent of the gross national product, estimated at $5 billion ($220 per capita) in 1964.[1,2] Oil production is the most important nonagricultural activity and contributes 10 to 15 percent of the gross national product. Industrial production has increased since WWII, and the industrial base is expected to expand under the stimulus of a governmental 15-year development plan started in 1961.[3]

Population

Current population statistics are not available. Table 1 summarizes the results of the most recent census, which was taken in 1956.[1] It has been estimated that the 1956 population of almost 19 million had increased to about 24 million by 1966.[4]

TABLE 1

1956 Population of Iran, by Age Group and Sex[1]

Age group	Males	Females	Total
0–14	4,077,562	3,915,604	7,993,166
15–24	1,409,389	1,508,310	2,917,699
25–44	2,497,660	2,353,987	4,851,647
45–64	1,265,463	1,168,058	2,433,521
65+	392,079	359,524	751,603
Unreported	2,791	4,277	7,068
Total	9,644,944	9,309,760	18,954,704

It is significant that more than 42 percent of the population was under 15 years of age. If an annual population growth rate of 2.5 percent since 1956 is assumed, the percentage of those less than 15 years of age must now be even greater.[2]

The three major elements in the population of Iran are groups who speak one of the Indo-Iranian languages, those who speak one of the Turkic languages, and the Arabs. Minor elements in the population are the few Armenians, Jews, and non-Muslim Assyrians.[1]

Those who speak one of the several Indo-Iranian languages are considered to be Iranians and number about two-thirds of the total population. About 10 million speak modern Persian (Farsi) or one of its numerous dialects. Most of these people live in the villages and urban areas of the central Iranian plateau. Other major Iranian groups include the Kurds, the Lurs, the Bakhtiari, and the Baluchi. These groups are tribal and live in the mountains surrounding the Iranian plateau.[1]

The Turkic-language-speaking groups are concentrated in northwestern Iran and form the majority in the province of Azerbaijan. They are also found in northeastern Iran where they are mixed with Persians, Kurds, and Arabs. In the Khurasan and southwestern areas of Iran the nomadic, the Qashqai, and Afshar tribes form enclaves of Turkic-language speakers in predominantly Persian areas. Except for the Azerbaijani, most of the Turkic-language-speaking groups are tribal and nomadic.[1]

The population strength of the Arabs is not well established. Estimates of their number vary from 400,000 to 800,000. The Iranian government statistics consistently hold to the low figures. The Arab population is concentrated primarily along the coastal plains of the Persian Gulf and the wastelands of the eastern plateau region. For the most part the Arabs are tribal and nomadic, but some have adopted a village-oriented life based on farming and fishing. There is little sense of ethnic unity among the Arabs, and they mingle freely with their non-Arab neighbors. They have shown little loyalty to Iran and have closer, though still very loose, ties to the Iraqi and other Arabs across the Persian Gulf.[1]

Most of the Turkic-language-speaking groups have learned to understand Farsi, the official language, but have not been assimilated into the dominant Persian culture. Within both the Iranian- and Turkic-language groups, elements such as the Kurds, the Qashqai, and the Baluchi have attempted at times to break away politically from Iran. Less extreme examples of anti-Iranian feeling on the part of other elements of the population are not uncommon. Regional, village, and tribal loyalties are frequently stronger than national ties.[1] Religion is not a strong binding factor. Ethnic, political, and cultural differences are strong divisive factors even though 98 percent of the population are Muslims and 93 percent adhere to the Shiite sect, the official religion.[5]

A critical and increasing shortage in professional, technical, and skilled labor was indicated by a manpower survey of Iran conducted in 1959 by the Iranian Plan Organization, a government agency, with the technical assistance of the Governmental Affairs Institute of Washington, D. C. The survey indicated that by 1963 Iran would need at least an additional 2400 engineers, 2000 doctors, 4300 nurses, 1300 medical technicians, 1800 accountants, 1500 college instructors and scientists, and 8400 teachers. It was estimated that Iranian and foreign institutions would supply only 10,600 of the 25,000 professional and technical personnel needed by 1963. It was further estimated that only about 400 of the 4300 additional nurses required would be available in 1963. This manpower shortage continues, and yet most graduates of the Iranian universities

are trained in law and the humanities, specialties that are not now in short supply in Iran.[1]

Education

Iran is faced with the problems of educating its youth, increasing the number and quality of skilled technical population, and raising adult literacy and skill levels. Until these problems are adequately met, success of the national land and industrialization programs is questionable.

In 1966 only 52 percent of all school-age children were attending school, and only 27 percent of those in rural areas were in attendance.[6] According to studies conducted by the Iranian government and UNESCO, it is estimated that about 75 percent of the population over age 25 are illiterate.[7] The standard of literacy is normally considered to be the ability to read and write, but according to Iranian government standards the ability to write one's name is frequently considered evidence of literacy. Table 2 shows the latest information available on illiteracy in Iran.

TABLE 2

1956 Percentage of Illiteracy in Iran, by Age Group and Sex[7]

(Rounded to nearest whole number)

Age group	Males	Females	Total
10–14	64	81	72
15–19	68	87	78
20–24	75	93	84
25–34	79	94	87
35–44	82	96	89
45–54	85	98	91
55–64	87	98	93
65 +	91	99	95

Another indication of illiteracy and educational needs is the number of school years and school programs completed. In 1956, 94.2 percent of the adult population of 8,010,000 had less than a primary-school education; 4.7 percent had completed only primary school; 1 percent had completed secondary school; and less than 1 percent had gone beyond secondary school.[7] There is no evidence of any significant changes in these statistics since 1956.

NATIONAL EDUCATION PROGRAM

Organization

The responsibility for education in Iran is centered in the Ministry of Education. The Minister of Education is nominated by the Prime Minister and appointed by the Shah.[8]

Within the framework of the constitution of the Ministry of Education, the administrative law, and other formal regulations, the Ministry of Education controls all aspects of education and operates most of the government schools, including the Iranian religious schools.[8] Other ministries are authorized to establish schools to provide training in their fields of interest, provided the curriculum is approved by the Ministry of Education.

At present the major civilian educational programs are as follows:

(a) Preprimary
(b) Primary
(c) Secondary
(d) Vocational and technical
(e) Teacher training
(f) Higher education
(g) Adult education

Table 3 shows the number of students enrolled in the various programs in the 1964–1965 school year and the changes from the previous year (Ref 9, pp 174–76).

TABLE 3

Comparison of 1964–1965 and Previous Year's Enrollment in Iran, by Type of School[9]

School	1964–1965 enrollment	Change from previous year	
		Number	Percent
Preprimary	14,192	- 378	- 2.6
Primary	2,056,927	+ 220,371	+ 12.0
Secondary	426,357	+ 58,231	+ 15.8
Vocational and technical	11,091	+ 2,676	+ 29.0
Teacher training	4,175	+ 1,852	+ 79.7
Higher education	24,720	+ 317	+ 1.3

Preprimary

Most preprimary education is in private hands. However, the private schools are supervised by the governmental Higher Council of National Education. Preprimary education usually is for children between the ages of 3 and 6.[10]

Primary Education

Primary education is divided into two programs, rural and urban. The rural primary-education program consists of six grades covering 6 years. Both programs are free and compulsory, starting with children at age seven.[10]

After the third year, in both programs, national examinations are given at the end of each term. At the end of the sixth year in the urban program a national examination is given for a primary-school completion certificate.[10]

Private primary schools follow the same curricula and use the same textbooks as the public elementary schools.[10]

Despite the emphasis on primary education and substantial progress in recent years, the major deficiency is lack of full participation in the program. In 1966 only about 52 percent of children between the ages of 7 and 13 were receiving primary education, and only 27 percent of those eligible in rural areas were in attendance.[5] The difference between the two areas has a divisive influence because of the predominance of the Iranian ethnic groups in urban areas and the predominance of the Turkic and Arab groups in the rural areas.

The available statistics show that boys constitute two-thirds of all primary-school students.[1] This probably reflects the traditional Muslim belief in the unimportance of education for women.

One of the long-range goals of the Iranian government's Third Development Plan is to provide universal primary education. The short-range goal is to raise primary-school enrollment to 60 percent of the 7-to-13 age group.[1,3] The attainment of this goal will require a substantial increase in the number of available teachers.

Secondary-School Education

Secondary-school education covers 6 years in two cycles of 3 years each. The curriculum in the first 3 years is the same for all students. In the second cycle, students major in such branches as literature, mathematics, physical science, business, home economics (restricted to women), agriculture, and industry. Students take national government examinations on completion of the fifth and sixth years of study. Those planning to enter institutions of higher learning are required to complete the sixth year of secondary school and pass the sixth-year completion examinations prescribed by the Ministry of Education.[10]

The low rate of participation in formal education programs is even more pronounced at the secondary-school level than at the primary-school level. In 1956, the year of most recent statistics on secondary-school attendance, only 10 percent of the 13-to-18 age group attended secondary schools. This group included 32 percent of those eligible in urban areas and only 1 percent of those eligible in rural areas. In 1962 only one-fourth of the 300,000 secondary-school students were girls.[1]

Vocational and Technical Education

Secondary technical schools provide vocational education at two levels. One program of 6 years is open to students who have completed the 6-year elementary course. This program specializes in mechanical, electrical, and other technical trades. Another program of 2 years provides training in metal work, construction, carpentry, weaving, dyeing, tailoring, nursing, and agriculture. This second program is open to students who have completed only the first 3 years of secondary education.[10]

In 1962 there were 27 general vocational schools, 25 technical schools, about 15 agricultural schools, and several commercial schools. However, enrollment in these schools was only about 4 percent of the total enrollment in secondary education.[1] The traditionally low social prestige accorded to labor in Iran has kept down attendance at vocational and technical schools despite the national need for skilled labor and technicians. Secondary-school students prefer to take the risks involved in competing for admission to

higher-education institutes, whose capacity is limited, or for the small number of government posts open to them.

The Iranian government has reacted to this problem by increasing the number of vocational and agricultural programs and by imposing tuition fees for secondary schools.[3] The efficacy of these measures has not been determined.

Teacher Training

Teacher-training schools admit students who have completed the first 3 years of secondary education. After completion of a 2-year program they are qualified as primary-school teachers. A 1-year training program for those who have completed 6 years of secondary education has recently been started and is expected to be expanded on a nationwide basis. The curriculum for all primary-education teachers includes work in general subjects (especially those to be taught in elementary schools), professional subjects, and practice teaching.[10]

The National Teacher's College is the principal institution for training secondary-school teachers. This institution offers a 3-year program for graduates of the 6-year secondary-school program.[10]

Higher Education

Education at the college level is provided at the Universities of Tehran, Tabriz, Shiraz, Isfahan, and Meshed and at a number of institutes and colleges.[3] Admission is based on the 6-year secondary-school completion certificate and an entrance examination.[10]

Adult Education

The civilian education programs for adults are primarily devoted to reducing illiteracy. There are two distinct programs: one aimed at urban groups and the other at rural groups, with the urban program apparently the most developed. In the urban literacy program, adults attend evening classes that are taught by professional teachers or by men and women who have completed secondary school. Most of the teachers and two-thirds of the students are women. Classes are segregated according to sex.

Teachers are paid according to the number of pupils who pass the state-administered examinations. The aim of the program is to bring illiterates up to a second-grade educational level in 1 year and to a fourth-grade level in reading and writing in 2 years.[11]

The rural program is aimed at working youths and adults and is carried out through a system of village schools. The program emphasizes reading and writing, practical ways of improving village life, and the concept of "self-help through group effort." The schools are staffed with teachers who are from rural areas whenever possible and who have had special training in village problems and in teaching adults.[1] No civilian educational programs are specifically designed to foster social integration of the different ethnic groups.

Few detailed statistics about enrollment, number of teachers, costs, and effectiveness are available, for either the urban or rural programs and these few are considered unreliable. Enrollment figures are believed to be inflated, and attendance is probably more irregular than the available statistics would indicate.

EDUCATIONAL PROGRAMS IN THE ARMED FORCES

Background

The Imperial Iranian Armed Forces, with a strength of about 180,000 (1965), consist of a 164,000-man Army, a 10,000-man Air Force, and a 6000-man Navy (see Ref 12, p 28). In addition there is a 26,000-man militarized national police force called the Imperial Iranian Gendarmerie.[1] This force is subordinate to the Minister of Interior in peacetime and becomes part of the armed forces in wartime.

The armed forces have the normal role of protecting the nation's borders and of preserving or restoring order in the event of serious internal disturbances. The Shah is Commander in Chief and exercises control through a Chief, Supreme Commander's Staff, who coordinates the activities of the three major services. A civilian Minister of War, who is not in the chain of command, represents the armed forces before the Majlis (National Assembly) in matters of finance and administration.[1]

The Iranian armed forces, particularly the Army, have played a significant role in national politics. Under Reza Shah (1926–1941) the government was a military dictatorship. The Minister of War was completely dominated by the Shah, and the budget for the armed forces was funded before consideration was given to the budget requests of the other ministries. Promotions within the armed forces were controlled by the Shah, who used this power to ensure the loyalty of the armed forces. During the rule of Reza Shah the Army was hated and feared by most of the population.[1]

Under the present Shah, Reza Mohammed Pahlavi, the government has been reorganized and is no longer a military dictatorship in the strictest sense of the term. However, the Shah as Commander in Chief retains control over military promotions and over the armed forces. The Ministry of War is always headed by a close friend of the Shah. Although the military elite cannot be identified with any political party or group, the senior generals wield considerable influence, both individually and in cliques. They are usually members of influential families and are well connected with members of the Majlis and the Cabinet. The Shah usually consults with the senior generals before making important policy decisions and appointments.[1]

The current political and social reforms centering on the land-reform program instituted by the Shah may be broadening his base of popular support.[1,3] However, the armed forces are used to carry out this reform program and to counter the considerable conservative elitist resistance to the program. The full effects of the reform program on the role of the armed forces in national politics are still undetermined.

Conscription Policies

The armed forces are made up mostly of conscripts. Conscription laws require all males to serve 2 years beginning at age 21. Draftees are selected periodically by lot. Less than half of those eligible are conscripted because the number of men available exceeds military requirements. Those who are not conscripted in three successive drafts after becoming eligible are exempted permanently from any military service. Permanent or temporary exemptions

are provided for the physically disabled, for hardship cases, and for students training for certain needed professions.[1]

Until recently, graduates of secondary school were exempted from military service on payment of a tax equivalent to about $70.[6] The rationale was that graduates of secondary schools should serve as officers and that the Army's need for officers was limited. With the emergence of the literacy program (described later) this practice has ceased, and secondary-school graduates are now conscripted for 18 instead of 24 months.[11]

Social Structure

The armed forces of Iran are characterized by well-developed class differentiations. The regular officers are primarily Iranian from upper-class families, with a few from the educated middle class. Promotions are made on the basis of time in grade, completion of prescribed schools, and military assignment. The Shah personally approves each promotion to general-officer rank and approves recommended lists for promotion to lesser grades. The elimination of officers on grounds of inefficiency is virtually unknown. Officers found disloyal to the Shah or guilty of subversion can be removed by a simple royal decree.[1]

Career noncommissioned officers come largely from the urban middle-class bazaar group. They enjoy a position of comparative prestige with considerable authority over enlisted men.[1]

Conscripts tend to be from the lower class and to be less well-educated than the other groups.[1] Information on the regional or ethnic composition of the conscript group is not available at the present time. It can be assumed that it is a more ethnically diverse group than the officers. Enlisted promotions are made on the basis of efficiency and length of time in grade. The available information indicates that the opportunities for movement from enlisted or noncommissioned ranks to officer status are very small.

Armed Forces Educational Programs

The educational programs of the Imperial Iranian Armed Forces consist of education of troops and the use of military personnel in civilian education programs. The education for troops covers language and literacy instruction and vocational training.

Language and Literacy Training. Under current regulations all conscripts are theoretically required to be able to read and write Farsi, the national language, before being discharged. Conscripts who lack the ability to read and write are apparently placed in a training program that consists of instruction for 1 hr a day, 4 days a week. The program is supposedly coordinated with the Ministry of Education and is designed to enable conscripts to earn an adult 2-year training certificate.[13] This certificate is believed to correspond to the second-grade equivalency rating achieved in 1 year by adults in the civilian urban literacy program.

The Iranian Army reports that 50,000 to 70,000 soldiers complete this program and receive their certificates each year.[13] This figure seems inflated in view of the Army strength of 164,000 and the 2-year term of service. If it is accurate, the 70,000 figure implies that nearly all conscripted soldiers require and successfully complete the program.

Vocational Training. The vocational-training program initiated in 1961 is designed to train conscripts during the last 3 months of their active service in one of the following: welding, carpentry, plumbing, leathercraft, electricity, metal working, tailoring, mechanics, and shoe repair.[14] Vocational-training schools—there were six in 1964—train 3600 men annually. It is planned to expand the program to 12 schools capable of graduating 7200 men annually.[13]

Vocational-training instructors, who in 1964 numbered 175,[15] are regular army sergeants who have attended special training school in Tehran.

The program has been financed through a joint effort of the Iranian Army and the Iranian Plan Organization, the US Military Assistance Program (MAP), and the US Agency for International Development (AID) program. The Iranian Army support included land, buildings, facilities, and general financing. The Iranian Plan Organization has contributed the equivalent of about $1,040,000 each year during FY62–FY64. MAP support amounted to $900,000 in FY62; AID spent $200,000 in FY61 and furnished technical assistance from the start of the program to 1966.[1,16] The program is now financed entirely by the Iranian Army.

Civilian Educational Program. The major educational effort of the Imperial Iranian Armed Forces has been in the area of civilian education. This effort is part of the extensive, national civic-action program, which also involves the armed forces in engineering, sanitation, agriculture, communications, and transportation. The national civic-action program is coordinated by a series of committees including a permanent committee at ministerial level, an executive committee of agency representatives to plan and direct specific projects, and field subcommittees to carry out specific projects. These committees are made up of representatives of the armed forces and civilian agencies.[17]

In the area of civilian education the armed forces have been directed to "cooperate with province Education Departments" in the following areas:[17]

(a) Assistance in furnishing training facilities such as books and stationery.

(b) Detailing of officers and noncommissioned officers as teachers in literacy courses.

(c) Cooperation with the Literacy Corps to improve training and culture.

To carry out these directives the armed forces draft all eligible high-school graduates and, except for the few needed for the officers' corps, train them as teachers for rural areas. Conscripts assigned to be rural teachers undergo 3 months of preparatory educational and military training in what is called the Literacy Corps. Of the total of 708 hr of training, 372 are in military subjects and the remainder are related to the duties of teachers. The educational training consists of 196 hr of "main training subjects" and 140 hr of "supplementary" subjects. The subjects and hours are shown in Table 4.[18]

The Literacy Corps graduate is given the rank of sergeant and assigned for 14 months, where possible, to a village in his home area. This practice is actually seldom followed since most high-school graduates are from urban areas. Those who fail the course are reassigned as privates to regular military service.

Currently, 21 schools are established or planned for the training of Literacy Corps personnel.[19] The Army provides the physical facilities, individual equipment, and supervisors and a research center to study the operation of the program.[19,20] Other requirements are provided by the Ministry of Education.

The cost of the program to the Ministry of Education was $620,000 in FY63 and $1,310,000 in FY64.[21] The US Military Assistance Advisory Group (MAAG) assisted with advice. Between 1963 and 1966, 23,487 completed the Literacy Corps program and were sent to rural villages.[22] The announced goal is 15,000 graduates annually.[19]

TABLE 4

Literacy Corps Curriculum, Nonmilitary Subjects[18]

Subject	Hours
Main training[a]	
Farsi	42
Mathematics	28
Physical science	28
Social science	28
Religion	14
Culture	23
Psychology	33
Total	196
Supplementary	
Agricultural and vocational training	32
First aid and rural sanitation	32
Rural economy	32
Physical training	13
Singing	13
Law	18
Total	140

[a]Primarily teaching techniques.

Assignments of Literacy Corps gradutes are based on village requests, provided that the village agrees to provide a schoolhouse, a minimum of 30 students, and accommodations for the corpsman.[23]

As a result of the Literacy Corps program, 3277 schools had been built and an additional 1078 repaired by the end of 1965.[14] The figures are deceptive because not all the construction represented net additions to the available educational facilities; replacement of earlier temporary facilities was included. Construction costs for new school buildings are met by the people of the villages, and the completed facilities become the property of the Ministry of Education.[14]

It is claimed that each group of 20 village schools is supervised by an inspector who is a graduate of the Iranian College of Education and has at least 5 years' experience in elementary-school administration.[24] One of the goals of the current curriculum is to bring students to an achievement level equivalent to second-grade primary school. It is planned to raise the goal to the equivalent of fourth-grade primary school.[24]

Because of the Literacy Corps program, villagers have been induced to contribute plots of land to local education offices for use as sport fields and

demonstration farms. In 1963, 974 plots were donated and farmers also donated about $50,000 to buy materials needed by students. The money was spent under the supervision of the village councils.[14]

According to the statistics announced by the Iranian Armed Forces, the Literacy Corps in 1964 instructed 69,666 boys, 14,876 girls, 32,294 adult men, and 1928 adult women.[15] These figures are probably inflated. If they are accepted, and if it is assumed that the 5000 Literacy Corps men graduated annually are in the field for 14 months, then the average number of students per Literacy Corps instructor is less than the prescribed 30 students.

On completion of his national service a corpsman is eligible for reenlistment or certification as a teacher with permanent status and regular standing as a civil service employee of the Ministry of Education. The Iranian Army claims that 80 percent of the corpsmen reenlist.[20] Those who select permanent civil service status are required to take a 6-month intensive teacher-training program and agree to teach for at least 3 years in the village where they taught as corpsmen. It is claimed that about a third of those leaving the Literacy Corps elect to become Ministry of Education teachers.[11] There is no explanation why corpsmen who have completed the Army training program and 14 months of service as teachers are required to take additional teacher training before they can be certified as civilian teachers performing the same tasks.

With the introduction of the Army-sponsored Literacy Corps program, it is claimed that attendance at rural schools has risen from 24 percent to almost 50 percent of the eligible population.[11] Although the 50 percent attendance claim is questionable, there is little doubt that attendance has risen because of the program. Where a sixth-grade education was previously adequate for qualification as a rural teacher, the Literacy Corps program provides teachers who have completed secondary-school education and have had some specialized training to meet the needs of rural education. It has also been claimed that Literacy Corps personnel are more effective teachers in rural areas because they are subject to greater supervision and control than civilian teachers.

It has been estimated that the cost per pupil taught by Literacy Corps personnel is about one-fourth that for pupils in the regular civilian program.[11] It is not clear whether this figure takes into account the costs covered by the contributions of the villagers and the difference between pay of civilian teachers and Army sergeants.

GENERAL EVALUATION

The impact of the literacy programs of the armed forces of Iran for its own personnel on the general level of illiteracy in the country is necessarily small because of the limited number of conscripts. However, it does reach some of the young adults who otherwise would have little or no exposure to any literacy training.

The effectiveness of the literacy training for military personnel is questionable. Available information indicates that the program is based on only 1 hr of instruction each day for 4 days a week. The announced goal is only attainment of a level equivalent to the fourth grade of primary school. Even if this level is reached, it is questionable whether the knowledge is retained or

serves as a basis for further education. Most of the conscripts are from rural areas and many from non-Farsi-speaking areas. No information is available on whether there is a supporting program to project the Farsi language into the rural areas by the use of radio broadcasts and publications that are readily available to the population at large.

The current efforts in the field of vocational training do not appear to make any significant contribution to the national manpower needs for a skilled work force. The vocational-training program of the armed forces, when fully implemented, is designed to train no more than 7200 men per year. If these men are divided among nine different vocational areas, the effect on the total manpower picture will be small.

The Literacy Corps program of the Iranian Army has the potential to make significant contributions to rural education and manpower development. The program is aimed at the rural population, which has lagged far behind the urban population in educational opportunities and achievements. The Literacy Corps program has provided instructors and schools for large segments of the population that would not have received educational opportunities under the current programs and resources of the Ministry of Education. It has been estimated that, with the current and foreseeable level of civilian education programs, the illiteracy rate of the population will not be reduced to 75 percent until the year 2000.[23] The Iranians believe that the contribution of the Literacy Corps program will reduce the illiteracy rate below that point well before the end of the century.

The curriculum taught through the Literacy Corps program is designed to meet the needs of the rural population and is not restricted to instruction in the national language. The need for this broader education is urgent if the opportunities opened by the land-reform program are to be exploited fully. Available information does not permit evaluating how well the curriculum does in fact meet the needs of the rural population.

It appears that the costs of the program have not been fully evaluated. The official estimate that the costs per pupil in the program are only one-fourth of those in the civilian educational program may not have taken into consideration the costs of the whole system. One of the questionable aspects of the program is the number of schools in existence or planned for training Literacy Corps personnel: 21 appears excessive and perhaps inefficient. The annual capacity of these schools ranges from 100 to 500. A consolidation of schools might be conducive to greater economy and efficiency because the training course lasts only 4 months.

The current impact of the Literacy Corps program appears to be overestimated. This appears to be the case with most Iranian claims on their civic-action programs. If the announced 1964 figure of about 125,000 attending schools operated by the Literacy Corps is correct, then only a relatively small number are being reached, and with an estimated 10,000 Literacy Corpsmen in the field the planned goal of 30 students per instructor has not been met.

A noteworthy aspect of the Literacy Corps program is its dependence on conscription of secondary-school graduates who previously, for all practical purposes, had been exempt from military service. The Iranian government claims that those conscripted for the Literacy Corps accept their 18 months' service with enthusiasm and that many reenlist for further service.

On the basis of available evidence it is doubtful whether the expanded role of the Iranian armed forces in the field of education will affect its position in the political system. Conceivably it may widen the appreciation of the armed forces for the social and economic problems of the nation, but that is only speculation. Under the present system the dominant factor in determining the interest of the armed forces in such problems is the degree of interest shown by the Shah.

At the present levels of activity the educational programs sponsored by the armed forces do not appear to compete with the development of the civilian education system. For the most part the programs of the armed forces are directed at those individuals who are beyond the reach of the current and projected civilian education system or who have not participated in the civilian program. Even with projected growth in several of the armed forces programs, it is doubtful that they will hinder the development of civilian education. Under the present political system the ultimate extent of the involvement of the armed forces in rural education is basically a decision of the Shah.

Overall it seems that the efforts of the Iranian armed forces in the field of education show more promise than performance. The data available to this study do not permit delineation of how the promise can be converted into effective performance. In view of the extraordinarily high degree of illiteracy in Iran it would appear that every agency that can assist in raising literacy levels should be used.

Chapter 3

ISRAEL

NATIONAL BACKGROUND

Economy

Israel's economy is more highly developed than that of the other countries in the Near East. The gross national product, estimated to be $1257 per capita in 1964, was roughly four times the average for that area. The growth rate, estimated to be 7 percent per year for the period between 1957–1958 and 1964–1965, was also the highest in the area and in fact one of the highest in the world.[2]

Consistent with these figures, Israel's economy shows a substantial degree of industrialization. In 1964 the manufacturing, mining, and utilities sectors contributed roughly 26 percent of the gross domestic product, agriculture, fishing, and forestry only 9 percent. Citrus fruits, polished diamonds, autos, textiles and fashion goods, building materials, tires, and pharmaceutical products are the principal exports.[25,26]

Population

Israel's population in 1965 is shown in Table 5.[27] The percentage of the population below the age of 14 (34.4 percent) is low for a rapidly growing country.

TABLE 5

1965 Population of Israel, by Age Group and Sex[27]

Age group	Total	Males	Percent of total population
0–14	893,400	459,725	34.4
15–29	619,682	313,332	23.9
30–44	450,846	217,932	17.4
45–64	476,624	241,159	18.3
65+	157,872	76,711	6.0
Total	2,598,424	1,313,859	100.0

Since Israel achieved independence in 1948, one of the outstanding features of its national development has been the influx of large numbers of immigrants.

The resulting changes in the ethnic composition of the Jewish population are shown in Table 6.[27]

TABLE 6

Ethnic Composition of the Jewish Population of Israel[27]

(According to country of birth)

Year end	Europe-America		Africa-Asia		Israel		Total
	Number	Percent	Number	Percent	Number	Percent	
1948	393,013	54.8	70,004	9.8	253,661	35.4	716,678
1955	635,332	39.9	445,208	28.0	509,979	32.1	1,590,519
1964	714,567	31.9	643,120	28.7	881,490	39.4	2,239,177

The Israelis use the term "Oriental" to denote Israeli Jews who were born or whose fathers were born in Muslim or Asian countries. The term "Occidental" is used to denote Israeli Jews who were born or whose fathers were born in other countries—primarily Europe. On this basis the Oriental Jews numbered 996,843 at the end of 1964 and represented 45 percent of Israel's Jewish population.

The large increase in Oriental Jews has created severe social problems and has retarded the creation of a truly national state. Although all Jews in Israel are united by a common religious heritage, the different social values held by the Oriental Israelis have been a strong divisive factor, according to Israeli governmental authorities.[28]

In terms of its institutional, political, social, and economic development, Israel is both modern and Western. Immigrants from Western countries, because of their relatively high educational levels and compatible social values, have been able to integrate rapidly into Israeli society. On the other hand, immigrants from African and Asian countries have had difficulty integrating because of lower educational levels and different social values. As a result Oriental Israelis are generally in the lower economic strata and have only a tenuous sense of association with the nation and its institutions.[28]

The records of the Israel Defence Forces reflect these differences between the Oriental and Occidental Israelis. In the 1960–1961 period, 36 percent of the male soldiers born in Muslim and Asian countries had less than 7 years of formal education and 75 percent had reached no higher than the eighth grade. For soldiers born in Israel the corresponding percentages were 7 and 23, and 8 and 27 for soldiers born in Europe and America.[29] These differences in origin also affected the second-generation Israelis. Among those soldiers born in Israel, those with Oriental fathers had significantly less formal education at the time of induction than those with Occidental fathers.[29]

Projected throughout the full structure of Israeli society, these differences in education and background have persistently hindered social communication and have led to feelings of bitterness and isolation on the part of the Oriental Israelis.

Educational Requirements

With 587,855 people between the ages of 5 and 14 and an additional 305,545 between the ages of 0 and 4, resources required for basic youth education in Israel are large and increasing.[27]

Israel's educational requirements are equally great in the area of adult education because of the large numbers of immigrants. In 1961 87.9 percent of the adult Jewish population was literate; 25 percent of those over 25 had completed secondary school.[7] Both figures compare favorably with those for other developing countries. However, since 1948 the adult-literacy rate has declined and the secondary-school completion percentage has not changed because most adult immigrants since 1948 have had less education than the original population.[7]

Since Israel's economy is oriented toward industrial growth, a rise in the literacy and educational levels of the adult population, particularly in the case of the adult immigrant, is desirable. Currently only 50 percent of the total Israeli population has completed primary school.

NATIONAL EDUCATION PROGRAM

Organization

National responsibility for general education is assigned to the Minister of Education and Culture, who is a member of the Prime Minister's Cabinet. He is appointed by the Prime Minister from among the members of the national unicameral legislature (Knesset).* The Minister is assisted by an Undersecretary, who is also an elected member of the Knesset, and by a Director General, who is the nonpolitical head of the operations of the Ministry.[8]

The authority of the Ministry stems from two fundamental laws: the Compulsory Education Law (1949), which provided for compulsory free education for children aged 5 to 13 (now 15), and the State Education Law (1953), which specifies the objectives of state education, the Minister's authority to prescribe curricula, and his responsibility to carry out the law.

The basic programs administered by the Ministry of Education and Culture are:

(a) Preprimary schools.
(b) Primary schools.
(c) Schools for the handicapped.
(d) Schools for young workers.
(e) Secondary schools.
(f) Vocational and agricultural schools.
(g) Teacher-training schools and colleges.
(h) University training.
(i) Schools of art and music.
(j) The School of Surveying.
(k) Schools of nursing.

*Appointed only technically; the political coalition forming the government apportions cabinet posts among the member parties.

Table 7 compares the number of pupils and teachers in the different types of school in 1964–1965 with the number in the previous year.[9]

TABLE 7

Comparison of 1964–1965 and Previous Year's Enrollment and Teachers in Israel, by Type of School[a]

School	Pupils			Teachers		
	1964–1965	Change from previous year		1964–1965	Change from previous year	
		Number	Percent		Number	Percent
Preprimary[a]	92,250	+1750	1.9	2,850	nd[b]	nd[b]
Primary	455,100	+8600	1.9	20,000	+500	+2.5
Handicapped and young workers	15,400	+400	2.5	1,300	+50	+3.7
Secondary, vocational, and agricultural	118,600	+7450	+6.7	10,200	+750	+7.9
Teacher training	5,200	+700	+13.4			
University	19,400	+4000	+25.9	nd[b]	nd[b]	nd[b]
Other[c]	1,600	+500	21.0	nd[b]	nd[b]	nd[b]

[a]Includes private nursery schools.
[b]No data.
[c]Schools of art and music, the School of Surveying, and schools of nursing.

Adequacy of Program

The emphasis in the Ministry program is on youth. In this area the program appears to be adequate in terms of the country's needs. The principal deficiency is the lack of formally qualified teachers. At the beginning of the 1964–1965 school year 4000 teachers in the primary schools lacked prescribed training. It was estimated that in the secondary schools about half the teachers lacked prescribed training.[9] Given the outputs of the teacher-training colleges and the university schools of education, upgrading or replacing unqualified teachers with qualified personnel would not be difficult except for the expanding school loads. In 1964–1965, the increasing number of pupils resulted in a requirement for 3000 additional primary-school teachers and 700 to 800 secondary-school teachers.[9]

In the area of adult education the Ministry program is limited both in scope and participation. In 1964–1965, the program included instruction in Hebrew, primary education in basic literacy training, training of teachers for adult instruction, and preparation of instructional aids for adults. In 1964–1965, 23,000 persons participated in the Hebrew program, 12,000 in the literacy program, and 50,000 in the adult education program.[9] There was no comprehensive basic or vocational education program nor was there any specific attempt to alleviate the problem of ethnic and social disparity.

In terms of the overall education and manpower problems of the country the principal deficiencies are in the area of adult education and production of teachers for the youth-education programs.

EDUCATIONAL PROGRAMS OF THE ISRAEL DEFENCE FORCES

Background

The Israel Defence Forces are organized on a militia based with standing forces, reserve forces, and area defenses. The standing force consists of a very small professional cadre, male conscripts who serve for 30 months and female conscripts who serve for 24 months. Peacetime personnel strength is 40,000 to 50,000. The area defenses are civilian border settlements that come under military control in time of hostilities.[30]

Significant aspects of the Israel Defence Forces' organization and operations, in terms of potential contributions to national manpower programs, are (a) the conscription system, (b) egalitarian orientation, (c) nonpolitical orientation, and (d) method of unit organization. These will be discussed in turn.

Conscription Policies

Israel is the only country practicing peacetime universal military conscription of both sexes. All young men and women are subject to induction at age 18.[30]

The only men excused from military service are those in very poor physical condition; those with severe mental disabilities; chronic delinquents, as determined by civilian probation officers; and those who combine lack of education, ignorance of Hebrew, and low intelligence to such a degree that they cannot be used as soldiers without educational preparation.[29] Some in the last category are enlisted at times for special training. This program is discussed later.

A few of the men who are inducted are deferred from full-time military service until completion of professional training at the university level. Such deferment is not a matter of personal choice but is granted by the Israel Defence Forces to selected conscripts to meet anticipated needs for professionally trained personnel.[30]

The number of men actually conscripted varies between 85 and 91 percent of those reaching induction age.[29] Inadequate formal education or inadequate knowledge of Hebrew are not in themselves grounds for ineligibility for military service. Because military service is virtually universal, the normal healthy young man regards such service as a normal part of his life. Rejection from military service is regarded as a social stigma, particularly because conscription is also applicable to young women.

Women who are married or who state that military service is contrary to the religious and traditional principles of their families are excused from military service.[30] Exemptions from military service on the grounds of physical disability are more liberal for females. Because of the high correlation between early marriage, low educational standards, and objection to military service because of religious and traditional principles female draftees as a group tend to have more formal education than the male.[29] Most women who are conscripted have had at least 8 years of formal schooling. In practice only about 50 percent of all women reaching age 18 are actually conscripted.[29] Among the women who have had some secondary schooling, the beliefs prevail that the draft is universal and failure to be drafted carries a social stigma.

Each year about 500 women who have completed secondary school are deferred from active service for 2 years to attend a teacher-training college to qualify as primary-school teachers.[29] The selection of those to be deferred for teacher training is made by the Israel Defence Forces.

Egalitarian Orientation

Pronounced egalitarian internal relations are characteristic of the Israel Defence Forces. Although discipline is strict and rather severe compared to that of some Western armed forces, personal relations among all ranks are devoid of most of the traditional military formalities. For example, officers are addressed by their first names or nicknames by all ranks. Reliance is placed on leadership by personal example and influence.[31]

The composition of the Israel Defence Forces contributes to this egalitarian orientation. Entrance into the officer corps is primarily through the enlisted ranks. Except for a small cadre of professional officers and an even smaller number of noncommissioned officers (mostly sergeant-majors), all personnel serving in peacetime are conscripts. Squad and platoon leaders and staff and technical personnel at company and battalion level are almost uniformly conscript personnel. Because of prior training time and the length of active military service, there is virtually an annual turnover in these positions. On completion of conscript service about half of all personnel have attained at least the rank of corporal. According to Israeli authorities the conscripts are more receptive to the education programs because of this personnel turnover and consequent opportunity for promotion.[29]

Nonpolitical Orientation

The Israel Defence Forces are marked by absence of partisan politics. A number of factors have contributed to maintaining and strengthening this orientation. The civilian government structure of Israel has been very stable. Changes in government have taken place in a manner in keeping with the letter and the spirit of the prescribed legal process. Furthermore the Israel Defence Forces are not a repository of special industrial and administrative skills that have little utility or demand in the civilian sector.

Finally, the Israel Defence Forces are an important but not a dominant element in the national political system. The professional military base is not significant in size. Universal conscription, relatively long annual active-duty periods for reservists (30 days annually), and reliance on the use of reserve units for large-scale operations inhibit the growth of any separatist tendencies within the Israel Defence Forces.

Unit Organization

Conscripts are assigned to units according to military needs, and there is a deliberate effort to avoid creating units with characteristics that would promote separatist tendencies because of origin or political affiliation.[29] One exception is in the case of special nonregular units preparing for communal farming.[32–34] It should be noted that reserve units are organized on a territorial basis in order to reduce time required for mobilization.

Units of the standing force, composed of conscripts, frequently conduct training exercises in different parts of the country. This practice has a two-fold objective. First, the Israelis believe that flexibility in national defense is better served if units are familiar with the defense problems and geography of all sections of the country. Second, this practice is considered to help build a sense of national unity by giving each soldier a better knowledge of his country and its current and future development needs.[31,34] Specific measures taken to reinforce this knowledge are described later.

Aims and Direction of The Education Program

The primary aims of the education program are

(a) To bring all personnel up to prescribed levels of competence in speaking, reading, and writing the national language, Hebrew.

(b) To educate all personnel to at least the eighth-grade level.

(c) To prepare certain Oriental Israelis for university training.

(d) To provide opportunities for off-duty education.

(e) To assist the national education program by making teachers available to the Ministry of Education.

The organization for direction of the Israel Defence Forces' education programs is shown in Fig. 1.

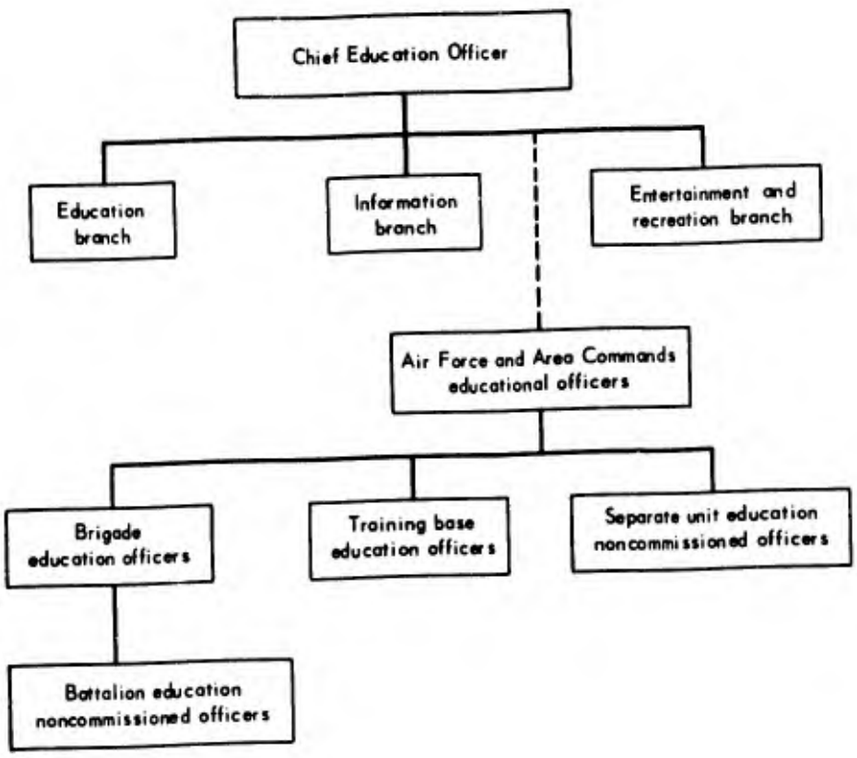

Fig. 1—Organization of the Israel Defence Forces Education Program

———— Staff supervision only

Overall control and direction of the education program is vested with the Chief Education Officer of the Israeli Defence Forces, who is also responsible for information, entertainment, and recreation programs. In the military hierarchy he is a special staff officer under the general staff supervision of the General Headquarters Chief of A Branch, which is responsible for personnel matters. Much of the execution of the program is delegated to the Area Commands and the Air Force. The three Area Commands (North, Central, and South) encompass the entire country. The Area Commands, the Air Force, and all units of brigade size have full-time education officers. Selection of education officers is a command responsibility but is coordinated with the Chief Education Officer. Battalions and units of similar size have full-time noncommissioned education officers. Units smaller than battalions designate personnel to perform educational supervisory duties as an additional duty. It is estimated that about 500 persons other than actual teachers are involved in educational duties.[34]

Specific Programs

The educaticnal programs of the Israel Defence Forces can be categorized as follows:

(a) Hebrew-language instruction.
(b) Basic educational studies.
(c) Geography and current-events instruction.
(d) Off-duty instruction.
(e) Vocational education.
(f) Special programs.
    (1) University preparation for selected Oriental Israelis.
    (2) Teacher training.
    (3) Special training for very-low-aptitude personnel.

Hebrew-Language Instruction. Instruction in Hebrew, considered to be the most important program, starts at the induction center. All conscripts who cannot read, write, or speak Hebrew satisfactorily, as determined by test, are separated by achievement level for initial instruction during the stay at the induction center.[34] The length of the conscript's instruction varies from 2 to 20 days depending on the length of stay at the induction center.

From the induction center the recruits are transferred to the basic training centers of the major branches of the Israel Defence Forces, such as infantry and armor, or to the Central Training Base, where training is provided for recruits assigned to branches that do not maintain separate basic training centers.[34] During basic training, which lasts for 3 months, about 60 to 100 hr are devoted to providing a basic knowledge of written and spoken Hebrew. The textbooks are designed to give concurrent instruction in geography, history, and national holidays and traditions. Hebrew-language instructors are usually female soldiers on active duty following graduation from teacher-training colleges.[35]

On completion of basic training and assignment to units, soldiers who have completed the course of instruction in Hebrew but require further instruction are sent to an Area Command school (Beth Sefer Pakudi) for a full-time 3-week course.[35] Selection of students is made by the Area Command education officer, based on records of achievement in the instruction given during basic training. Scheduled attendance at the Area Command school is coordinated

with the unit commander.[34] The three Area Command schools are located in Nazareth (Northern Area Command), Jerusalem (Central Area Command), and Mishnar (Southern Area Command). The Air Force operates an equivalent school at the Central Training Base.[35] About 5000 soldiers a year study at these schools, which represent the inductee's last formal instruction in Hebrew.[34] Provision is made for further instruction within the unit for those few soldiers who complete the program but fail to reach the required level of competence.

Inadequate knowledge of Hebrew among inductees is largely a result of the extensive immigration to Israel and not a failure of the school system. In fact, many who require this training have had considerable formal schooling and are fluent in one or more other languages. As a consequence the need for Hebrew training carries no social stigma and the instruction is eagerly pursued by the students.[34] This contrasts strongly with the basic-studies program discussed in the next section.

The teaching of Hebrew to all inductees who require it provides not only a common language essential for military and, ultimately, civilian activities but contributes significantly to national social development.

The Hebrew language is not associated with any single social or ethnic group and the dominant Occidental-Israeli elements did not develop Hebrew as a mother tongue until they arrived in what is now Israel.

Basic Studies. All soldiers who have not completed eighth-grade schooling are required to attend a 3-month 600-hr course in basic educational studies.[29] The course is given at Camp Marcus in Haifa. (The camp is named after COL David Marcus, an American who was accidentally killed in the fighting for Jerusalem in 1948 as a result of his failure to understand a warning shouted at him in Hebrew.)[35]

The subjects currently taught are arithmetic, general history, geography, elementary science, citizenship, Jewish history, and the Bible.[35] Emphasis is on understanding principles and awakening interest in education rather than on memorization of facts. The curriculum is coordinated with and approved by the Ministry of Education and Culture.[35] The course is intensive with emphasis on individual instruction. Classes are small, consisting usually of 10 pupils with 2 instructors, one for social studies and another for the physical sciences.[29,34] Most students spend 9 hr a day in class, with an additional hour for supervised study.

As with the Hebrew-language program previously described, the instructors are female soldiers. According to the Chief of Education of the Israel Defence Forces, there have been no difficulties in using women directly out of teachers' colleges to instruct soldiers with little or no educational background and generally lower social status. It has been found that the students have shown a protective attitude toward their instructors and approach their studies with more enthusiasm than might have been the case under other arrangements.[34]

The course is given during the last 3 months of service with the students completely detached from their units and attending on a full-time basis. The scheduling of basic educational training for this period was the result of experiments conducted during the period 1963–1965. During that period, basic education training was given at the beginning of military service in an effort to permit the armed forces to benefit from the increased education of inductees with low achievement levels. The experiments were unsuccessful because the

students proved so unmotivated that the steps necessary to maintain discipline in class defeated the purpose of the instruction.[29,34]

The reasons for the failure stemmed primarily from the fact that most students lacking eighth-grade education were dropouts from the civilian education program. Confronting them at the very beginning of military service with a class situation and subjects that they had previously failed or fled only reinforced their disinterest and spirit of rejection. Unlike the need for Hebrew-language training, the need to take basic educational training carried a social stigma of backwardness. Conducting basic educational training in the last months of service has meant providing formal education to students whose original attitudes have been modified over 2 years of active service. During this service the advantages of educational achievement have been demonstrated by the selection for promotion. Another inducement is the need to prepare for civilian life. In Israel, completion of eighth-grade education is virtually a prerequisite for entrance into most apprentice training programs. Hence scheduling basic educational training at the end of the active service period has proved successful.[29,34]

In line with the purpose of the basic studies program to prepare students for employment and for further education, the last few weeks of the course are devoted to extensive counseling of the students. This counseling, by civilian agencies of the government, informs the students of the civilian opportunities available to them and assists them in the selection of civilian positions and further vocational training.[34,35]

A general educational development examination at the eighth-grade level is given on completion of the course. Those who pass the examination are awarded a certificate that is nationally recognized as the equivalent of successful completion of eight-grade education. Those who fail receive a certificate stating that they had attended the course. The examination is coordinated with and approved by the Ministry of Education.

The educational levels of inductees has gradually risen over the past few years with consequent lowering of the number requiring basic education at the eighth-grade level. A recent result has been the experimental extension of basic education to include the first 2 years of high-school level.[29,34]

Geography and Current-Events Instruction. These two low-cost and relatively informal programs are considered by the Israelis to be important contributions to development of social cohesion.

Each year the Israel Defence Forces give a small number of personnel intensive training in the geography and associated history of Israel. On completing this training the personnel are returned to their units, where they serve as instructors in the subject in addition to their normal duties. The instruction is informal and is usually carried out during field exercises and long marches held in various parts of the country. The instruction emphasizes historical ties of the area and development problems. The instruction is reinforced with a series of pamphlets published by the Israel Defence Forces on various sites and areas. These pamphlets have also proved popular with the civilian population.[36]

Current affairs instruction in the unit is conducted principally by the unit commander. Several times a month soldiers meet with their commanding officers to hear brief talks on subjects of current interest, the affairs of the unit, and national holidays. The Chief Education Officer provides material for the

talks and also background information for troop commanders through a publication, The Monthly Survey, and through study programs prepared at the Military Education Academy in Jerusalem.[34,36]

Once a month the informal talks of the unit commanders are supplemented by formal lectures on political developments or world affairs. The speakers for these talks are members of the faculties of the universities and other institutions, members of the Knesset, journalists, and other particularly knowledgeable individuals. A series of explanatory booklets, leaflets, films, and exhibits produced by the Israel Defence Forces complement the lecture and discussion program. Special programs are also produced by the Defence Forces radio broadcasting station (Galei Tsahal).[34,36]

Off-Duty Instruction. Off-duty study by Israel Defence Forces personnel is actively encouraged. Libraries and study facilities are provided at military installations. Formal off-duty courses are given. The Chief of Education's office attempts to provide instructors for any course requested by 10 or more persons.[34] In many respects the Israeli off-duty instruction program parallels the US Army Education Center program.

Special Programs. The Israel Defence Forces conduct three special programs that have no direct military utility but are considered important contributions to the overall aims of national development.

University preparation for selected Oriental Israelis.[2] The percentage of Oriental Israelis attending universities is considerably lower than their representation in the total population. As indicated earlier this is a result of the generally lower level of educational achievement and economic status of the Oriental Israelis. To assist in reducing this gap between the Oriental Israelis and other population elements, the Israel Defence Forces sponsor a special program for Oriental-Israeli inductees who have completed their high-school education or some part of it. Under this program those inductees having both the aptitude and desire to continue their studies at university level are placed on detached service for 8 months to attend a special course designed to permit them to (a) complete their matriculation examination, (b) prepare for the university entrance examinations, and (c) get a head start on the requirements of these institutions. The curriculum for this course is prepared by the Hebrew University of Jerusalem and the Technion of Haifa. The instructors for this course are drawn from the faculties of the universities.[34,36] This program is considered to be an important contribution to reducing frictions between the two major population elements in Israeli society.

Teacher training. Each year about 500 female inductees are selected for deferment from active-duty training for 2 years to attend teacher-training colleges to qualify as primary-school teachers. On completion of this training they are inducted to serve the normal active-duty period for women (2 years). About half these inductees are assigned as teachers, primarily with the Hebrew-language and basic-studies programs previously described. The others, after short periods of military training, are placed on duty with the Ministry of Education and Culture. These personnel are assigned by the Ministry to schools in the frontier areas where civilian teachers are in short supply. The teachers made available by the Israel Defence Forces teach in elementary schools and in adult education programs for new immigrants.[29,34]

In addition to these qualified teachers the Israel Defence Forces also make available to the Ministry of Education and Culture some female inductees who are high-school graduates and have volunteered for service in frontier settlements. These personnel perform tasks like those of the qualified teachers and take part in community-development projects.[29]

The female inductees on duty with the Ministry of Education and Culture remain under military control and are paid and administered by the Israel Defence Forces.[29]

Another measure that helps to alleviate the national shortage of qualified teachers is the cooperative program with the Ministry of Education and Culture for off-duty teacher training. In the Tel Aviv and Haifa areas, where there are relatively large concentrations of female inductees, the Ministry of Education and Culture has established and operates night schools for training teachers. The Israel Defence Forces arrange the military duties of those accepted for such training so that the course can be pursued without interruption.[34]

Training for very-low-aptitude personnel. About once a year the Israel Defence Forces induct approximately 300 men who have been found during pre-induction examination to be unfit for general military service because of complete lack of education and very low aptitudes. After special training for 3 to 4 months, they are placed with NAHAL units. These are highly motivated units preparing to establish or join collective farm settlements. It has been found that the special social character of these units has been conducive to assisting many of the very-low-aptitude personnel to adjust to contemporary Israeli life.[34,36]

Vocational Education. The Israel Defence Forces have no program designed specifically to teach inductees vocational skills for civilian use. As with all military forces, training is given in vocational skills that are also readily used in the civilian economy. The thrust of such training, however, is to meet military requirements; adaptability to civilian use is a side benefit.

Two vocational-education programs of the Israel Defence Forces are of interest. To meet the need for highly skilled technicians requiring long training, the Israel Defence Forces rely primarily on civilian employees and on their own apprentice-training program. Under this program the technical schools of the Air Force, the Navy, the Signal Corps, Ordnance Corps, and Engineer Corps accept boys 16 and 17 years old for training of up to 4 years' duration. These programs include training in mechanical skills and high-school-level general subjects. On completion of this training the students are inducted to serve the normal period of active duty.[29,34,36]

The Israel Defence Forces also support two military boarding schools for boys who plan to make a career in the Defence Forces. These two schools, the Gymnasia Realit in Haifa and the Gymnasia Hertzlia in Tel Aviv, are civilian high schools. The Defence Force students attend classes in civilian clothes with the other civilian students. However, they are financially supported by the Defence Forces, are under military control, and receive some military training during nonschool hours.[36] On graduation they are conscripted as are all others of their age group.[34] The purpose of these schools is to motivate and give special training to those who are inclined to a professional military career. Although the Israel Defence Forces have no difficulty in securing candidates for commissions as reserve officers, there has been some difficulty in procuring high-quality personnel for professional officer careers.

EVALUATION

Basic Studies

The basic-studies program makes its greatest contribution in providing for virtually all between the ages of 18 and 26 an opportunity to acquire the equivalent of an eighth-grade education. This opportunity and the exposure to influences aimed at instilling national pride and consciousness are excellent preparations for adult participation in Israeli society. To those who dropped out of the national education system it offers a second opportunity to acquire the minimum education needed for vocational training or for employment at other than the common-labor level.

The timing, class arrangement, and conduct of the basic-studies program are significant. The timing, at the end of the service period, reflects the Israeli experience that school dropouts require a period under changed conditions to achieve a change in goals and degree of motivation. These changes, according to the Israelis, are necessary to make a second exposure to formal education succeed. The emphasis on small-group instruction is consistent with the remedial nature of the program. The concurrent vocational guidance and placement services provide additional motivation and also assist in the integration into civilian society of the least-educated element of the population.

The Israeli experience does not necessarily indicate that armed forces are always the most appropriate vehicle for exposing dropouts to a second school opportunity. It does appear that at present the use of the armed forces for such purposes in Israel is appropriate; in other countries this may not be the case.

Hebrew-Language Training

The Hebrew-language program assists in filling one of the major requirements for social integration in Israel—a common language. The contribution to military effectiveness is obvious and the use of small-group intensive instruction has proved economical because of the personnel resources made available by universal conscription.

The Israeli problem of teaching a common language to a multilingual population is only superficially comparable to that of other nations with similar problems. Although many languages are spoken in Israel, there are no significant geographical areas with a spoken language other than Hebrew. Further, Hebrew is not the language of a dominant ethnic or political group, but rather the mother tongue of the sacred literature of Judaism and one of the bonds that unite all Jews regardless of residence and nationality. A knowledge of Hebrew carries great prestige among Jews regardless of the language they speak. This motivation and intensive small-group instruction are factors in the success of the Hebrew-language program. In other countries a comparable language-instruction program may have to place greater emphasis on motivation because a single official national language may have adverse political effects, carry adverse nationalistic connotations, and in significant areas of the country may not even be spoken.

Geography and Current-Events Instruction

The geography and associated history program is an economical and effective means for concurrent instruction designed to contribute to development of national consciousness. This type of instruction is common in military forces, but it is frequently ineffective because it is limited to presentations in a classroom type of environment. The Israeli program capitalizes on the opportunities presented by the frequent movements of units throughout the country to provide detailed and meaningful instruction. Motivation is provided by the close association of the Israelis with the Biblical heritage that is fundamental to Judaism. The provision of qualified personnel and illustrative pamphlets assist in this program. The guide pamphlets produced under the auspices of the Chief of Education are effective, as is attested by the purchase of 2 million copies by the general public. Adaptations of this program may prove advantageous in other countries.

Instruction in current events is common in all armed forces. However, the widespread use of civilian instructors and discussion leaders that characterizes the Israeli program is uncommon. Instruction in current events given within armed forces is difficult because the presentation becomes either partisan or is innocuous because of the need to avoid controversy. In view of the intense partisan politics characteristic of Israel and the lack of criticism of this program, it can be assumed that the Israel Defence Forces have succeeded in presenting nonpartisan views. The available evidence does not indicate whether the instruction is effective in arousing interest.

Special Programs

These programs, which involve special use of teachers, training of very-low-aptitude personnel, and preuniversity training for Oriental Israelis, fill specific deficiencies in the social and civilian educational structures. It is apparent that these programs are the product both of close coordination between the Ministry of Defense and the Ministry of Education and Culture and a joint determination of those tasks that will strengthen the civilian educational and social structure and that the armed forces can carry out.

The Israel Defence Forces' use of qualified teachers helps alleviate the shortage of teachers in the border settlements and the new development areas without resort to excusing a special group from military service. Under the Israeli system all qualified teachers who are conscripted are used for educational purposes either within the armed forces or in areas where the number of civilian teachers is insufficient. Additional personnel are made available to bolster civilian educational resources through the use of volunteer high-school graduates. Those who desire to continue with teacher education while in the military service are given the opportunity through special off-duty schools. In effect these programs provide an alternative form of national service in the field of education within the framework of universal conscription.

The programs for those with very low aptitude and for Oriental Israelis who lack preuniversity training are examples of the use of armed forces for purposes that have minimal military value but substantial civilian importance.

These programs would probably be impossible except for the universal military conscription. No quantitative data are available on the extent and success of these programs, but it appears that they do provide some substantial contribution toward strengthening the social structure of the nation. If nothing else, they demonstrate the concern of the State with the needs of all elements of the population. The drain on the resources of the Israel Defence Forces for these programs is probably minimal.

The outstanding feature of the Israel Defence Forces educational programs is the exploitation of the opportunities presented by universal conscription to contribute significantly to social integration of the nation and to augment the resources of the civilian educational system. Universal conscription provides personnel resources that would not otherwise be available except possibly at the expense of operational effectiveness and permits reaching many of the population elements requiring special training and motivation.

Although the details of the coordination with the Ministry of Education and Culture are unknown, it appears that the programs of the Israel Defence Forces do not usurp the civilian responsibilities for education and social integration. The available evidence indicates that the coordination between the two Ministries does not consist merely of pro forma acquiescence by the Ministry of Education and Culture in the plans of the Ministry of Defence.

The Israel Defence Forces seem content to supplement the civilian educational system with programs designed to fill the needs of its personnel and meet those national needs within its capabilities without impairing the basic mission of defense against external attack. There is no evidence to indicate that the Israel Defence Forces educational activities impede the development of the civilian education structure. On the contrary, the military programs appear to be well designed to contribute to the growth of the civilian structure.

Many aspects of the educational problems of Israel and the role of its armed forces in education are unique to Israel. Only a few nations practice universal conscription, and only Israel conscripts women. Despite many different social and geographic origins, the Jews of Israel share a common heritage of religion and language and face a nationally recognized security threat.

Chapter 4

PERU

NATIONAL BACKGROUND

Economy

The economy of Peru is underdeveloped even by Latin American standards. The gross national product, estimated to be $285 per capita (1963 prices) in 1965, was much lower than the average for the region as a whole. However, the annual rate of growth of per capita product, 2.7 percent for the period from 1960 to 1965, is relatively high for Latin America.[37] The economy is primarily agricultural, with mining second in importance. In recent years, industrial activity has increased with government encouragement of manufacturing. More than 17 percent of the labor force is currently employed in manufacturing and construction.[37] The principal industries contributing to the generation of foreign exchange are mining and fish-meal production.

Peru is characterized by a pronounced shortage of skilled labor. Much of the labor force engaged in manufacturing is unskilled. Detailed statistics on skilled-manpower needs are not available, but there are severe shortages of electricians, mechanics, higher-level technicians, and managers.[38]

Population

The population of Peru in 1965 is shown in Table 8.[39] Current estimates place the 1966 population at over 12 million.[40]

TABLE 8

1965 Population of Peru, by Age Group[39]

Age group	Total	Percent
0–4	2,087,000	18.0
5–14	3,153,000	27.0
15–19	1,198,000	10.3
20–59	4,629,000	39.7
60+	583,000	5.0
Total	11,650,000	100.0

It is significant that more than 45 percent of the total population was under 15 years of age. The annual population growth-rate is estimated to be 3.1 percent.[40]

The population of Peru has three major ethnic components—white, mestizo, and Indian. The white group, which consists primarily of the descendants of the Spanish colonists, holds a dominant position in the nation although numerically it is a minority group. Most of its members are concentrated in Lima, the capital, and other large cities. They speak Spanish and are the only group displaying ethnic unity and social cohesiveness. Their national identification is strong.[38]

The mestizos are a racial admixture of Spanish and Indian and make up about 37 percent of the population.[41] They are found throughout the country but are most numerous in the Sierra region. Like the whites, the mestizos have a strong sense of national identification and are active participants in the political and social systems of the country. However, they do not act as a social group or display group consciousness. Most mestizos consider themselves to be superior to the Indians but inferior to the whites. The mestizos dominate economically the more advanced sectors of the agricultural and small commercial urban activities. There are few in urban white-collar positions, but the number is increasing.[38]

The Indians, less homogeneous than either the mestizos or the whites, are the least integrated into the national political and economic systems. The principal Indian groups are the Quechua in the highlands and the Aymara in the area around Lake Titicaca. Neither group represents a cohesive tribe, and the principal focuses of loyalty and unity are the family and local community. Both groups are physically isolated from the rest of the country and have had little sense of identification with the nation or its institutions. This isolation is gradually breaking down because of employment opportunities in Lima and on the large industrialized coastal plantations. Indians returning from employment in these areas have broadened the national consciousness of the rural Indian groups, but the process is slow.[38]

Education

Like most developing countries, Peru is faced with the problems of educating its youth, increasing the number and quality of skilled technical personnel, and raising the literacy and skills of its adult population.

An increasing proportion of the Peruvian population is young, and the proportion of young people attending school has been rising steadily. The 1,154,000 children between the ages of 5 and 15 attending school in 1964 represented 60.3 percent of all those in this age group, compared with only 52.4 percent who attended in 1960.[39] However, the dropout rate is so high that enrollment in the fifth grade was less than one-fourth the number of children enrolled in the first year.

Adult illiteracy has declined from about 57 percent in 1940 to about 39 percent in 1961. However, the degree of illiteracy varies widely between men and women and between urban and rural areas. Table 9 shows the illiteracy rates among the population 15 years old and over in 1961.[39]

Literacy has great impact on Peruvian politics because the ability to read and write is a requirement for eligibility to vote in national elections.

Further evidence of Peru's adult education requirements is given by UNESCO statistics. According to these statistics for 1961, 42.8 percent of

Peru's 3,560,000 adults 25 years of age and older had not completed elementary school; 44.9 percent had completed no more than elementary school; 9.7 percent had completed no more than secondary school; and only 2.5 percent had completed some postsecondary-school work (Ref 7, p 126). Deficiencies in adult education are not distributed with geographic uniformity.

TABLE 9

1961 Percentage of Illiteracy in Peru, by Sex and Area [39]

Area	Males	Females	Average
Urban			
Lima[a]	3.3	12.3	7.7
All urban[b]	9.3	25.9	17.7
Rural	4.6	76.4	59.5
Total	25.6	51.8	38.9

[a]Includes the entire Lima–Callao metropolitan area.
[b]Includes the Lima–Callao area for lack of data to permit differentiation and applies to urban centers as defined for census purposes.

NATIONAL EDUCATION PROGRAM

Organization

The Ministry of Public Education has primary responsibility for education. By law, the Minister of Education exercises jurisdiction over all private and public education except the universities and certain independent schools that are under the jurisdiction of other ministries. The Minister is appointed by the President and serves for an indefinite term.

At present the major programs of the Ministry of Education for education of the young are as follows:

(a) Preprimary education.
(b) Primary (urban and rural) education.
(c) Secondary (public and private) education.
(d) Vocational education.
(e) Teacher training.
(f) Higher education.

Table 10 shows the number of schools, students, and teachers in Peru in 1960.[41]

Preprimary

Preprimary-school education is coeducational and is provided free for children 4 to 6 years old in kindergartens that exist primarily in urban areas as adjuncts of elementary schools. The final year of this program is a transition class to prepare 6-year-olds for elementary school. Curricula and syllabi for all preprimary schools are issued by the Ministry of Education.[41] Teachers

for the program are graduates of teacher-training schools who have specialized in preschool education. Their curriculum includes one additional year beyond the normal 3-year teacher-training program.[41]

TABLE 10

1960 Schools, Students, and Teachers in Peru, by Educational Level[41]

Educational level	Schools	Students	Teachers
Primary	14,590	1,479,100	41,900
Public	12,700	1,260,400	35,200
Private	1,287	148,700	5,200
State supervised	603	70,000	1,500
Academic secondary	524	158,900	11,300
Public	222	103,778	6,500
Private	302	55,122	4,800
Vocational secondary	251	39,359	5,300
Public	177	33,878	4,200
Private	74	5,481	1,100
Teacher education	38	3,940	500
Public	32	3,338	373
Private	6	602	127
Total	15,403	1,681,299	59,000

Primary Education

The Public Law of Education of 1941 stipulates that elementary- (primary) school education be free and compulsory for children 7 to 16 years old or until completion of the fifth grade.[41] Primary-school education is also compulsory for illiterates between the ages of 16 and 40. Those who refuse to attend can be arrested, though they rarely are.

Primary education is divided into two types of programs: urban and rural. The urban program consists of two subprograms; a 3-year program for children 7 to 10 years old and a 2-year program for children 11 to 13 years old. The rural program consists of a transitional year and a 3-year program similar to the 3-year urban program. As indicated in Table 10, 14,590 primary schools were in operation in 1960. Total enrollment was 1,479,100, and the total number of teachers was 41,900.

A decree issued in September 1959 requires that teachers in the primary-school program must have completed 3 years of study beyond secondary school. This decree has not been enforced because of difficulties in securing an adequate number of teachers.[41]

Secondary-School Education

Secondary education is provided in national schools, both academic and vocational; private schools; special comprehensive centers; and evening schools.[38] The academic secondary-education program takes 5 years to complete and is divided into two cycles. The first or basic cycle of 3 years covers general

subjects. The second or specialization cycle of 2 years is divided between humanities and science with some common general instruction.[41]

Completing an academic secondary school and passing a national examination administered by the Ministry of Education are prerequisites for higher education.[41] Teachers in academic secondary schools are required to be graduates of the National Pedagogic Institute, a normal school, or a university school of education.[41]

Vocational Education

Vocational secondary education is provided in industrial and technical schools, agricultural schools, and commercial institutes.* Like the academic secondary-school programs, these take 5 years and are divided into two cycles. The Department of Vocational Education is responsible for vocational and technical education.[41]

Vocational secondary-school teachers are required to be graduates of normal schools or other institutions of higher learning or experienced engineers or technicians in the particular field of specialty.[41]

Teacher Training

Teacher training is given at special training (normal) schools and at the schools of education of the universities. Table 10 shows the number of schools in 1960 and their enrollment.

Higher Education

There are 28 universities in Peru, 20 of which have been established since 1960. Eight of the universities are in Lima and account for 52 percent of the total enrollment. The newer universities are concentrated outside Lima. Many of these are small and most are technical schools. In 1965 there were 56,000 university students, nearly double the total for 1959, but an average of only 9 percent of those enrolled between 1960 and 1964 graduated.[37,39]

Adult Education and Literacy

Programs of adult education and literacy have been functioning in Peru since 1956. The most ambitious literacy program was undertaken in 1963, called the "Year of Literacy" by the ruling military junta. Various efforts to reduce illiteracy, including those by the armed forces discussed in the following section, were to have been combined and coordinated in this program. Progress has been limited, but by 1965 there were 4000 literacy centers of various types in operation.[38] Information on the details of the civilian adult literacy programs, including enrollment, is not available.

Continuing Problems

Despite substantial progress in the education program in recent years, several significant deficiencies still exist. The basic deficiency is the lack of

*Additional vocational programs are provided through the National Industrial Apprentice Service, organized in 1962. These and other quasipublic programs are not discussed.

universal participation at even the primary-school level. Elementary education has been both free and compulsory since 1941, but in 1962 the Ministry of Education reported that only about 74 percent of the eligible children were attending primary schools.[41] Primary-school attendance in rural areas is generally much lower. The official reasons are "the employment of children in agricultural work, apathy of parents, the low standard of living (especially of the Indian population), long distances between the schools and the homes, the lack of qualified teachers, and their ignorance of the Indian languages."[41]

Most eligible students prefer the academic secondary school to vocational education. The reasons for this are the lower social prestige of vocational and technical training and the lack of good vocational schools and programs. It is reported that most vocational schools do not qualify students for higher learning or for jobs in industry.[41] It appears that the vocational program, even as supplemented by apprenticeship programs, does not provide a sufficient number of skilled technicians to satisfy Peru s needs.

The adult literacy programs are designed to raise the level of literacy and skills of those who were unable or unwilling to attend primary schools because of their physical isolation or lack of interest. Like the youth education programs, the adult literacy programs appear to be hampered by a lack of facilities, teachers, and interest on the part of the rural population.

EDUCATIONAL PROGRAMS IN THE ARMED FORCES

Background

The Peruvian Armed Forces consist of three separate services—an Army of about 30,000 men and a Navy and an Air Force of much smaller size. There is also an internal security force, the Guardia Civil (Civil Guard).[38]

The Peruvian Constitution requires the President to "maintain internal security" and authorizes him to "organize, distribute, and use the armed forces in the service of the Republic."[36] His principal advisors in these tasks are the equal and independent Ministers of War, Navy, and Aeronautics, who are uniformed members of their respective services.

The President is also directly advised on military matters by three committees: the Supreme Council on National Defense, the Joint Command of the Armed Forces, and the National Intelligence Service.[38] The commanding general of each service is directly responsible to the Minister.

Since Peru's independence, the armed forces have been an extremely important element in the national political structure. Since 1930 the country has been ruled more than half the time by military leaders who have taken power by coups d'état. When not in power, the armed forces have exercised a degree of control over national politics through their power to intervene by a coup d'état. Historically the armed forces have been a conservative element supporting the status quo in economic and social affairs. In the past few years there has been a shift in the social composition of the officer group toward greater representation of the middle class and a recognition of the internal security implications of social reform. Recently the armed forces have become increasingly liberal in their attitudes toward national social and economic problems. As a result of these changes in attitudes the armed forces have

increasingly favored programs that involve the military in various programs contributing to national development.

Conscription Policies

Military service is obligatory for all males between the ages of 18 and 50. The Constitution requires every Peruvian to "contribute toward national defense and to submit to military obligations."[38] The implementing law provides for a selective draft by lottery for all males between the ages of 18 and 25. Conscripts are inducted every 3 months for a service period of 2 years.

Exemptions from active service are available to high-school and college students who receive compulsory military training at school, clergymen, the physically disabled, and convicted felons. Evasion by the use of political influence, bribery, and failure to register is not uncommon.

Those who fail to register are pursued and inducted if found. These include many Indians who cannot read the posted draft regulations or who purposely ignore the draft because it interferes with their agricultural activities. In some areas the number of apprehended delinquents is sufficient to fill the quotas of local draft boards. In other areas volunteers and petty lawbreakers avoiding prison by volunteering are sufficient to fill quotas.[38] Military requirements seldom exceed more than 5 percent of those eligible for service.

Social Structure

In the past the officers were drawn primarily from the land-owning elite. More recently they have come increasingly from the middle class and the lower-class peasant groups. This has broadened national support for the armed forces and has increased the concern of the armed forces for social problems. The change in the social structure of the officer group has also caused the professional military to lose prestige with the upper class. Officers are promoted at the authorization of the President and the Congress, but the grounds for promotion are unclear.

Conscripts come largely from the lower-class urban population and from the Indian peasant groups. In general, conscripts do not view military service favorably because enlisted personnel are looked down on and receive little pay and few privileges. Service in the armed forces in an enlisted status apparently lacks any significant connotation of patriotic service.

Conscripts usually serve in the vicinity of their homes.

Armed Forces Educational Programs

The educational programs of the Peruvian Army consist of education of troops within the Army and the use of troops after military service as teachers in the civilian literacy program. The education of troops within the Army covers literacy training and training in agriculture and other vocations. The Navy and Air Force have their own educational programs, but they are minor and no detailed information on them is available.

Literacy Training. The Peruvian Army "Alfabetizacion" project is designed to provide illiterate conscripts with the ability to read, write, and speak some Spanish. It is estimated that between 60 and 80 percent of all conscripts are illiterate.[42] Because the absolute number of conscripts is small, only 5000

to 6000 recruits receive this training each year. Details on the teachers, the timing of the program, and the level of reading competence are not available.

In 1964 the Peruvian Army provided $227,604 for support of this program.[43] This support included payments for teachers, facilities, and classrooms and other related costs. The US AID has supported this program by providing funds for certain publication costs.

Vocational Training. The vocational-training program is designed to train selected conscripts in various civilian trades during their last 3 months of military service. This program was initiated in 1962 with the establishment of an experimental center at Lima. Since that time four additional centers have been opened (Piura, Arequipa, Cuzco, and Iquitos) so there is at present a training center in each of the five military regions that encompass the country.

When first opened each training center taught six basic courses: carpentry, electrical work, masonry, plumbing, painting, and steel-door and -window construction.[44] New courses have since been added at each center in accordance with the demands of industry. Between 10 and 12 different trades are now being taught, including rug weaving, welding, body and fender work, blacksmithing, and furniture construction.[44] In addition to technical training, soldiers receive instruction in labor law, labor management, civic government, community relations, and management of small business.[44] Each center has a public relations section charged with liaison with industry, placement of students on graduation, and the furthering of governmental resettlement programs (Ref 16, Chap. XVIII).

The five centers had reportedly graduated 7874 semiskilled workmen by the end of 1965, 2874 being graduated that year. The announced annual goal is 10,000 graduates.

The Government of Peru provides the necessary staff and physical facilities. The cost of this support to the end of 1964 was about $563,000.[44] There are no data on subsequent costs or sources and allocations of the funds. The US AID supports this program and by the end of 1964 had contributed equipment and services valued at about $400,000.[44] The equipment consisted of tools, texts, and training aids. A full-time vocational-education advisor was furnished, and the training of some instructors at US Armed Forces installations in the Panama Canal Zone was financed.

In 1965 the program was managed by 19 Peruvian military personnel and 104 civilians.[44] The instructors are civilians who for the most part are journeymen with over 10 years of experience in their trades. These instructors are supervised by technically qualified shop foremen and qualified vocational-education specialists (Ref 16, Chap. XVIII).

The Army has a similar vocational program for conscripts at the start of military service to supply its own needs for technical personnel. The program is not discussed in this paper.

Agricultural Training. This program is designed to enable selected conscripts to study modern agriculture and animal husbandry during their last 6 months of military service. Formal training covers the operation and maintenance of farm equipment; animal husbandry, including work with cattle and poultry; and the preparation of meat and dairy products. Courses are also given in crop control and the growing of fruits and vegetables. The training emphasizes small-farm operation but also includes instruction in the operation of cooperatives.[44]

The Peruvian Army Agricultural Training Center began its operations in March 1965. It is located on the Paucartambo River, approximately 110 km northeast of Cuzco on the Sunchubamba Hacienda, which the Peruvian Army purchased for the purpose of establishing a pilot program.[44]

The initial class numbered 30 students and the second class numbered 60. It is expected that the program will be enlarged to 100 students per class or a total of 200 students per year. The local civilian population is also permitted to attend the training centers (Ref 16, Chap. XVIII).

Financial and technical support for the program has come from the Peruvian Army, the US AID, and the Government of Israel and from the sale of produce, particularly eggs. By the end of the first year of operation the Peruvian Army had contributed the equivalent of $186,500 for salaries and such expenses as the purchase of livestock, seed, and equipment. It has also provided the necessary operating staff, faculty, and facilities.[44] AID support consisted of the services of a vocational-education advisor and some equipment originally designated for the vocational training previously described.[44] The Government of Israel is providing technical assistance in the management and operation of the farm and has conducted instruction on the operation, establishment, administration, and management of cooperatives.[44]

A separate agricultural and livestock training program is being developed. Training, presumably for men not nearing the end of their service, is to be conducted at Army farming and stock centers in Lima, Cujamarca, Caraz, and Tacna. Ultimately, training will be given at military farms at Tumbes, Lambayequye, Talara, Piura, Arequipa, and Cuzco.[44] Details on this program are not available.

Adult Literacy Training. The purpose of this program is to prepare conscripts on discharge to teach civilian adult illiterates. Under this program the Army each year prepares certain conscripts to serve as instructors in the civilian literacy program. These conscripts, who are selected on the basis of "character, intelligence, aptitude for teaching, and leadership potential," receive a 1-month teacher-training course during their military service.[44] On discharge they are given a kit of teaching aids that includes 10 sets of word flash cards, 10 reading textbooks, and 10 course-completion certificates. Each instructor pledges to teach a minimum of 10 persons in his home community (usually a rural village) to read and write within 1 year. It is reported that the Peruvian Army has initiated a system to check on the progress of this program, but at present there is no way of ascertaining or ensuring that individual instructors have fulfilled their pledge.[44]

The program was inaugurated in May 1964 but because of delays in publishing instructional materials the training of instructors did not begin until January 1965. In the first year of operation 2796 literacy teachers were trained in the five military regions and at the Chorillas Center of Military Instruction (CIMP) in Lima. About one-half of those trained were in one military region—the First—at Piura.[44]

Since the start of the program the Ministry of War has spent about $150,000 for the design and publication of necessary materials. It has also provided the necessary classrooms, office equipment, and staff. The US AID supported the program in 1965 to the extent of a grant of $12,000 for part of the publication costs of textbooks, flash cards, and course-completion certificates.[44]

Navy and Air Force Programs. The Navy educational programs are limited to training merchant marine personnel and instructors for the public schools sponsored by units of the fleet in various parts of Peru.[45]

The Air Force has no educational programs except the training of technicians and Spanish-language instruction for enlisted men.[45]

No other significant data are available about the Navy and Air Force programs. These programs are of minor importance because of the small size of both the Navy and the Air Force.

GENERAL EVALUATION

The Peruvian Army estimates that 5000 to 6000 men receive literacy training each year through the Army. Even if these figures are accurate and all students reach a minimum level of competence, it is still questionable whether the program is of any significance. With 39 percent of the country's population illiterate, the contribution of the Army program toward solving this problem is very small. The available data also raise questions about the magnitude of the program within the Army. If it is assumed that the percentage of illiterates among conscripts entering the service is equal to that in the population as a whole, then it is quite apparent that not all illiterate conscripts receive literacy training. From the social composition of the Army and prevailing conscription policies, it is likely that the percentage of illiterates among conscripts is even greater than that of the general population.

The efforts in the field of vocational education also appear to be relatively insignificant, at least at present. In 1965 2874 men, divided among 12 skills, completed training. Yet in 1960 the total civilian vocational-school output was given as 39,359. The Army vocational program is planned to expand to the point of producing 10,000 students annually. If this goal is achieved the Army efforts in this field will be truly significant. It will mean that almost every conscript leaving the Army will have some civilian skill training. Of course it is not known how many will practice these skills and how many will simply return to farming.

The agricultural training program has not been in operation long enough for evaluation. It appears that this program, like the vocational training program, has not grown as planned because of lack of funds. The financial problem has probably resulted in lower-quality training and in inadequate equipment.

The program for preparing conscripts to be instructors of illiterates on leaving the service is too new to be adequately evaluated. If the annual goal of 6000 instructors is reached and each instructor does teach 10 illiterates in the year following discharge, then the annual addition of 60,000 to the country's literate population could be significant. However, the ability of these discharged conscripts to teach Spanish to illiterates is questionable. Also questionable is the adequacy of the motivation of the discharged conscript to carry out his pledge. Despite the current questions about the effectiveness of this program, it appears to be the only Army-sponsored program potentially contributing toward national integration. It would appear that national integration cannot be established as long as a significant element of the population is disenfranchised because literacy in a national language is a prerequisite for eligibility to vote in national elections.

On the basis of available evidence it is doubtful whether the expanded role of the Peruvian Army in the field of education will affect its position in the political system. Conceivably it may widen the Army's appreciation of the social and economic problems of the nation, but that is only speculation. The number of new voters resulting from the current Army-sponsored educational programs is probably too small to have any discernible political effects.

At the present levels of activity the Army-sponsored educational programs do not appear to hinder the development of the civilian educational system. For the most part the Army programs are directed at those individuals who are beyond the reach of the civilian educational system or who have not participated in the civilian program. Even with projected growth in these programs it is doubtful that they will significantly hinder the development of civilian education.

Overall it seems that the efforts of the Peruvian armed forces in the field of education are minimal and show more promise than performance.

Chapter 5

TURKEY

NATIONAL BACKGROUND

Economy

The economy of Turkey is predominantly agricultural. More than three-fourths of the labor force is engaged in farming and related occupations, which contribute between 40 and 45 percent of the gross national product.[46] Per capita income, estimated at $245 (1964 prices) in 1965, was somewhat below the average of all the other Near East countries. The annual growth rate as measured by the change in per capita gross national product between 1957–1958 and 1964–1965 was 1.5 percent.[2]

Since 1963 the major stimulus to industralization has been the Turkish government's 5-year plan. The plan is basically designed to allocate resources to development without sacrificing financial stability and to overcome many of the structural obstacles to growth. In Turkey these obstacles include a high rate of population growth, a low rate of domestic savings, a backward agricultural sector, underemployment of human resources, stagnant exports, and inefficiencies in state-operated industries.[46–48]

Population

The population of Turkey in 1965 was 31,391,000 (Ref 26, p 656). The annual rate of population growth was estimated at 2.8 percent. Although the latest available statistics showing the distribution of the population by age and sex are for 1960 (see Table 11[49]), this distribution probably has not changed much. However, the percentage of the population under 15 years of age, which was 41 in 1960, has probably risen.

The population of Turkey is of rather uniform ethnic character. More than 90 percent of the population consider themselves to be Turks, although there are some differences among the three major Turkish groups—the Anatolians, the Rumelians, and the group called the "Turks of the North." All groups are united by a common religion (most are Muslim) and by the common Turkish language, even though there are varying dialects.[46] The principal minority groups in Turkey are the Greeks, Armenians, and Jews, all three of whom are concentrated in the urban areas, primarily Istanbul. These minority

groups, although they retain their separate identities, are well integrated into the Turkish economy.

TABLE 11

1960 Population of Turkey, by Age Group and Sex[a,49]

Age group	Males	Females	Total	Percent of total population
0–4	2,180,000	2,076,000	4,256,000	15
5–14	3,760,000	3,411,000	7,171,000	26
15–19	1,247,000	1,058,000	2,305,000	8
20–59	6,191,000	5,974,000	12,165,000	44
60+	757,000	1,051,000	1,808,000	7
Unknown	29,000	21,000	50,000	—
Total	14,164,000	13,591,000	27,755,000	100

[a]Based on a 1-percent sample of census returns and rounded to the nearest thousand.

Other minority groups are the Kurds, Yuruks, and Arabs. These groups are largely nomadic and have continually resisted assimilation into the economy and social structure of Turkey.

The principal divisive factor within the Turkish population is the differences between the urban population and the tradition-oriented rural population. Historically rural Turks have divided their allegiance between the local community (including the extended family) and the universal Islamic (community) "umma."[50] Although there is some question about the strength and importance of the Islamic ties, there can be little question of either the strength or the importance of the ties to the village and extended family. These ties have continually frustrated the government's efforts to further economic and social development. The integration and reorientation of rural groups is a continuing problem in the Turkish modernization program.

Education

The adult population of Turkey is largely illiterate. Statistics compiled by UNESCO and Turkey showed that in 1960 about 46 percent of the male population and 75 percent of the female population were illiterate, with the percentages in the rural population being higher.[51] Illiteracy was defined for the purposes of this survey as the ability to read and write, but no level of competence was indicated. The percentage distribution of illiteracy by age and sex in 1960 is shown in Table 12.[7]

Another indication of illiteracy and educational needs is the number of school years and school programs completed. In 1950 about 83 percent of the total adult population (92 percent of all adult females) had not completed primary school; 12 percent had completed only primary school; 4 percent had completed secondary school; and 1 percent had completed more than secondary

school.[7] It is believed that these percentages have not changed significantly since 1950.

TABLE 12

1960 Percentage of Illiteracy in Turkey, by Age Group and Sex[7]

(Rounded to the nearest whole number)

Age group	Males	Females	Total
10–14	35	56	45
15–19	33	60	45
20–24	30	69	49
25–34	37	77	57
35–44	46	82	64
45–54	58	89	73
55–64	72	93	83
65+	78	95	88

THE NATIONAL EDUCATION PROGRAM

General

To place the national educational program in context, it should be recognized that Turkey is in a continuing process of institutional and cultural transformation with the following goals:

> . . . a secular, national republic with authority vested in a popularly elected national assembly, instead of an Islamic theocratic empire. . . ; an industrialized and planned economy with an indigenous entrepreneurial group. . . ; a state system of secular schools. . . ; mobilization and utilization of all the manpower resources of the society. . . .[51]

Organization

The Ministry of Education (Maarif Vekaleti) has legal authority over education and educational institutions. This authority includes establishment and operation of schools, preparation of budget estimates, and employment and training of school personnel. The Minister of Education is a member of the national Council of Ministers. Each province has a Director General for education who is appointed by the Minister of Education. The provincial Director General reports both to the governor of the province and to the Undersecretary for Education in the national Ministry. Each provincial Director General supervises public and private education in his area as well as such other institutions as public galleries, libraries, and museums.[8]

The major educational programs of the Ministry of Education are as follows:

(a) Primary education.
(b) Secondary education.
(c) Vocational education.
(d) Teacher training.
(e) Higher education.

Table 13 shows the student enrollment and the number of teachers in the various types of public schools in 1964–1965, the last year for which complete data are available.[9] The types of schools are described subsequently.

Enrollment in private schools was 73,854 in 1964–1965.[9]

TABLE 13

1964–1965 Public School Enrollment in Turkey, by Type of School[9]

Type of school	Enrollment	Teachers
Primary	3,830,281	85,137
Secondary	148,145	10,206
Vocational	104,551	6,123
Teacher training	12,753	1,351
Universities	55,202	3,443
Other[a]	13,831	736

[a]Schools of religion, art, and music.

Primary Education

The Turkish constitution prescribes compulsory, public, and free primary education for both sexes. The primary-school program covers 5 years and is designed for children between the ages of 6 and 14. At the end of the program a national examination is given for a primary-school certificate, which is a prerequisite for admission to the secondary middle school or a vocational school.[52]

The resources required for primary education are large and increasing. In 1960, the 6-to-10 age group numbered over 3,932,247, and there were over 11,427,000 under the age of 14.[49,51] These numbers have undoubtedly grown since 1960 since the annual population growth rate is about 2.8 percent. The inadequacy of the Turkish capabilities in primary education in 1960 was demonstrated by the fact that only 63.6 percent of the eligible children aged 6 to 10 attended primary school that year.[51] The percentage of children in rural areas attending primary schools was even lower. There is no evidence to indicate any significant improvement since 1960.

Secondary Education

The secondary-education program is based on two schools, the middle level and the upper level.[48,52] The program of each school covers 3 years and is based on 32 scheduled hours of instruction per week. Students completing the middle school take an examination for a middle-school completion certificate, which is a prerequisite for admission to the upper level.[52] On completion of the upper-level school the student receives a certificate (lise bitirme diplomasi) that makes him eligible to take the Ministry of Education comprehensive matriculation examination.[52] This certificate is a prerequisite for admission to a university.

The secondary schools offer three courses of study: literary, scientific, and commercial. Only graduates of the literary and scientific courses are eligible for university admission.[52]

Private secondary schools follow the same organization and curriculum as the public secondary schools.[52]

Vocational Education

Vocational education is offered at different levels. The trade schools and institutes admit both primary- and middle-school graduates. These vocational schools offer 5-year programs with both general and specialized courses in such fields as mechanics, chemicals, and building. The printing-trade schools offer a 6-year program, and the tailoring and pattern-making schools offer a 4-year program. Vocational schools for girls offer a 5-year program, most of which is in home economics. The commercial schools are considered part of the secondary school, and national final comprehensive examinations are given and State Maturity Certificates are granted to graduates.[52]

The need for vocational education in Turkey is urgent. Skilled and semi-skilled workers accounted for less than 10 percent of the available manpower in 1960.[46] This figure is considered to be inflated because it probably includes a substantial number of persons who would not be considered skilled in a developed country. The 15-year development plan for Turkey, announced in 1961, indicates clearly a need for skilled workers that probably cannot be met from current resources or the present level of output of the vocational schools.[46–48] Because vocational-school students must be graduates of primary schools, the number of vocational-school students depends partly on greater primary-school attendance by the eligible age group.

Teacher Training

In addition to the universities there are five types of institutions for the training of teachers: normal schools, training schools for secondary-school teachers (also called pedagogical institutes), a teacher-training college, training colleges for technical-school teachers, and a training college for commercial-school teachers. Admission requirements and curriculum in the various teacher-training institutions are highly variable. For example, one type of normal school admits holders of elementary-school certificates to pursue a 6-year course; another type admits holders of intermediate-school certificates to pursue a 3-year course.[52]

The output of the teacher-training institutions has been inadequate to meet the need for trained teachers. A UNESCO survey concluded in 1966 that there was "a shortage of teachers in every type of school and at every level."[9] It was estimated that 6627 teachers were needed in the primary program and 5892 in the secondary-school program.[9]

Higher Education

The major institutions of higher education are the University of Ankara, Aegean University, Technical University of Istanbul, Middle East Technical University, Ataturk University, and Robert College. Admission to these institutions is usually limited to lycée graduates who hold the State Matriculation Certificate.[9]

A number of other more specialized institutions of higher education are devoted primarily to technical training of vocational teachers, commerce, fine arts, and branches of engineering.[51]

EDUCATIONAL PROGRAMS IN THE ARMED FORCES

Background

The Turkish armed forces, with a strength of about 442,000 in 1965, consist of a 360,000-man Army, a 45,000-man Air Force, and a 37,000-man Navy.[12] In addition a 60,000-man gendarmerie is subordinate to the Minister of Interior in peacetime and becomes part of the armed forces in wartime.

The armed forces have the normal role of protecting the nation's borders and of preserving or restoring order in the event of serious internal disturbances. In the latter role they were active during the Kurdish uprisings in 1925 and 1930, the anti-Greek riots in 1955, and the student riots in 1960.[53]

Control of the armed forces is exercised by the Prime Minister under the President and through the Minister of National Defense. The Chief of General Staff, who is subordinate to the Minister of National Defense, performs the functions of the commander and chief in peacetime. In wartime he is superseded by a Field Commander and Chief who is appointed by the President.

The President of Turkey acts as President of the National Defense Council, which determines national defense policies. Membership includes the Prime Minister; the Minister of National Defense; the Chief of General Staff; and the Ministers of Interior, Foreign Affairs, Finance, Economy and Commerce, Communications, Agriculture, and State Exploitation. A Supreme Military Council is responsible for matters of concern to all the military services. It includes among its members the Prime Minister, who acts as President of the Council; the Chief of General Staff; the chiefs of the three armed services; and other selected military officers.

The armed forces have maintained a continual position of political neutrality and have exhibited a reluctance to be associated with any particular party.[53,54] However, the armed forces are an important force in Turkish politics and have not hesitated to exercise their power when in their opinion the situation has required it. In 1960 the army seized control of the Turkish government. Control was ultimately returned to civilian hands, but in succeeding elections and coups it has become increasingly clear that the armed forces will not tolerate a government whose views they oppose. Retired and other former military officers have been active in the government of Turkey throughout the history of the Republic. During the period 1920–1957, former military personnel had the highest rate of election to the Grand National Assembly of any vocational group except professional civil servants. Three of Turkey's presidents had served previously as military officers.[53]

With respect to military-civilian relations, it has been asserted that the armed forces enjoy enormous prestige with the general public and that the Army has contributed more to Turkish national pride than any other single factor. It has not been established whether these assertions represent propaganda or the actual views of the civilian population.[53]

Conscription Policies

The armed forces are made up mostly of conscripts. Conscription laws require all males to serve in the armed forces. Eligibility for conscription starts at the beginning of the year in which the conscript has his twentieth birthday and ends at the beginning of the year he has his forty-sixth.[53] The

length of the period of active service varies among the Army, Navy, and Air Force, but most conscripts serve for 2 years starting at age 21.[12]

Deferments are granted for students and those in critical occupations. Deferments for medical reasons are few. The conscription laws require that 60 percent of the conscripts assigned to each of the services be literate. This requirement has not been satisfied because of the low literacy of the general population, and only about 40 percent of those conscripted are literate. It is estimated that about 80 percent of the draft-eligible population are inducted.

Since 1955, women have been admitted to the Turkish War Academy as cadets. Details on this program are not available.[12,54]

Social Structure

Historically the Turkish armed forces have been less egalitarian than most armed forces. Until quite recently, members of some minority groups could be conscripted but could not bear arms or become officers and were assigned to labor battalions in the interior of the country. Under present regulations they can bear arms and, technically, can become officers but the latter occurs only rarely. Enlisted men are eligible to become officers but few achieve this status.[54]

Assignment Policies

It appears to be the policy of the Turkish armed forces to avoid having conscripts serve in their home areas. Conscripts from rural areas are assigned to posts in urban areas and vice versa.[53] The same policy in a more elaborate form applies to officer assignments.[54] The country is divided into three districts: western, central, and eastern. Within each district, military posts have been classified into four categories depending on their economic and social, climatic, cultural, and medical environment. Before an officer can be assigned a second time to the district of his initial assignment, he must serve in one of the other two. In addition the classification of his specific post must be changed from assignment to assignment.

Armed Forces Educational Programs

The educational programs of the armed forces of Turkey consist of literacy training and civic-action educational projects. The literacy-training program is the more extensive.

Literacy Training. The objective of this program is to eliminate illiteracy among the members of the armed forces. The program, started in 1959, places all illiterate conscripts (50 to 60 percent of the total) in special army education centers for a 4-month course.[53,55] Induction-test scores determine those who require this training.[54] The curriculum covers reading, writing, arithmetic, and elementary social studies. The emphasis is on developing a reading and writing vocabulary of 300 words.[55]

The instructors in the program are regular civilian teachers fulfilling their military obligations.[56] Each teacher is assisted by an army sergeant whose function is to maintain discipline and in some instances to assist with

the teaching.[56] Each literacy-training center is the responsibility of a military commander, but the Ministry of Education provides a civilian director to supervise instruction at each center.[55] At present there are 16 educational centers with an annual total output of 60,000 to 70,000 men.[56]

Estimates of the number mastering the 300-word literacy vocabulary vary. One center reported that 93 percent of the recruits "mastered the fundamental skills and were capable of progressing as long as there were adequate reading materials available."[57] Other reports suggest that this is not typical and that the average may be closer to 70 percent. No data are available on dropout rates or measure of achievement in comparison with comparable civilian programs.

The financing of the literacy-training program has been a joint effort by Turkey and the US. The US contributed $6,037,000 and Turkey $9,330,000 for the construction and equipment of literacy-training centers.[55] The Joint US Military Mission for Aid to Turkey (JUSMMAT) loaned some 200 Quonset huts for use as barracks, mess halls, and classrooms.[55] The Turkish military authorities, however, oppose any diversion of US military assistance resources to purposes that are not strictly military in nature.[55,58]

The US AID contribution has been more than financial. Dr. William L. Wrinkle, the International Cooperation Agency (ICA) General Education Advisor in 1957, played a major role in establishing the literacy-training program.[56] In addition Georgetown University, under contract to ICA, conducted the linguistic research necessary for the program and assisted with the development of teaching techniques.[56] ICA and AID have contributed textbooks and other teaching materials.[56]

Civic Action Educational Program. Before 1960, all high-school graduates conscripted into the Army were commissioned as reserve officers after 6 months of special training and spent the remainder of their active-duty period as officers.[53] Since 1960 such personnel have sometimes been used as teachers in rural areas for the 18 months of their obligated service remaining after their officer training.[56,58] This program has been limited, and only a few thousand men have actually been assigned to villages as teachers.

GENERAL EVALUATION

The education programs of the Turkish armed forces have been mainly limited to the needs of the armed forces and show little relation to or coordination with either the national development plan or the actions of the civilian agencies of the government. This is primarily a result of the basic attitude of the Turkish armed forces that their forces "should only be engaged in those activities which will not impair in any way their military tasks and combat capability." It is apparent that any activity that does not contribute directly to improving combat capabilities is viewed as an impairment. The available evidence indicates that the economic development plans prepared by the State Planning Office completely ignored the possible capabilities of the armed forces to make positive contributions, particularly in the area of manpower development. There is no evidence of vocational training in the armed forces other than that required for military purposes.

The impact of the literacy-training program of the Turkish armed forces for its own personnel on the general level of illiteracy in the country is apparently small because of the high national illiteracy rate. Even if 70 percent of the annual intake of 72,000 illiterate conscripts does become literate, the absolute impact of the program is small since more than 65 percent of the population of over 25 million is illiterate. The effectiveness of the literacy training cannot be evaluated because of the lack of information. It appears that a 300-word reading and writing vocabulary and some arithmetic are unduly modest objectives for a 4-month full-time course.

The practice in the Turkish armed forces of releasing conscripts who are high-school graduates for duty as teachers in rural areas appears to be an exception to the general policy. It may be that this program is supported because it drains off excess high-school graduates from active duty as officers and still permits retention of the policy of affording all such personnel the opportunity for officer training.

The Turkish armed forces policy of assigning conscripts from rural areas to urban areas and vice versa may assist in weakening traditional local attitudes and in building a sense of national identification. On the other hand it may be only a device to prevent a close identification with the local populace at the expense of military reliability.

Overall, the contribution of the Turkish armed forces to national growth in the field of manpower development appears to be grudgingly made. The potential is unusually great because Turkey, like Israel, is one of the few nations with universal conscription that inducts almost everyone in the eligible age group.

Chapter 6

ANALYSIS AND EVALUATION

INTRODUCTION

The purposes of this analysis and evaluation are to assess the potential of armed forces in national manpower development and social integration programs and to determine if any general principles can be derived for the conduct of such programs. The conclusions contained in this chapter are tentative because of the data limitations described in Chap. 1. This analysis and evaluation is not intended to judge the superiority of the programs of one country over those of another.

GENERAL

The four countries studied represent a variety of military organizational systems and educational and social needs. Israel and Turkey practice universal military conscription and actually induct more than 80 percent of the eligible age group. Peru and Iran use selective conscription and induct only a relatively small part of the eligible age group, generally those from the more socially backward and poorly educated segments of the population. An exception is the Iranian conscription of high-school graduates for service as teachers in rural areas (Literacy Corps).

Educational needs also vary among the countries. Iran, Peru, and Turkey have very high illiteracy rates. Israel's rate is much lower but is concentrated in a segment of the population that is poorly integrated into the national social and economic structure. Vocational training is needed in all four countries, but the greatest deficiencies of skilled manpower needed for national economic development are in Iran, Peru, and Turkey.

All four countries have social integration and national identification problems. In Iran, Peru, and Turkey these problems are compounded by the divisive effects of sharp delineation between urban and rural groups in social and economic attitudes, sense of national identification, and educational levels and opportunities. In Iran and Peru particularly significant ethnic minority groups have distinctive cultural and social affinities that tend to be at cross purposes with national integration. The unintegrated element in Israel is not an ethnic entity since it shares a common heritage with the dominant social groups. The

Israeli national integration problem arises from the presence of immigrants from Muslim countries who have some social attitudes that differ from those of the dominant group.

To facilitate analysis and evaluation, the educational programs of the armed forces of the four countries studied are discussed under these headings: "Education of Military Personnel," "Teacher Training and Selection," "Support of Civilian Educational Programs," and "National Identification and Social Integration."

EDUCATION OF MILITARY PERSONNEL

Literacy and Basic-Education Training

All four countries provide literacy and basic-education training for military personnel. In Iran, Peru, and Turkey at least 50 percent of all conscripts require such training because of lack of previous opportunity, and no significant drop in this percentage is indicated over the next decade. In Israel, with a national literacy rate of about 88 percent, this training is required primarily by school dropouts and immigrant elements. The numbers to be trained are diminishing with the decrease in immigration.

The goals of the literacy and basic-education programs for military personnel vary among the countries. The Israel goal is the equivalent of eighth-grade primary schooling, in Iran it is the equivalent of second-grade primary schooling, and Turkey it is a 300-word reading and writing vocabulary. Information is not available on the achievement level sought in the Peruvian program. Apparently the goal of the literacy and basic-education training in each armed forces program reflects the general literacy rate of the nation—the higher the literacy rate, the higher the goal. This goal also reflects in part the availability of resources, primarily personnel, for carrying out such programs.

Turkish and Israeli experiences indicate that motivation and previous exposure to educational opportunities are factors in selecting the most effective time for basic educational training for military personnel. According to the Israeli experience, school dropouts do not benefit from a second opportunity for education unless there has been a change in attitude toward the value of education such as that resulting from the experience of active military service. The Turkish armed forces have found that basic education at the beginning of active service is effective because it affords the recruits an opportunity to achieve a socially desirable goal—literacy and knowledge—that had not previously been available. Under such circumstances basic education early in the service period does not reinforce a previous failure but represents a new opportunity.

The conduct of the various basic literacy and educational training programs cannot be adequately evaluated because of the lack of sufficient information on cost, curricula, and measure of achievement. Much of the available information appears to describe as achievement what in reality may only be goals. The teachers used in the programs are for the most part recent graduates of either secondary schools or teacher-training institutes and have little or no experience or training in adult education. The Israeli basic-education program appears to accomplish the most in the 3 months allotted to it, partly because

of the high ratio of trained teachers to students. This situation probably cannot be duplicated in most underdeveloped countries because of the lack of universal conscription and the limited availability of trained teachers in the armed forces or within the nation. The available evidence indicates that the instructional methods are traditional and oriented around the teacher. In none of the countries examined is there evidence of development of methods or equipment for adult education that extend the instructional range of the individual teacher.

There is little information to indicate the true degree of coordination between the armed forces literacy and basic-education programs and the comparable civilian programs. The literacy and basic-education programs of the armed forces should complement civilian programs to enable the motivated serviceman to move into the civilian educational stream with minimum adjustment. An example of such complementarity is the design of the Israel Defence Forces' basic-education program: graduation is nationally recognized as the equivalent of completion of the civilian primary school, and graduates of the program are eligible for vocational training open only to primary-school graduates.

Apparently the time and resources devoted to the current literacy and basic-education program of the armed forces in Iran, Israel, Peru, and Turkey degrade military operational readiness. Significantly, none of the four armed forces attempt to raise all their military personnel to educational levels above the national average.

Vocational Education

Vocational training for the specific purpose of preparing military personnel for civilian life and meeting national shortages in skilled manpower is a relatively new development in armed forces educational programs. Only Iran and Peru of the four countries examined have such programs. The Israel Defence Forces program for training certain groups in agriculture (NAHAL) is motivated by special factors not directly related to economic development needs.

The need for vocational training to assist in the economic growth of underdeveloped countries is urgent. Although armed forces programs to provide this form of training are now only in their infancy, the potential contribution is sufficiently great to warrant further investigation and study. As pointed out before, military service places a considerable body of young adults under governmental control. This group for the most part must make a career choice on leaving the service, and the government, through the armed services, is in a strong position to guide that choice.

As with the literacy and basic educational programs, there is little information on the conduct of vocational training. It is suspected that it is elementary and could probably be made more effective by the use of advanced teaching methods and equipment. The selection and training of teachers are areas that also warrant investigation and study. Little or no information is available on the selection process for vocational training or on postservice placement procedures. The evidence does not indicate how many of those trained in a specific skill actually use that skill after discharge. The effectiveness of vocational training depends not only on how well a skill is learned but also on whether it increases the labor pool in the skills required by the economy. In this regard the available information indicates that the involvement of

industry in the armed forces vocational-training programs is minimal. It would appear that closer coordination with the private business sector would increase the effectiveness of such programs. The private business sector knows what skills are needed and could help in (a) the design of curricula, (b) counseling, and (c) getting jobs for those completing the training.

Another area for further investigation is coordination with civilian programs for opportunities for further training. It is doubtful whether any armed forces vocational-training program alone can produce craftsmen with the skill levels required. At best the armed forces can probably provide only the initial training to permit entrance into a skill area and the motivation for further training. These accomplishments can be significant.

TEACHER TRAINING AND SELECTION

The four armed services all obtain teachers from different sources, and the choices reflect in part the national military conscription policy and attitude on teacher qualifications. The armed forces of Iran and Turkey consider high-school graduates, with some additional training sponsored by the armed forces, capable of teaching rural primary schools and illiterates. The Israel Defence Forces use as teachers women who have had 2 years of civilian teacher-college training following high-school graduation. This civilian teacher-college training, designed to prepare primary-school teachers, is supplemented by some instruction on adult education given by the Israel Defence Forces. This instruction is believed to be only a short orientation course.

Vocational-training instructors in the program of the Iranian armed forces are regular military personnel who have received special training. The nature and extent of this training are unknown. The teachers in the vocational-training programs of the Peruvian armed forces are experienced civilians who are supervised by qualified technicians and vocational-education specialists.

The same type of military personnel used in the armed forces literacy and basic education programs is used to support programs to reduce illiteracy among civilians. A major exception is the Peruvian armed forces' program of using former conscripts as teachers after 1 month of training at the end of the service period. It is presumed that a significant number of these teachers learned to read and write while on active service. The effectiveness of this unsupervised voluntary program can only be suspect.

The information on teacher selection and training is too scanty even in the four cases examined to draw any firm conclusions on the preferred methods of recruitment and training of teachers for armed forces educational programs. It is doubtful whether any one general method is applicable to all underdeveloped countries. Further study of the four countries examined and additional case studies would be helpful in developing guidelines based on experience. In this respect the Iranian policy of inducting all high-school graduates for training and duty as teachers in rural primary schools suggests interesting possibilities. In effect the high-school graduates are singled out for a form of compulsory national service in rural areas. This practice is not considered discriminatory in Iran because other select population elements are also conscripted for other nation-building programs under military control. The

Iranian government claims that as a result of this national service many of the high-school graduates become professional teachers after some further training following completion of military service.

SUPPORT OF CIVILIAN EDUCATIONAL PROGRAMS

In all four countries examined the major thrust of the armed forces support of civilian educational programs is the provision of teachers for schools in rural areas as a form of alternative national service. In this respect the armed forces programs assist in overcoming the deficit in rural teachers caused by national teacher shortages and consequent concentration of teachers in the preferred urban areas. The quality and degree of this support varies as previously described.

Civilian adult educational programs are emphasized by the armed forces of Iran, Israel, and Peru. These programs apparently are the most significant governmental education programs that reach the illiterate in rural areas and in some cases the only programs. The effectiveness of these programs may be questioned on the grounds that attendance is erratic and that the quality of instruction is poor. Nevertheless the armed forces do provide a vehicle for extension of literacy training to individuals, particularly in rural areas, who would not otherwise receive it.

The use of members of the armed forces as teachers in rural areas is one way of coping with the serious problem of teacher shortages. Other solutions suggest themselves, such as full scholarships through the secondary-school level in return for 2 years of service in rural schools at minimal salaries. The problem of teacher recruitment is complex and requires special study of many factors including the educational requirements, social structure, and mores of the nations concerned.

NATIONAL IDENTIFICATION AND SOCIAL INTEGRATION

Except for the Israel Defence Forces, none of the armed forces examined try deliberately to foster national identification and social integration. It is questionable whether an armed forces program isolated from other national programs and policies can significantly foster these attitudes. It does seem that with little effort the armed forces can make meaningful contributions when there are overall national programs to strengthen national identification and social integration of all elements of the population. This appears to be the case in Israel. However, there are so many unique circumstances in that country that it would probably be an error to generalize from the programs of the Israel Defence Forces. Although many of the elements of the Israeli program, such as the geography and national history, are readily adaptable to other countries, the resulting effectiveness would still be questionable unless they were part of an overall national program. An armed force in many respects reflects the society of which it is a part and cannot effectively carry out sociological programs that are not reflected in other aspects of national life. In those societies where the ruling elites consider class mobility as a

threat to their interests—this is true in some permutation in most underdeveloped bipolar societies—the armed forces cannot make real contributions to national cohesiveness. However, the armed forces can assist in breaking down the traditional attitudes of elements of the population by contributing to basic education and literacy and vocational-training programs. This in turn may facilitate the eventual reordering of the social basis of the country if such a goal is desirable.

OVERALL EVALUATION

This study indicates that in underdeveloped countries the armed forces do have a potential for contributing to manpower development in the areas of literacy training, basic education, and vocational training. The armed forces can also be used as a vehicle for alternative national service to assist in overcoming temporary inadequacies in civilian educational programs. Armed forces educational programs probably have only limited impact when measured against total national requirements as long as the major consideration in the size of the armed forces is security requirements. However, armed forces programs can reach population elements that cannot be adequately provided for by civilian educational programs.

In many underdeveloped countries the leadership of the armed forces represents both the conservative element that dominates the national political system and a minority social class. Extension of the activities of such armed forces into the field of manpower development in the area of education may possibly serve to reinforce their control of the population. However, this is not likely to be a significant factor. Population control is exercised through economic means and control of political mechanisms and the channels of expression of public opinion. Further, when the civilian authorities cannot obtain the necessary resources to meet national educational needs, there is merit in using other available and feasible means to assist in reducing illiteracy and in raising educational levels. National development in economic, social, and political spheres cannot make progress when illiteracy rates are high and skilled manpower inadequate.

Although this study indicates that armed forces do have a potential for contributing to manpower development in underdeveloped countries, the information is insufficient to indicate more than broad courses of action for conduct of such programs, as follows:

(a) Educational programs of the armed forces should be closely integrated with and should complement civilian educational programs.

(b) Where feasible, final authority over content and design of the armed forces educational programs should rest with civilian educational authorities at the highest national level.

(c) Vocational training should be designed to be compatible with national and economic development plans and should consider the vocational interests of the trainee.

(d) Armed forces educational programs should be aimed only at military personnel and those population segments that cannot be reached through civilian educational programs.

(e) Educational programs for the armed forces of a specific country must be designed to fit the specific national needs, with cognizance of the national educational system, development plans, population structure, and the civilian and military social structures.

Further research is needed to provide a basis for exploiting the potential of armed forces in manpower development in the area of education. Although no program can be universally applicable, there is value in learning the errors and successes of past and current programs. Other areas that require further research are listed below. In the listing the term "basic education" is used to include literacy training.

(a) Methods and criteria for evaluating alternative manpower policies to further (1) basic education and vocational training of military personnel and (2) use of military personnel to assist in training and education of selected segments of the civilian population.

(b) Methods of integrating armed forces educational programs with national educational and economic development programs.

(c) Teaching methods and equipment for basic education and vocational-training programs of armed forces of underdeveloped countries to (1) improve student/teacher ratios and (2) increase effectiveness of instruction. This area includes investigation of adaptability of training and educational methods of the US armed forces.

(d) Curriculum design and execution of armed forces programs for basic education and vocational training for military personnel.

(e) Methods for securing cooperation of the private business sector in the design and conduct of armed forces vocational-training programs.

(f) Criteria and methods for measuring the effectiveness of armed forces programs for basic education and vocational training.

(g) Selection and training of armed forces personnel as teachers for basic education and vocational training for both military personnel and selected segments of the civilian population.

(h) The desired role of the US in supporting and assisting in the education programs of the armed forces of other countries.

The results of this further research should help to plan effective programs in the education aspects of manpower development for the armed forces of underdeveloped countries.

REFERENCES

CITED REFERENCES

1. The American University, Special Operations Research Office, Foreign Areas Studies Division, "US Army Handbook for Iran," Washington, D. C., 1963.
2. US Agency for International Development, Office of Program Coordination, Statistics and Reports Division, "Near East and South Asia: Economic Growth Trends," Washington, D. C., 1966.
3. "Iran," The Middle East and North Africa, 1966–67, Europa Publications Ltd. London, 1966, pp 227–58.
4. US Agency for International Development, "Selected Economic and Social Facts about Iran," Washington, D. C., 1966.
5. Louis Barron (ed), "Iran," Worldmark Encyclopedia of the Nations: Asia and Australia, Worldmark Press, Inc., Harper & Row, Publishers, New York, 1963.
6. "Iran Sends 'Army' To Aid Peasants," The New York Times, 29 Jan 67.
7. United Nations Educational, Scientific, and Cultural Organization, Statistical Yearbook, 1965, Mayenne, France, 1966.
8. Kathryn G. Heath, "Ministries of Education: Their Functions and Organizations," Dept of Health, Education, and Welfare, US Govt Printing Office, Washington, D. C., 1962.
9. United Nations Educational, Scientific, and Cultural Organization, International Yearbook of Education, 1965, Paris, 1966.
10. Dept of Health, Education, and Welfare, Office of Education, Division of International Studies and Services, "Educational Data: Iran," Information on Education around the World, Washington, D. C., 1959.
11. Alfred Friendly, "Unique Iranian Army Leads Children instead of Guns," The Washington Post, 10 Jul 66.
12. The Institute for Strategic Studies, "The Military Balance 1965–66," London, 1966.
13. Imperial Iranian Ground Forces, "Imperial Ground Forces Civic Action," mimeographed notes from Shiraz Conference, 12–15 Oct 64.
14. Commander in Chief, US Strike Command, "Narrative—Section G—Civic Action—Iran," mimeographed paper, 15 Jun 67.
15. MAJ T. J. Simmons to LTC B. L. Hambleton Jr, memo, "Civic Action in Iran," 29 Jun 64.
16. Hugh Hanning, Peaceful Uses of Military Forces, Frederick A. Praeger, Inc., New York, in press.
17. GEN Hejazea, Chief, Supreme Commander's Staff, "Plan of Civic Action," report, 30 Oct 63.
18. BG Karimbo, "Training Program Literacy Corps Units," memo, 6 Jan 64.
19. BG Bayat-Makoo, "Directive Concerning Literacy Corps," memo, 28 Mar 64.
20. Shapour Nemazee, "Progress Report on Literacy Corps," Kayhan International, 29 Jul 64.
21. HQ, US Strike Command to Mr. Wynne James, Ltr, 13 Jul 64, Incl, "Civic Action," 30 Mar 64.
22. J. Behrovz (ed), Iran Almanac and Book of Facts, 1966, Echo, Tehran, Iran, 1966.
23. Geogory Limu, "Education for Change," reprinted from Kayhan International, undated.
24. Richard Blandy and Mahyar Nashat, "The Education Corps in Iran," Development Dig., IV: 122–29, (Jan 67).

25. "Israel," The Middle East and North Africa, 1966–67, Europa Publications Ltd, London, 1966.
26. Luman H. Long (ed), The World Almanac & Book of Facts, Newspaper Enterprise Association, Inc., New York, 1966.
27. Central Bureau of Statistics, Statistical Abstract of Israel, 1966, No. 17, Jerusalem, 1966.
28. Randolph L. Braham, "Israel: A Modern Educational System," Dept of Health, Education, and Welfare, US Govt Printing Office, Washington, D. C., 1966.
29. COL Mordechai Bar On, "Education Processes in the Israel Defense Forces: A Working Paper on the Conference on the Draft," 4–7 Dec 66, at the University of Chicago, mimeographed.
30. COL Irving Heymont, "Israeli Defense Forces," Military Rev., XLVII (2): (Feb 67).
31. ——, observations, field trip to Israel, Summer, 1966.
32. ——, "Role of Armed Forces in Nation-Building Programs: Agriculture: The Israeli NAHAL Program," RAC-TP-23, Research Analysis Corporation, 1966.
33. C. Rossillion, "Economic and Social Work for Young People During Defense Service: The Israeli Formula," International Labor Rev., (93): 66–79 (Jan 66).
34. Discussions with COL Mordechai Bar On, Israel Defence Forces, Dec 66.
35. Miriam Mechner, "Bridging the Gap: Elementary Schooling in the Israel Defence Forces," in Israel Defence Forces, undated.
36. COL Mordechai Bar On, "Tsahal's Educational Enterprise," in Israel Defence Forces, undated.
37. Inter-American Development Bank, "Peru," Social Progress Trust Fund Sixth Annual Report, 1966, Washington, D. C., 1967, pp 338–55.
38. Edwin E. Erickson et al, "US Army Handbook for Peru," Foreign Areas Studies Division, Special Operations Research Office, The American University, Washington, D. C., 1965. FOR OFFICIAL USE ONLY
39. Inter-American Development Bank, "Peru," Social Progress Trust Fund, Fifth Annual Report, 1965, Washington, D. C., 1966, pp 513–47.
40. Dept of State, Office of Media Services, Bureau of Public Affairs, Foreign Policy Briefs, XVI (23): (24 Apr 67), US Govt Printing Office, Washington, D. C.
41. Adela R. Freeburger and Charles C. Hauch, "Education in Peru," Dept of Health, Education, and Welfare, US Govt Printing Office, Washington, D. C., 1964.
42. US Southern Command, Ltr, subject: "Civic Action Projects Report," SC(ES) Incl 13, Sec I, 2 Apr 64.
43. ——, Ltr, "Civic Action Projects Report," SC(ES) Incl 9, Sec III, Peru, 3 Dec 63.
44. ——, "Peru," Civic Action Progress Report 1965, Vol III, pp 676–744.
45. Inter-American Defense Board, "Military Civic Action in the Economic and Social Development of Countries," T-255, Washington, D. C., 1965.
46. Louis Barron (ed), "Turkey," Worldmark Encyclopedia of the Nations: Asia and Australia, Worldmark Press, Harper & Row, Publishers, New York, 1963, pp 339–50.
47. Nuri Eren, "Financial Aspects of Turkish Planning," Middle East J., 120, (2): 187–95 (1966).
48. "Turkey," The Middle East and North Africa, 1966–67, Europa Publications Ltd, London, 1966, pp 691–95.
49. United Nations, Statistical Office, Department of Economic and Social Affairs, Demographic Yearbook, 1963, New York, 1964, pp 206–07.
50. Kemal Karpat, "Society, Economics and Politics in Contemporary Turkey," World Politics, XVII (1): 50–74 (Oct 64).
51. Andreas M. Kazamias, Education and the Quest for Modernity in Turkey, University of Chicago Press, Chicago, 1966.
52. Dept of Health, Education, and Welfare, Office of Education, Division of International Studies and Services, "Educational Data: Turkey," Information on Education around the World, No. 30, Nov 59.
53. COL Clifton C. Fox, "Turkish Army's Role in Nation Building," Military Review, 68–74 (Apr 67).
54. Daniel Lerner and Richard D. Robinson, "Swords and Plowshares, The Turkish Army as a Modernizing Force," World Politics, XIII: 19–44 (Oct 60–Jul 61).

55. "Civic Action—Turkey," mimeographed paper furnished by OSD(ISA), undated.
56. Paul T. Luebke, "US Foreign Aid Helps Turkey Fight Illiteracy," mimeographed.
57. Jerry Kluttz, "The Federal Diary: Turkey's Army Strives To Reduce Nation's Illiteracy," The Washington Post, 30 Nov 61.
58. MG Enginsoy, Central Treaty Organization, Presentation for the Civic Affairs Seminars held in Shiraz, 12 Oct 64.

ADDITIONAL REFERENCES

Avidon, M., "Education in Israel," Education Abst., X (6): (Jun 58).
Bentwick, Joseph S., Education in Israel, The Jewish Publication Society of America, Philadelphia, Pa.
Dept of Health, Education, and Welfare, Division of International Studies and Services, "Educational Data: Israel," Information on Education around the World, No. 27, Oct 57.
Feller, A., "Education in Israel: A Survey," Pedagogic Reptr., Jan 57.