REGIONAL COOPERATION IN EDUCATION IN THE NEAR EAST

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EXECUTIVE SUMMARY OF PRINCIPAL RECOMMENDATIONS

Little regional cooperation in education exists between countries of the Near East. To the extent that there is regional cooperation, it exists among the Arab states through ALESCO, the UNESCO regional center for education, and the UNRWA-UNESCO Institute of Education. Only the last of these three organizations has undertaken practical projects and programs. Other activities are largely discussion, in the form of conferences and seminars. Egypt has been the most active country in developing regional programs for other Arab countries and for several African states. These activities are, however, more in the form of assistance than cooperation, in which Egypt, by virtue of its cultural and educational hegemony, has aided Muslim/Arab countries to develop their education systems. Israel, too, has had extensive experience in foreign aid related to education, mostly in African states. A survey of Egyptian and Israeli experience in these technical assistance activities indicates to some degree possibilities of their mutual cooperation in development of education. At present, the political setting, the psychological atmosphere, and the commitment to cooperation indicates that the only possible candidates for such cooperation are Israel and Egypt.

Disparities between the two countries in resources, educational philosophy and goals, internal political and social structure, and preparedness for mutual cooperation would require a cautious and gradual approach. With these reservations in mind, a three phase proposal for cooperation through a trilateral relationship has been developed. In the initial phase, contacts would be exploratory, undertaken with assistance from the United States. American institutions would be the venue of many initial contacts, some in the form of seminars and small meetings. They would be undertaken through a trilateral commission of American, Egyptian, and Israeli academicians and scholars. Projects would be small-scale, with low visibility, small numbers of participants, for a relatively short period of time. Funding would be modest.

Phase two would be initiated by the trilateral commission after a trial period of three to five years for the projects in phase one. Success of projects in phase one would assure continuity of contacts between participants into phase two. An atmosphere conducive to further cooperation would have been developed, and the three countries participating in the trilateral commission would be prepared for longer term commitments to larger projects, with more participants and a greater investment of funds. In phase two, the subjects of seminars and discussions of phase one would be implemented in concrete projects of longer duration.

Projects undertaken in phase one and phase two from the basis of phase three. By the time participants would be ready for phase three, a decade would have passed during which close relations would have evolved between Egypt and Israel. At this point, participants would be ready for commitments of some permanency requiring large investment of funds, perhaps from outside the region. Projects in phase three would be based on relations that had become institutionalized over a decade or more. Manifestations of this relationship would be establishment of permanent organizations and/or institutions involving full participation by Egypt and Israel, perhaps with assistance from the United States.

Regional Cooperation in Near East Education

Despite efforts by every country in the Near East to improve education, disparities in achievement and differences in existing systems are so great, that it would be difficult to discuss education in terms of a regional system. Morocco, Tunisia, and Algeria in North Africa as well as Syria and Lebanon have been strongly influenced by French traditions and organization in development of their school systems, teaching methods and curriculum. In Jordan, Iraq and Egypt British tendencies outweigh the French. Among the countries of the Arabian peninsula and in many other rural regions, traditional Islamic-Arab trends often predominate. Educational goals in the new socialist oriented republics are frequently difficult to accommodate with those in monarchies with traditionally oriented regimes and educational systems.

Statistical indicators of educational achievement and scientific and technological efforts show a great range in literacy rates, the percent of population employed in agriculture, numbers of students in universities and university graduates, numbers of scientists and engineers, the percent of professionals in research and development, and percentages of GNP devoted to R & D. As demonstrated by the attached charts, the range is as great as that between developing and developed countries. (See appendices 1 through 7)

A conference of Arab ministers responsible for application of science and technology to development reported in 1976 that:

"The highest number of students enrolled in the institutions of higher education per million population is in Lebanon (15400 in 1971), Egypt (9166), Syria (7570 in 1971), Iraq (6228) and Kuwait (6005)."

"About 64% of all students in Arab countries are enrolled in the social sciences and humanities, 7.5% in natural sciences; 10% in engineering, 10.5% in medical sciences and 8% in agriculture."

"For most Arab countries, students studying abroad can be considered as an essential supplement to those enrolled in national institutions of higher education."

"With regard to the Second Development Decade target which expects that by 1980 the developing countries will be spending 0.5% of GNP for R & D activities; as yet it appears that, except for Egypt, none of the Arab countries have reached this target. In some of these countries, however, expenditures on R & D are approaching the target. . . ."

"In twelve reporting countries, the density of the total stock of scientists and engineers, as related to population, is generally several times higher than in Africa and Asia, is comparable to that of Latin America, but is less than 1/3 that of the developed countries. On the other hand, the density of the stock of technicians is almost equal to that of Africa and Asia and is about 1/30 that of developed countries. . . ."

"The distribution of the stock of scientists and engineers by field of science shows that more than 60% of this category were trained in the social sciences and humanities. Engineering represents 14%, agriculture 9%, medical sciences 9%, and natural sciences 7% of the total stock of scientists and engineers."

"The total number of scientists and engineers engaged in R & D related to population shows that only one country (Egypt) has achieved the target set for the Second Development Decade: 200 scientists and engineers assigned to R & D per million population by the year 1980. Close to the target are Kuwait and Iraq with 186 and 141 R & D scientists and engineers respectively per million inhabitants. . . ."

"Agriculture in Arab countries is represented by the largest group of scientists and engineers in R & D (more than 42% on average), followed by natural sciences (about 22%), the social sciences and humanities (13%), engineering and technology (12%) and medical sciences (11%)."

"The productive sector is a bigger employer of R & D manpower (about 45% of scientists and engineers) than other sectors in most of the countries. It is

followed by the higher education sector (33%) and the general service sector (22%)."

"The ratio: 'technicians per scientist and engineer in R & D' seems to be very low in practically all Arab countries (0.5:1 on average). This ratio is slightly higher in the productive sector (0.7:1)."

Education and National Development

All countries of the Near East have given high priority to education in the national development process. Since the 1950's eradication of illiteracy has been a common major national goal. Countries of the region generally recognize the need to improve teacher education and training, to develop modern curriculum and to expand the physical plant of their educational institutions to create the skilled manpower required for national development. Percentages of national budgets and GNP devoted to development, expansion and improvement of educational resources has increased substantially. Expansion of educational systems at all levels, up through university, has taken place, often without adequate long-term planning, proper distribution of resources and allocation of priorities in the attempt to make up for lost time.

In several countries of the region there has been an explosion in numbers of institutions and students with little regard for allocation of manpower and the specific roles the new class of educated young people will play in the development process. In some countries it seems that higher education is expanding at an uncontrolled rate, related more to population increase than to developmental goals, as an ad hoc solution to immediate socio-economic problems with no synchronization of demand and supply of highly skilled manpower. No country in the region has yet developed the capacity to determine relationships between supply of and demand for various occupations required for balanced development. The result is evolution of structures in which education and labor markets

combine the worst aspects of the free market and controlled planning systems.

Since the oil revolution of 1973, the pace of economic development has been unequal and unpredictable as countries like Saudi Arabia, the Gulf states, Libya and Algeria acquire national incomes inconceivable only a decade ago. These countries have increasingly sought foreign technical assistance in their attempts to follow rational development plans and to create alternative resources to their oil. Increasingly they have turned to labor markets which can provide skills in which they are deficient--markets such as Egypt, the Palestinians, and Pakistan. Egyptians and Palestinians have been the chief suppliers of educational skills in assisting these countries to develop and expand their burgeoning educational systems.

Regional cooperation has been widely accepted as a beneficial concept by most governments in the Near East and a variety of international and regional bodies have been established to carry out this objective. Most cooperation has to date been at the discussion level, in the form of conferences and meetings organized to exchange information, draft plans for projects which have not yet been implemented, and to propose schemes for future implementation.

Within the Near East most of the existing organizations to carry out regional programs have been established at the inter-Arab level. There is little regional contact in programs related to education, health, agriculture, industry and science and technology between the Arab and non-Arab countries such as Turkey and Iran; such contact between Israel and its neighbors is at present non-existent.

Among the Arab states themselves constraints on actual implementation of cooperative projects are both political and social. Diverse colonial heritages, differing social and political orientations, and a wide gap in levels of social development are impediments to closer coordination in achievement of educational goals among the Arab states. To the extent that there is commonality of educational

goals and organization among the diverse Arab states, it is, less the result of an integrated plan, than of Egyptian educational and cultural hegemony.

Despite diversity, common acceptance of a Pan-Arab theme has given a distinctive Arab national character to educational orientation of the twenty-one Arab League states. All increasingly emphasize the centrality of the Arabic language and Arab cultural and national themes. All face common problems in realizing goals of developing a modern Arab educational system. Shortages of teachers and teacher training institutions exist throughout the region. Technical, vocational and special educational personnel and resources are in short supply. Local planning facilities and management personnel to carry on day-to-day tasks of sustaining existing levels, to say nothing of increasing the pace of educational development, are in short supply. As a result of these difficulties, most Arab countries of the region, and some non-Arab Muslim states in Africa have turned to Egypt for assistance.

Most countries in the region are recipients rather than donors of technical assistance in developing their educational systems. However, Egypt and Israel stand out as contributors to the development process of other nations. Both have had extensive experience in assisting other developing countries in Africa, Asia, Latin America and the Near East. While the emphasis in both cases has been on assistance rather than on cooperation, their experiences might be a useful indication of capabilities in advancing regional cooperation in education.

Relationships between countries rendering assistance and those receiving it, a donor-client relationship, is quite different than that between countries working in cooperation. In the latter case, the emphasis is more on parity in responsibility, obligations and benefits; a greater psychological equilibrium exists and prospects for a balanced relationship are more likely. Nevertheless,

it would be useful to examine the assistance efforts of both Egypt and Israel to determine the resources, capabilities, successes and failures of each country should they become involved in mutual efforts to develop cooperation in education.

Foreign assistance efforts of both Egypt and Israel have been labeled "international cooperation," but in reality the nature of their involvements has been assistance, in which they have been donors of expertise to countries requesting aid. There has been strong political motivation in these efforts, although they have been colored by the rhetoric of international service. However, many participants and some of the institutions involved have been highly motivated by the international service credo.

Israel and Regional Cooperation

Israel's "international cooperation" program began in the early 1950's with assistance to Burma. Its Ambassador to Burma, David Ha-Cohen, and Prime Minister David Ben Gurion, both leaders of the country's Labor Party and strong advocates of a socialist orientation, perceived the ties with Burma as one way to redress Israel's exclusion from the newly formed Third World Bloc created at the 1955 Bandung Conference. Israel's exclusion from Bandung and from the New Delhi Asian Socialist Conference in 1956 impressed on Israeli leaders the effectiveness of Arab pressure and the importance of creating bonds with the developing world to prevent their country's political and economic isolation. Initially Israel assisted Burma with a military mission, agricultural, medical and industrial experts to advise the Defense Service Industries. Later cooperation was expanded to non-military fields.

Similar assistance to Ghana, followed by establishment of diplomatic relations in 1957, was followed by expansion of contacts with other African countries, spreading to cooperation with Tanganyika and Nigeria. Later cooperative efforts were also initiated with Latin America, the Caribbean, Oceania and with

other Asian countries. Since 1958, Israel has sent some 7,000 experts to developing countries on official bilateral and multilateral missions. At the same time, Israel has trained more than 20,000 people from these countries.

Until the mid-1960's most of Israel's programs were with African nations. They were particularly receptive to Israel's program because it provided them with what the Africans themselves perceived as their needs in a non-political and "non-colonialist" manner. The Israeli style, low cost, and lack of political pressures were appealing. By 1966, political realities began to undermine Israel's African relationships. There was a growing convergence of African and Arab political interests, and Arab countries began to play a more active role in the Pan-African movement, especially in the OAU. Israel's victory in the 1967 war led to its increased political isolation as most third world countries including those in Africa tended to side with the defeated Arab states. By the end of the 1973 war all African states except Malawi, Lesotho, Botswana, and Swasiland severed relations with Israel leading to termination of most bilateral cooperation efforts. As a result, aid to Latin America rose to first place. Activities were also continued with Nepal, Laos, Cambodia, Singapore, Korea, the Phillipines and Singapore.

The programs have emphasized manpower training and development in a variety of fields, with most efforts focused on agriculture and community development. Other fields include assistance in developing youth organizations, vocational and management education, joint commercial enterprises, medicine, nursing, science, research, and higher education.

Courses are given in several different languages, in diverse subjects at various institutions in Israel for varying lengths of time. Examples are: a year long course in English in comprehensive regional planning given at the Settlement Study Center of the National and University Institute of Agriculture at Rehovot;

a three and a half-month course in French in cooperation and labor in the service of national development at the Afro-Asian Institute for Labor Studies and cooperation in Tel-Aviv; a three-month course in Spanish on problems of arid zones, including village agricultural planning, agro-technology, irrigation systems, hydrology, and drainage; a four-month course at Mt. Carmel International Training Center for Community Services in Haifa, on home industries and cooperative marketing; a six-week course in English at Mt. Carmel on non-conventional approaches to education. Other courses include agricultural cooperative marketing, nursing, public health and social medicine, farm management, and mechanical engineering.

The Israeli programs have also included sending consultants and specialists in the above and other subjects to countries with which Israel has had cooperative relationships. Instructors sent abroad are usually young professionals, a high percentage of whom have lived in agricultural communities. They have generally been highly motivated individuals characterized as being hard working and devoted to their assignments.

Among the more popular Israeli activities have been youth training programs requested by more than thirty developing countries since 1962. Many have adopted the Israeli model of youth organization focusing on rural areas and agricultural settlement. The underlying principle in these programs is that youth must be involved in the development process through education; it must identify with the inherent changes of traditional social patterns and political authority. The programs are based on Israel's experience with the Youth Aliya movement and the para-military Nahal and Gadna Training programs. Until 1972, the youth programs were under the Ministry of Defense. Since then an independent organization funded by the Foreign Ministry's Division of International Cooperation was created,

the International Youth Cooperation Center, to assist. An example of a successful youth program has operated in Malawi since 1964. Called the Malawi Young Pioneers, its three thousand members have been trained at twenty-two farms. Upon completion of training, the Young Pioneer graduate returns to his village as an instructor passing on the skills acquired at the training farm.

Difficulties in dealing with local tribal differences in Dahomey, Togo, and Ivory Coast led to sacrifice of the nation building concepts in the Nahal ideology. These programs were marred by continuous tension and hostility which prevented effective discipline or the growth of any national consciousness, causing up to sixty percent desertion from the training course. In Tanzania and Ivory Coast, the Nahal and Gadna type programs were affected by political and military associations of the youth programs. Because they were by definition linked with the armed services, they were more sensitive to internal politics than were other programs.

A major component in community development programs has been improving the status of women and their role in development. The Mt. Carmel Center mentioned above was established in 1961 to combat illiteracy and to train women in areas such as pre-school education, community services, adult education, and handicrafts. Since 1961 some 2,500 trainees from 101 countries have participated in its activities. A follow up study of Kenyan alumni showed that nearly two thirds used the methods they learned in Israel. Those who entered the training with a higher level of education were more motivated to use the knowledge and more capable of applying it. The most successful of ten courses was the kindergarten program and the least successful dealt with health and nutrition. About 68 percent of those interviewed from the literacy course continued to work in adult education, many adapting methods learned in Israel. About thirty percent were unable to follow through

because of lack of encouragement, time, and facilities. Recommendations for improvement included better recruitment procedures to assure that courses fitted students' abilities, and more intensive on-the-spot courses.

Israel's assistance program to Iran has been its single experience in cooperation with another Near Eastern country. This link also had strong political motivations. The Shah long regarded Israel as a model of development, especially in agriculture and water resource development. Instead of overt assistance agreements between the two countries, contracts were signed between private and quasi-governmental establishments and their subsidiaries. Through this arrangement, Israeli consultants assisted in rural rehabilitation of Qazvin area after it was devasted by earthquakes in 1962. Exchanges with Iran included advice in rural rehabilitation and in education.

Assistance programs are organized through the Division of International Cooperation of the Ministry for Foreign Affairs, one of the largest divisions in the ministry. It is responsible for creation, implementation, and funding of assistance policies and projects. The Histadrut (General Federation of Labor) has also established an institutional base for such assistance with its International Institute for Development, Cooperation and Labor Studies. The Foreign Training Department of the Ministry of Agriculture has also trained several thousand personnel from more than 80 countries. Other organizations established for purposes of international cooperation include the Mt. Carmel Center mentioned above, the Histadrut's Center for Cooperation and Labor Studies for Latin America, the Center for International Agricultural Cooperation, the Hadassah Medical School of the Hebrew University, and the International Youth Cooperation Center of the Foreign Ministry. Several Israeli universities have also cooperated in these efforts.

Development of Israel's cooperative programs has been constrained by lack of funds and changing political circumstances, especially in Africa. As a recipient of foreign aid itself, Israel could not afford to extend large financial aid or extensive commitments abroad. Its projects have of necessity been small and in response to specific requests from abroad. The emphasis has been on training teachers in development methods because of the multiplier effect in diffusion of innovations. Manpower training is considered crucial because of the multiplier effect which can change the lives of larger numbers of people. Although some of the values underlying Israel's development programs are definitely culture specific and can apply only to its own development experience, its pragmatic approach ("implementationism") and non-doctrinaire orientation to national problems of development has appealed to many of the developing countries which have approached it for assitance.

Egypt and Regional Cooperation

Egyptian programs in regional cooperation have been less formally structured than those of Israel, although if aid in education to other Arab countries is taken into consideration, its programs are considerably larger in numbers. Egyptian experience has been in Africa and the Near East, emphasizing similar values and structure despite differences among the countries involved.

Programs in education had roots in Egypt's cultural and educational domination of the Arab world going back to the nineteenth century. Long before the 1952 Egyptian revolution, the country was a center for Arabic education and Islamic cultural development. The thousand year old al-Azhar, oldest known university with a continuous history, had long served the Arab region and Muslim societies beyond as a center for Islamic religious training. Cairo University, originally Fuad I University, was the first modern institution of higher education established by

Arabs using the Arabic language for instruction. Until very recently, the Arab novel, the Arab theatre, Arab cinema, and much of Arab music was almost synonymous with the Egyptian novel, theatre, cinema, and music. For a generation or more, the mass circulation Egyptian daily newspapers such as al-Ahram and al-Akbar were as widely read in other Arab countries as their local press. Egypt's educational and cultural hegemony in the Arab world is not a new phenomenon. Until 1950, all Arabic textbook authors were Egyptian and most Arabic school materials were published in Egypt.

While the disparities in Egypt's own cultural achievements left a wide gap between its educated elite and a largely illiterate peasantry, this elite was sufficiently large and influential enough to establish its paramount position throughout the Arab world. As one of the First Arab countries to achieve independence, Egypt was in a position to develop its universities and its own educational system long before most other Arab League members. As other Arab countries became independent and sought to develop their own educational systems, most turned to Egypt for guidance and assistance. After the 1952 revolution, the need of other Arab countries for Egyptian aid converged with aspirations of

Egypt's leaders to establish a paramount political position in the region. Thus, Egypt's educational resources were also a political asset in attaining specific goals adopted by president Nasser after 1956.

Government policy in sending teachers, professors, and educational administrators abroad also coincided with a period of rapidly deteriorating economic conditions in Egypt. Not only did Egyptian teachers find relatively lucrative opportunities abroad, but these opportunities helped the country to build up its rapidly depleting foreign currency reserves.

With the government's blessing and often with its assistance, some 35,000 Egyptian teachers are scattered in Arab countries from Morocco to the Gulf. The largest numbers are in Saudia Arabia, where there are now between ten and eleven thousand, and in Libya, where until recently there were 5,000. Even in periods of the most severe political strain between Egypt and one or another of the Arab states, these educational ties remained. Several thousand Egyptian teachers have left Libya during the last year or two, but about 2,000 still remain, despite the break in diplomatic relations and the exchange of bellicose threats between the leaders of the two countries.

Egyptian influence is also pervasive in educational planning and development in several Arab countries. Through conferences of education ministers held every four years, meetings on text book development and curriculum, Cairo's input has been large. Thus, a Regional Center for Research in education has been established in Riyadh for the Gulf states with Egyptian specialists and Saudi financing. A Research Center for Education was recently opened in Bahrain with a largely Egyptian staff.

Higher education in the region has also been strongly colored by Egypt. Several universities in Arab countries such as Jordan, Kuwait, Libya, and Saudi Arabia were originally organized and heavily staffed by Egyptians. However, as

other Arab countries aspire to control their own political destinies, they moved as rapidly as possible toward control of their own educational institutions. It has been several years since the University of Jordan has had an Egyptian president; Kuwait only last year designated one of its citizens to take over from an Egyptian as president of Kuwait University. Still, the shortage of academicians is so great that 1,500 Egyptian professors continue to serve in other Arab countries.

After reaching a peak in development during the late 1950's and early 1960's, Egyptian foreign assistance in Africa began to decline. With contraction of Israel's activities in Africa, it was not necessary to maintain the high level of competition for which many of Cairo's programs had been initiated. The 1967 defeat also limited the country's international political role and forced President Nasser to assume a less activist foreign policy. The economic strains of the 1967 war also took their toll and internal economic problems caused by the population explosion, massive urban growth, and the flow of nearly one million inhabitants from the Canal Zone to Cairo taxed the country's already meager resources. Increasing pressures for rapid expansion of the educational system at home required curtailment on the large number of teachers sent abroad. After 1973, there was another spurt of overseas activity in education, as oil rich Arab states expanded their education systems at a much more rapid rate than they were able to staff their new institutions. Again Egyptian teachers were in demand in the Gulf, Saudi Arabia, and Libya. This time, however, overseas educational missions were financed by the recipients of the assistance who could now afford to pay for aid from Cairo.

As these countries acquire increasing numbers of their own trained personnel and staff, the flow of Egyptian teachers and specialists has diminished.

Furthermore, there has been a relative decline in the quality of Egyptian teachers, compared to those in some other Arab countries. With the massive increase of graduates from Egyptian institutions during the 1960's and 1970's, there was a corresponding decline in quality. Increasingly, Arab requests for Egyptian assistance have emphasized opportunities for specialists with external rather than internal degrees. Nevertheless, although the volume of Egyptian expatriates has decreased, the programs established in the 1960's continue, and Egypt still plays an important and highly visible role in educational and cultural assistance to Arab countries in the Middle East and Muslim countries in Africa.

Assistance in education continues to reinforce recognition that Egypt is the regional leader in cultural and educational development. It would still be difficult for many Arab countries to dispense with Egyptian assistance, thus the frequent criticisms by other Arab states of Cairo's foreign policies often have a hallow ring.

In some instances there is apprehension about the moral and ideological influence that Egyptian teachers and specialists have over a highly impressionable but extremely significant section of society. The unidirectional influence of these programs in the Arab world has also caused some concern. In Oman for example, native teachers, until recently, comprised only fifteen percent of all instructors, with the rest from other Arab countries, largely from Egypt. Omani officials noted that each expatriate teacher had in mind the educational model of his own native country, and that many tried to exert their particular influences on Oman's educational system. Another not uncommon criticism of Egyptian specialists in other Arab countries is that many are somewhat inflexible in dealing with their foreign associates and students, unaccustomed to what often appears to them as strange or unconventional behavior abroad, thus, Egyptians are

sometimes perceived as assuming superior, arrogant attitudes toward those among whom they have worked.

A large part of Egyptian assistance to African countries consists of accepting students in Egyptian universities and subsidizing their education. Until the breakdown in relations between President Sadat and the Palestine Liberation Organization, thousands of Palestinian students were given preferential treatment and financial aid in a variety of Egyptian institutions.

In competition with Israeli assistance to African countries, Egypt implemented a program that reached twenty seven non-Arab league African nations by 1960. Egyptian personnel in these countries included technicians, doctors, and teachers. Although since 1952 Egypt has attempted to maintain a secularist orientation, Islamic bonds in Africa and Asia have been emphasized for political purposes in a variety of ways. Foremost among them has been use of al-Azhar University, long before 1952 a symbol of Islamic unity. Religious scholars from the institution were sent to Muslim countries around the world, mainly in Africa. By 1963 al-Azhar announced establishment of its missions in Africa to include primary and secondary schools, a mosque and an infirmary. Since the 1960's, students from more than thirty-two African countries have attended al-Azhar.

An important component of Egyptian cultural and educational activities abroad is the export of Arabic publications, films, TV and radio programs. A major purpose of these exports is to familiarize coreligionists with Egyptian life and values. Because of Egypt's supremacy in these fields, no other Arab or Muslim country has been able to challenge Cairo's supremacy. Radio Cairo's "Voice of Islam" and its "Voice of the Arabs" have been potent forces in rallying support for the country's political goals through emphasis or common Islamic and on Pan-Arab themes. In 1964, "the Voice of Islam" initiated thirteen hours daily of Koran chanting broadcast to African countries in many different languages.

Under the sponsorship of al-Azhar, its programs were expanded to include Islamic culture as well.

Between 1960 and 1967 al-Azhar established ten cultural centers in African countries, three in Arab League states, and increased its budget for foreign students by two thousand percent. Sixteen schools and institutions were established in Africa, and the Cairo University branch in Khartoum increased the number of students enrolled from 1,600 in 1963-64 to over 9,000 by the 1970's.

The African orientation of Egyptian policy was indicated by Nasser in his early writing. In the Philosophy of the Revolution, he strongly emphasized the significance of Egypt's African, as well as its Islamic and Arab affiliations. With Nasser's emergence as one of the leaders of the Third World at the Bandung Conference in 1955, Egypt's foreign policy aspirations extended beyond the Arab world to Africa and the Islamic countries in the wider circle of Egyptian relations. Themes emphasized in the broadcasts of Radio Cairo and in much of the cultural materials defused abroad were anti-imperialism, anti-colonialism, as well as Pan-Arabism and Pan-Africanism. These materials often focused on Egypt's leading role in the Arab world and in Africa. Eventually Egyptian prestige and dignity as a regional leader was a political value which became linked with and inseparable from Nasser's own prestige.

Some examples of Egyptian assistance to African countries include: scholarships for agricultural training for students in Burundi; assistance in health training for the Cameroon; university scholarships for Islamic studies in Chad, Ethopia, and Gambia; experts in agriculture, hygiene and biology in Guinea; agricultural and higher education scholarships in Kenya; health and hygiene experts to Mauritania; one health expert and five professors of Islamic studies to Niger (see appendix 8).

Unlike Israel, Egypt has not centralized or coordinated its diverse foreign

assistance activities. There is no centralized agency or specialized cadre to carry out these programs. Responsibility is diffused through the various ministries and contacts are made by individual universities. Within the Ministry of Education, the Under Secretary for Educational Services and Foreign Relations presides over the General Department for Foreign Relations. In the former Ministry of Higher Education, there is a Higher Commission for Missions Abroad, the General Department for International Scientific and Cultural Activities, and the General Department for Missions Abroad, the latter two under the aegis of the Under Secretary for Cultural Affairs. Until recently there was a Ministry for Azhar Affairs which had a Department for Foreign Students, a branch of the Academy of Islamic Research. In the former Ministry of Culture, the Department of Foreign Cooperation and Marketing was headed by the Board of Directors of the General organization for theatre, music and folk arts.

The Egyptian government has a special program in Sudan where it funds and staffs the University of Cairo branch in Khartoum (with approximately 7,000 to 9,000 students) and accepts others (about 1,000) in Cairo. The Egyptian government bears the costs for education of all of these students, however, the University of Cairo branch produces the largest number of unemployable graduates (although this is not a problem for graduates of engineering, medicine, or agriculture). The University of Cairo graduates in non-scientific fields compete with other Sudanese students for jobs in public service which have not grown proportionately to the number of graduates available to fill those places. The result is unemployment in some areas and manpower shortages in technical and scientific fields. In addition, the emphasis on foreign education raises expectations so that returning students are not satisfied. It does not provide sufficient incentive for the expansion of enrollment at home, and does not promote the development of better facilities and higher standards of vocational and technical

programs. Complicating these problems is the political relationship between Egypt and Sudan; educational cooperation is closely associated with that relationship.

Other Regional Cooperative Programs

A noteworthy example of regional cooperation in education which has produced concrete results is the UNRWA-UNESCO Institute of Education. Originally established as a facility to upgrade teacher training for Palestine Arab refugees under the care of UNRWA, the institute achieved such high standards, with widely visible results among its trainees, that it attracted attention of several Arab governments with critical problems in their burgeoning school systems.

Rapidly expanding student populations outstripped abilities of teacher training programs to attract and graduate enough educators with the required skills. In some countries, good teachers were drained away by better paid positions in wealthier states. As a result, many schools were staffed by instructors with sub-standard qualifications, or with heavy teaching loads that undermined effectiveness. This problem was acute, not only in the UNRWA schools, but throughout the Arab world. After a 1964 survey revealed that 90 percent of the 4,768 teachers in UNRWA schools were professionally or academically unqualified, the Institute of Education was established to improve teacher training programs.

In its initial stages, the Institute concentrated on the immediate problem of upgrading the skills of the unqualified elementary and preparatory school-level teachers, which was accomplished without involving the withdrawal of these teachers from their normal school duties, through on-the-job training. By 1974, 3000 new teachers had been added to the system as well. The Institute was then able to develop a program of refresher courses to keep all teachers abreast of new developments in education, and re-orient courses to train them to adapt

to changes in curricula. At the end of June, 1978, 1300 UNRWA/UNESCO teacher/trainees were enrolled in in-service courses.

A distinctive "Integrated Multi-Media Approach" which has proved to be economical, flexible and very effective, has been adopted by the Institute for its courses. The technique combines direct face-to-face teacher training with indirect educational methods such as auto-instructional working assignments, field libraries, educational journals, programmed instruction, and audio-visual learning materials. A-V programs in Arabic have been produced on such subjects as mathematics, geography and Arabic Islamic Culture.

This approach has attracted the interest of a number of Arab countries, and in 1971, the Institute extended its services to their national in-service education programs. Nine countries, Bahrain, Iraq, Jordan, Lebanon, Oman, People's Democratic Republic of Yemen, Sudan, Syrian Arab Republic, Yemen Arab Republic, have now wholly or partially adopted the techniques, adapting them to their particular needs. Representatives from Kuwait, Morocco, Somalia, Tunisia and United Arab Emirates joined participants from these countries in March, 1978, at the Third Conference of Directors of Arab In-Service Teacher Training Projects, which the Institute organized in cooperation with UNICEF, and which resulted in a number of recommendations for the development of printed instructional materials.

The Arab League Educational Scientific and Cultural Organization (ALESCO), established as an Arab UNESCO, has greatly expanded its conference activities since the larger availability of Arab oil money after 1973. Its activities have been largely conference oriented although it has made available grants to assist existing Arab research institutions and scientists. Its five sub-departments: 1) education, 2) social sciences and humanities, 3) biological and physicial sciences, 4) documentation and information, and 5) the Institute of Arabic Manuscripts, have conducted numerous research projects involving scientists from

the Arab League states. In general, however, ALESCO is a forum for discussing joint scientific research at a Pan-Arab level; it is often the victim of political maneuvering by states attempting to use it for their own political purposes.

The recently opened UNESCO Regional Office for Education in the Arab States is the last of four such regional establishments. The others are in Africa, Asia, and Latin America. Its purpose is to coordinate the Arab oriented projects of UNESCO in the hope of developing an Arab educational strategy. Plans include establishment of a curriculum development center, a teacher educational center, a center for non-formal education, and a network of innovational education centers. Since the UNESCO Regional Office was opened in 1973, its chief activities have been to conduct surveys of existing conditions and needs in education among the Arab states it serves.

The concept of formally organized regional cooperation in education is, for reasons cited above, still in a nascent stage. Even in Egypt, the emphasis is more on Egyptian assistance than on regional cooperation, and few Egyptians have given serious thought to the idea of cooperation with Israel. A major constraint on rapid development of regional cooperation in any area including education, which would involve Israel, is the wide difference in social and political organization existing between Israel and the Arab states. During the months ahead, the only likely candidate among the Arab states for cooperation with Israel will be Egypt because of the recent political breakthrough.

Potential for Egyptian-Israeli Cooperation in Education

On the basis of past Israeli and Egyptian experiences in international cooperation, it might be possible to identify the strengths and weaknesses of each country to determine their resources and needs and existing structures which could be used for mutual cooperative efforts. Each country has areas of

strength in which the other might desire cooperation. For example, Egyptians have developed instruction methods and materials in Arabic teaching which would be useful in Israel. Egyptologists from Cairo have resources that would be of great benefit to Israeli archaeologists. Israel's work in agriculture might be of value to Egypt, and Israeli successes in education of women for development has attracted attention among some Egyptians. It is important to emphasize and to reemphasize the necessity for cooperative ventures to strive for joint participation and achievement of a psychological equilibrium. Mutual participation should be emphasized in projects to avoid domination by one side in the relationship.

Despite Israel's success in Africa with organization of youth groups modeled on Nahal and Gadna, the para-military nature of these activities would probably be too sensitive for the initial stages of a fragile relationship with Egypt. Initially, joint participation in assistance to other Third World countries might also be extremely sensitive, stirring memories of previous competition in Africa between the two former enemies.

In both Israel and Egypt, assistance programs in education have been motivated by specific political objectives mentioned above; therefore, previous experiences might not always be adaptable in a new mutual relationship. The programs of both countries have been limited because of financial constraints. Neither has had the resources to develop programs as large as their leaders would have liked. On many occasions, programs have been overextended, been insufficiently staffed and suffered from lack of equipment. In some instances, governments that offered to share financial burdens have failed to fulfill their obligations, thus, some projects have been aborted before realizing their objectives.

Many Israeli programs aimed at creating social change have come into conflict with traditional values and social patterns; many have been problematic with

several cases of outright failure. Some of the ideological motivations and values of Israeli programs are unique to its experience. Zionist emphasis on pioneering and the dignity of manual labor and the emphasis on modern socialism are different motivations and values than those of Egypt. Egyptian motivations and values have derived from Cairo's role as one of the world's major Islamic centers and identification with Pan-Arabism.

Programs of both countries have encountered social problems. Some foreign trainees and students in Israel have complained that Israeli colleagues were at times unfriendly or uninterested in personal contacts. Black Africans have not been immune to racial prejudice, have been objects of curiosity and have found it difficult to socialize with Israelis, especially with women. Recipients of Egyptian assistance have had similar problems, and many students from Africa have found it difficult to cope with life in Cairo. A problem specific to training of foreign students in Egypt has been the overproduction of graduates in non-scientific and non-technical fields, while at the same time their countries have been pressed by shortages of trained scientists and technicians.

While some Egyptians have expressed general approval for the concept of cooperation with Israel, few have given thought to specific plans or proposals. To some, the idea is a shocking, although at present, acceptable novelty. Others, if presented with specific proposals are willing to give them serious consideration. And a few, including some of the best minds among Egyptian intellectuals, are apprehensive about cooperation with Israel if not outright opposed for a variety of political reasons.

A major constraint is the authority orientation of Egyptian society. Authority is highly centralized and pyramided, with directives, and ideas for innovative projects coming from above. Not only lower and middle level officials, but often cabinet ministers themselves are reluctant to make commitments, or even

to venture original ideas in an area of such potential political significance as cooperation with Israel. Without explicit and direct sanction from the presidential level, probably from the president himself, it would be difficult to develop cooperation that would be more than merely symbolic. Effective cooperation, expected to produce substantive results must be more than symbolic, free from constraints of political maneuvering and manipulation. At present, there is danger that some forms of cooperation could be used for political purposes in Egypt, in much the way that many Soviet-American cooperative efforts acquire a political hue.

Even if officially sanctioned prospects of cooperative efforts with Israel, especially in education are viewed with apprehension by some academicians whose contacts with other Arab countries are vital. In certain areas, such as Middle East and oriental studies, and the social sciences, where inter-Arab contact is highly valued by Egyptians, there is fear that too close contact with Israel will jeopardize if not cut the links with other Arab states. One has only to remember that for many years there were American academicians who avoided contact with Israel, lest their Arab connections be imperiled.

Because of the authority structure in Egyptian society, there is always a possibility that cultural and educational exchanges, especially in so sensitive an area as cooperation with Israel, will become influenced by political considerations diminishing academic and scholarly concerns. It is not unlikely that the best minds and most outstanding potential contributors to a genuine cooperative effort, might be excluded from participation in some fields. In a system where most important decisions come from the top, selection of participants for cooperative efforts might frequently be determined on the basis of participant's political reliability rather than contributions they could make to building a soundly based academic effort.

If cooperative efforts between Egypt and Israel should progress to the stage of implementation, close attention should be given to psychological disparities, differences in perception, national pride, and sensitiveness of each partner to the other. Egyptians are especially sensitive to their country's poverty in educational and scientific resources relative to those of Israel. Because of severe financial stringency and foreign currency shortages, only a few Egyptian scholars have access to up-to-date scientific literature, professional journals, and the most recent scholarly literature in their fields. The poverty of resources is evident in university libraries and scientific laboratories, as well as in overcrowded classrooms and educational institutions. The relative affluence of academic institutions, libraries, and research institutes in Israel which provide many scholars with the latest in academic literature and scientific equipment could create invidious reactions among visiting Egyptian academicians.

For many scholars from Arab countries, the frequency with which they would meet counterparts in Israel who are transplanted from the United States, Great Britain, and other Western countries would be easy to misinterpret. Because Israel is an immigrant society which has ingathered not only homeless refugees, but thousands of settlers from America and Western Europe, many appear as American or Western European rather than as prototypes of the "native Israeli;" it would be difficult to dispel the notion among those unfamiliar with Israeli society that these individuals are indeed not Americans, Britons, or Frenchmen.

The idea of cooperation is not only accepted by most Israeli academicians, but embraced with great enthusiasm. Each of the country's major universities has set up committees or ad hoc working groups to explore the idea and to develop concrete proposals. Scores of articles and monographs have been written on the theme of cooperation with the Arab states, and conferences have been convened to explore the subject. Tel-Aviv University has established a Research Project

on Peace headed by one of the country's senior physicists to develop concrete proposals. The University committee designated to develop the project includes the institution's highest officials and many of its leading scholars, joined by high level officials from government and private enterprise.

The president of Ben Gurion University has already announced schclarship and faculty exchange programs to be developed with Egypt, measures described as "part of a cooperative scheme, concerned largely with desert development." In a speech to the annual meeting of his board of governors, President Tekoah proclaimed that Ben Gurion University should become the "university of peace;" that it be designated as the site for an international conference in 1979 to discuss and recommend possibilities for joint cooperation in water use and management, methods to combat desertification, dune stabilization, non-conventional energy sources, and development of new crops for food and industrial purposes. The proposed scholarship program would help Egyptian students and provide assistance and research facilities to Egyptian scholars. His university, Tekoah announced, "has much to offer Egypt for its land reclamation schemes in the Sinai and its large desert west of the Nile."

Israeli scholars and the country's institutions are much more psychologically prepared for regional cooperation than are their counterparts in any of the surrounding countries including Egypt. The danger is that disparities in perceptions of the concept and in preparation to implement it could create difficult situations. The eagerness of many Israelis to assist Egypt, to offer Arab society what Israelis perceive to be the best of their own intellectual resources, could overwhelm those not yet attuned to the full meaning of a cooperative relationship.

The dangers of inequality in a cooperative relationship between Israel and the Arab world are greater than in other similar situations. Societies which have

been at war for half a century, suddenly finding themselves at peace, are more likely to be sensitive to patronizing attitudes, or to unequal relationships in which one side is predominatly the donor and the other, the recipient. The imbalance in contemporary intellectual attainments, scientific accomplishments, and levels of educational achievement can create difficulties much like those in relationships between the United States and Third World countries which are recipients of American technical assistance and "international cooperation."

Many Israelis and Egyptians are aware of the danger that cooperative efforts can degenerate into a client-patron relationship. Among the more thoughtful academicians who have considered problems of cooperation, the watch words are: extreme caution, low visibility, an incremental approach, don't pursue "aggressive projects," go slowly. Some who are apprehensive about the shock of initial contacts have recommended a trilateral approach, in which Egyptians and Israelis would work with Americans or some other third party to develop initial pilot projects in a step-by-step process leading to more direct, eventually more secure bilateral relationships. True, frequently Israeli and Egyptian scientists and academicians have had cordial encounters at professional meetings on neutral ground. While these meetings confirmed the possibility of amicable interpersonal contacts, they are not an adequate test of problems in institutionalized cooperation. The spirit of amity prevailing at international conferences and symposia are no indication of how the individual participants will or can work together in projects involving education, scientific research, and regional planning for cooperative projects.

Keeping in mind the limitations and constraints on regional cooperation outlined above, the following three phased proposal for educational cooperation between Egypt and Israel has been developed. The proposal is based on the premise that peaceful relations exist between the two countries and that neither is

disturbed by internal disorder or threatened by external pressures. Attention is focused on Egypt and Israel because present political developments seem to point toward possibilities of mutual cooperation.

Constraints of time have also meant that in the short period allowed to develop these ideas, attention was focused on the two most likely candidates for regional cooperative relationships. Not only is Egypt the most politically prepared for such ties, but also much better conditioned psychologically for cooperation than are any of the other Arab states. Egypt has the largest resources of any Arab country to contribute in concrete projects.

Regardless of the present political impasse between Israel and the other Arab states, there would be even greater psychological obstacles to overcome in Arab countries other than Egypt. Among West Bank intellectuals, there is not only political resentment of Israel, but a feeling that cooperation is undesirable for a variety of social and emotional reasons. This hostility has become more intense since President Sadat's peace initiatives. Because most Palestinians feel that their future is being bargained away, their resentment of Israel has been intensified in recent months. It would be difficult in this environment to discover any West Bank Palestinian with political following or credibility, who would be willing to engage in educational cooperation with Israel.

Three Phase Plan for Cooperation

Phase One: In this phase initial political relationships have been established and there is exchange of diplomatic relations at least on a consular or ministerial level. Attempts are made to explore each others' assets and needs with a view to establishing cooperative relationships in education, health, agriculture, industry and science and technology. In the exploratory stage projects might be considered as pilot projects testing larger possibilities and longer term commitments. Projects in this phase are small scale, do not require large funding, large numbers of people, or long-term commitments. The first projects may not involve exchanges of personnel at all.

Implementation of the first phase would be greatly facilitated if the concept of cooperation were given formal recognition in the context of the Egyptian-Israel peace settlement. If the diplomatic provisions of the peace agreements provide for cultural and educational cooperation this would be tantamount to official sanction by the highest authorities, a sanction that seems to be required to encourage participation by many Egyptian academicians.

To initiate action a small trilateral commission might be established with one or two academic or cultural affairs/officials, and one or two representatives of the academic community from Egypt, Israel and the United States to begin discussing ways to implement the proposals which follow, and/or others which they may designate. This six-to-twelve person trilateral commission of university presidents and/or deans, scholars, and representatives of education ministries could become responsible for facilitating arrangements to carry out the projects, to decide at what time to increase the scope of activity leading to second and third phases of the following plan. The trilateral commission should be provided with a semi-autonomous legal position and sufficient funds to carry out its tasks.

The commission might resemble the joint working group established to carry out United States-Egyptian projects; where it is feasible for the trilateral commission to do so it could work with the United States-Egyptian joint working group. The trilateral commission should set a time framework for implementation of projects in Phase One of three to five years beginning with establishment of the commission. Special attention would be given to possibilities of cooperation in programs related to women and development, taking advantage of Israel's experience in this field.

An initial step may involve an exchange of educational materials rather than personnel. In each country academicians are eager to know resources of the other. At this stage an exchange of book exhibits could be arranged. During January Cairo is the scene of an annual international fair at which books by Israeli authors might be displayed. Although some Egyptians felt that it might be premature to organize a separate display of books from Israel, even those who were cautious could see no objection to display at the book fair of Israeli authors published by American houses. The display could include a range of authors from fiction writers of international fame such as Amos Oz, to scientific writers such as S. N. Eisenstadt or Joseph Ben David who have been published widely in Western languages. Since the book fair is to take place in January, immediate attention should be given to organizing this project within the American contribution to the book fair. To test reactions of Egyptian intellectuals it might be useful, within the framework of the American exhibition, to set up a display of works by 1978 Nobel prize winner in literature I. B. Singer. Although he is not Israeli but American, his emphasis on Jewish themes and traditional Jewish folklore is close to the tradition of Israel and parallels themes of many Israeli writers. It would be ironic if his works did not receive some special attention this year in an international book exhibition.

Parallel to exchange of books might be exchange of film exhibitions. The Egyptian cultural office in the United States organized an excellent display of films last year that won praise in the United States. This series could be shown in Israel in exchange for a series of Israeli films to be shown to Egyptian film makers, students of cinema, and intellectuals interested in artistic work.

A follow-up in this initial stage could be made by exchange of writers, authors and film makers who have produced the films and books displayed. These visits would be on an individual basis for short periods, perhaps a few days or a week, in which the authors and producers met with representatives of those who had seen their works - visits to universities, publishing houses, cinema studios and film schools. Egyptian writers who are known to many Israelis like Neguib Mahfouz, Twefiq Hakim, Yousef Idris, might visit Israeli scholars who have written about them. Contemporary Israeli writers like Amos Oz might visit departments of modern Hebrew at Cairo University or at Ein Shams University.

The academic community might follow through within this initial phase with short visits by individual professors engaged in academic study related to the above-mentioned exchanges. Several Israeli professors have written scholarly works about Egyptian contemporary writers. One or more of them might be invited to give a few lectures on these writers at Egyptian universities.

In Phase One the trilateral commission might initiate short exploratory visits by small teams of Israeli and Egyptian educators, professors, scientists, and other academicians to each country for the purpose of discovering the counterpart's resources and needs, with a view toward developing requests for longer term exchange visits, and to develop projects involving cooperation between Israelis and Egyptians. The trilateral commission could also organize several seminars and conferences in the United States or in some other non-Middle

Eastern country to discuss problems related to education. The conferences would emphasize human rather than material resources, bringing together individuals with common interests, perhaps many of whom studied at the same institutions as the United States. The supplementary paper on post-graduate education (appendix 9) offers a set of relatively detailed steps that might serve as an example of this process.

Subjects in which trilateral meetings could be organized might include the following.

Teaching science and mathematics. In both Egypt and Israel educators have given special attention to improving teacher training in science and math. Both countries have given high priority to upgrading teacher preparation in these fields. Israel has developed teacher training methods and materials in science education that have been exported to Thailand, Mexico and Venezuela. These programs emphasize experimentation, understanding of principles and their practical application. Exchange of information on methods and resources to improve science and math teaching would be of mutual benefit.

Eradicating illiteracy. Although the literacy rate in Israel is double that in Egypt, both countries have placed major emphasis in their educational systems on dealing with problems of illiteracy. In both countries educators define illiteracy as not only ignorance of reading and writing. Both are placing increasing emphasis on social and cultural illiteracy, professional illiteracy, and political and national illiteracy. Both are seeking non-traditional ways with non-conventional approaches to the problem. One of the most important centers in the Middle East for development of literacy is the Arab States Regional Center for Functional Literacy (ASFEC) at Sirs al-Layyan in Egypt. Created in 1969, its purpose is to promote functional literacy and adult education in Egypt and in the

rest of the Arab world. An early conference on this subject in which both countries have had significant experience would have the advantage of exploring a subject in which there are possibilities of parity in cooperation.

Technical and vocational education. In both Egypt and Israel educators are beginning to place increasing emphasis on the need to combine conventional with technical and vocational training. Since 1972 Egypt has experimented with a polytechnical school which seeks to remove the barriers between theoretical and practical education. With a large infusion of science and math, this school seeks to strengthen its vocational emphasis.

In both Egypt and Israel there are plans to increase the network of vocational schools established to meet manpower shortages in hotels, tourism, banks, and communications. In Egypt this problem is exacerbated by the departure of about one million people trained in these fields to labor markets offering better opportunities. The UNESCO has suggested that Egypt's programs in vocational training can provide a model for the rest of the Arab world and provide teachers for technical institutions in other developing countries. Egypt's vocational programs have already served as examples and assisted in preparing in-service training programs for other Arab countries. Egyptian curricula, books and educational materials were also used, and Egypt has been a center for regional seminars in vocational education. This is another area in which there appear to be possibilities of parity in developing exchanges of information and ideas at an early stage in cooperative efforts.

Curriculum innovation. Egypt's National Center for Educational Research and the Hebrew University's Research Institute for Innovation in Education have had extensive experience in translating research in educational innovation into widely used textbooks. In both countries interest in educational innovation covers subjects such as environment, community education, resource conservation,

language instruction and population problems. In both attempts are made to develop systems of evaluation to improve examination methods. Mutual exchange of information on the activities of these innovational centers and their projects would be feasible at the first stage in cooperative efforts.

Comprehensive education. Closely linked to problems of developing technical and vocational education are those of comprehensive education. In both Israel and Egypt there have been experiments deviating from the traditional secondary school pattern which divided the system into general secondary and technical secondary (industrial, agricultural and commercial). Educators in both countries are increasingly aware of the need to link education and community needs, to combine theoretical and applied studies, to improve the training of students for practical life, and to provide production and service sectors of the economy with manpower. Attempts have been made to find an educational formula for a secondary school, free of the traditional patterns, where science and the humanities are taught as well as vocational and technical studies. In both countries there have been experiments in combining traditional and technical secondary education by bridging the gap in a single institution so as to correct negative attitudes toward the technical emphasis. These include the open school combining regular methods of instruction with a variety of non-conventional tools such as radio, television, videotapes, etc.

Other educational areas of mutual interest. In both Egypt and Israel special attention has been given by educators to the handicapped, both physical and mental. There are schools for the blind, the partially sighted, and the deaf. In both, efforts have been made to develop rehabilitation programs for the handicapped despite the sparse resources available for special education. While the problems in Egypt and Israel in dealing with these special problems differ, information exchanges at an early stage of the cooperative effort would be manageable.

Cooperation in higher education. Mutual interest in oriental, Middle Eastern and Islamic studies offers opportunity for stage one conferences of Israelis and Egyptians. In this early phase of exploration and discussion, attempts should be made to avoid conferences dealing with some of the highly volatile subject matter related to study of the contemporary Middle East. However, there are many Egyptian and Israeli orientalists who lead their fields in study of the pre-twentieth century Middle East. An early exchange of ideas on subjects such as Waqfs, the Ottoman era, or early Islamic manuscripts, would offer opportunity for reasonable scholarly dialogue in Phase One.

Post-graduate specialized education. Post-graduate, problem-oriented education programs offer a special opportunity for cooperative development. As noted earlier, many of the holders of advanced degrees in Egypt have obtained their training in programs abroad--only literally relevant to specific domestic needs. Despite academic differing histories, organizational structures, and current curricular content, there are numerous areas of common need in Egypt and Israel. Programs designed to identify and respond to such areas of high common need, pursued in a context of trilateral cooperation, would run a lower-than-customary risk of political interference. They could build on the patterns of scholarly amity encountered in the previous international context. And they could be of sufficiently small scale and independence to exist, in large part, outside the present academic hierarchies of either country.

A supplementary document (appendix 9) details procedures for problem identification and post-graduate program implementation that builds on these assumptions.

Phase Two: If the exploratory projects outlined in phase one are realized with reasonable success, the foundations for a more advanced stage of cooperation will

have been established. Certain psychological barriers will have been overcome, patterns of cooperation initiated, and the beginnings of an institutionalized procedure for implementing cooperative projects will now be available. As a result of initial exploratory contacts and preliminary conferences on subjects of mutual interest outlined in phase one, Egyptians and Israelis will have become more aware of each other's resources, strengths, and needs. Interpersonal contacts established in stage one will facilitate more rapid and more direct communication between those interested in educational cooperation. Nevertheless, the institutional and social differences in the two countries will remain, making it necessary for formalized procedures to carry the cooperation to a higher stage. The trilateral commission described in phase one can still serve a useful function in facilitating expansion of these efforts. The commission could organize subsidiary interest groups, affiliated with the commission and acting with its formal authority. The interest subgroups of the commission might proceed to implement phase two. One subgroup should concentrate its activities on developing seminars related to women and development; another might explore the subject of tradition and modernity, of interest to both Egypt and Israel.

In phase two cooperative efforts would be more visible, require somewhat larger funding, be of longer duration, and involve larger numbers of participants, perhaps some in group situations. Phase two would be initiated only after normal diplomatic, cultural, commercial and trade relations would have been established. Many of the programs that follow involve exchanges of significant numbers of people and a relatively long-term commitment to cooperation in education. In stage two themes discussed at conferences arranged by the trilateral commission in phase one would be developed into joint projects, some undertaken on a trilateral, others on a bilateral basis.

Exchange of cultural activities. In both Egypt and Israel great emphasis has been placed on developing national cultural institutions such as performing groups in dance, theater and music. In both countries these performing groups are intended to represent national themes, folk culture and indigenous creativity. Exchanges of performing groups under the auspices of the trilateral commission would offer opportunity for Egyptians and Israelis to become more familiar with each others' living culture.

Joint textbook surveys. During the last thirty years textbooks used in elementary and secondary schools in the Arab countries and Israel have tended to reinforce stereotypes of the "enemy". History written for children has tended to emphasize negative characteristics of people "on the other side", and to arouse feelings of hostility rather than amity. Joint textbook surveys by Egyptian and Israeli teachers, psychologists and educators should attempt to identify educational materials which undermine confidence, inspire fear or apprehension toward national groups, and subtly undermine possibilities of creative relationships. The committees could make recommendations for changes and improvements and attempt to produce new materials which emphasize better understanding. The emphasis in texts might shift from predominently political history to cultural history, with special attention to the common Semitic history of Israelis and Arabs. The existing committee of Egyptians and Americans studying textual materials could be expanded to include Israelis within the trilateral arrangements proposed above.

Language training institutes. During the past decade both Cairo University and Ain Shams University have begun programs for teaching Hebrew to Egyptians. Interest in study of contemporary Israel and its institutions has been high. In Israel there has been study of Arabic at all levels of the education system for many years, although at the pre-college level the number of students in Arabic is

relatively small considering the country's location at the heart of the Arab East. Israeli universities, however, have some of the leading scholars in Arabic and in related subjects--history, literature, linguistics, and contemporary Arab affairs. Establishment of an institute for study of Hebrew in Cairo to supplement the work of the Egyptian universities, staffed by Israelis, would give students of Israel's language and culture opportunity for first-hand association with scholars in the field. Similarly, establishment of an institute for study of Egyptian language and culture in Jerusalem would supplement the work of Israeli institutions, giving students in the country opportunity for direct contact with those who are part of the culture. While there are many Arabic-speaking Israelis from Muslim countries, and hundreds of thousands of Israeli Arabs, the opportunity for direct contact with scholars from the centers of Arab academia has been denied to most Israelis since 1948.

Institutes for study of pre-modern culture. Both Egypt and Israel are repositories of vast wealth in antiquities, papyri, ancient manuscripts, and the like. Since departure of the Jewish community from Egypt, many ancient synagogues and libraries have fallen into disrepair. Study groups and joint commissions to rehabilitate these old institutions and convert them into museums would be advantageous to both Israel and Egypt. Scholars of Egyptology in Israel have had no opportunity to visit the sites of their study for more than thirty years. Egyptian institutes for study of the pharaonic era could now be opened to Israeli scholars, and Egyptian scholars in the subject would now have opportunity to lecture at universities in Israel. A joint commission for study of monuments, archives and documents from the pre-modern era could plan these activities. Initially it would be useful if the commission were trilateral, perhaps using as its base the facilities of the American Research Institute in Egypt which has already initiated projects like these on a bilateral, Egyptian/American basis.

Teacher education projects. In stage two projects derived from the seminars and conferences initiated by the trilateral commission in phase one could begin. Some of these projects would continue to be trilateral; others could be initiated through direct Israel-Egyptian cooperation. A trilateral teacher training institute might be established situated in Egypt, Israel and the United States. The institute would use facilities of universities and centers for development of educational materials in the three countries. Objectives of the institute would be to upgrade teaching and to develop materials for instruction in science and mathematics, technical and vocational education, comprehensive education, literacy, and education for the handicapped. With assistance from American teacher training institutions several parallel model schools could be established in Egypt and Israel, exchanging staff and materials directly or through the American institutions. A model polytechnical school unifying teaching in theory and practice could be set up in each country to develop patterns for general use in both Egypt and Israel.

Educational exchange programs. At this stage sufficient confidence should have developed among both Israelis and Egyptians to experiment in programs of educational exchange involving both teachers and students. A bilateral exchange commission could be established for this purpose, beginning with small numbers of highly qualified personnel. Initially exchanges of professors would be on a small scale--a mini-Fulbright program in which universities in Egypt and Israel would request through the commission scholars from the other country in fields which the universities select. Initial student exchanges probably should also be on a small scale and high level, beginning with small numbers of graduate students. The first graduate students might come in groups of four or five, studying in a common field, accompanied by a senior professor in that field. This would help to prevent students from becoming overcome by cultural shock, feelings of isolation in a strange and

unfamiliar environment, and give them a feeling of confidence, with their professor as an intermediary in developing relations between the students and the foreign academic institutions where they would be situated.

Development of joint scientific research projects. Israeli and Egyptian scientists have already met in many third country forums and conferences. Despite the cordial relations that many have established, it has been difficult, if not impossible, for them to follow through on these rather tentative contacts. To facilitate development of specific research projects in areas of mutual concern and interest such as desalination, mineral and petroleum development, solar energy, oceanography, improving agriculture and food production, and problems of health and disease control, a trilateral scientific commission should be established. Its initial task would be to sponsor small trilateral problem "seminars" and conferences to explore research needs and possibilities in each of these fields. With assistance from the United States, joint research projects would be funded to facilitate cooperation between Egyptian and Israeli scientists. Egypt has established several research institutes through its Academcy of Scientific Research and Technology, organized in 1971, to assume many duties of the Ministry of Science. Its specialized research institutes include the Theodore Bilharz Research Institute, the Central Metallurgical Research and Development Institute, the Institute of Oceanography and Fisheries, the Institute of Astronomy and Geophysics, the National Institute for Standards, and Auxiliary services such as the Scientific Instruments Center, the National Information and Documentation Center, the Patent Office, and the Science Museum. Representatives of similar institutions in Israel would be logical partners in developing a wide range of research projects related to the subjects of mutual concern listed above.

Exchange of mass media techniques, educational television programs, and audio-

visual materials. Both Egypt and Israel have advanced beyond the experimental stage in use of these techniques to diffuse education in their respective countries. Egypt has sent its specialists in the use of mass media techniques for education to other Arab countries and continues to develop them for its own use. Israel too has developed programs such as language teaching through television which have been exported to other education systems. A joint commission of Egyptian and Israeli specialists in development and diffusion of mass media techniques and audio-visual materials could exchange recent innovations in these areas.

Phase Three: Initiation of the third phase in educational cooperation between Israel and Egypt will begin sometime in the future, when relations between the two countries have reached an advanced stage, similar to those existing among Western European countries, like Benelux or the association of Nordic states. Psychological barriers will have been overcome, close diplomatic, economic and cultural ties created, and an atmosphere of trust will exist, if the following proposals are to be successfully implemented. Because of the deep chasm now existing between Egypt and Israel in social structure and outlook, political organizations and institutions, and generally in perceptions of the world and of each other, several years, if not a decade or more is likely to pass before the environment will be conducive to these projects. However, because of their complicated nature, the long advance planning necessary to implement them, and the large resources required to initiate and sustain them, it is not premature to think about and discuss these projects during phase one and phase two of the overall plan for cooperation. Projects in the first two phases will test the feasibility for those in phase three; they will also establish foundations for a more realistic approach to and implementation of phase three. Participants in the first two phases will be those on whom success of the third phase depends. If the projects envisaged in the first two phases are successful, initiation of phase three makes sense.

The projects in phase three will require much larger commitments of funding and of national resources. The dimensions of funding are such that third party contributions will be required, probably from the United States. These projects will have a certain permanency for they will have passed the phase of experimentation, or pilot projects, requiring long-term commitments of the countries and of the individuals involved. The numbers of people involved for long periods of time will be much larger than required in the first two phases of

cooperation. Since many of these projects will become institutionalized, in physical plant and in time, they will be a testament to the reality of peaceful coexistence and cooperation. By the time the region is ready for projects envisaged in this section, the trilateral commission will probably have completed its function of bringing together Egyptian and Israeli scholars, scientists, researchers, academicians and artists. Cultural and educational cooperation and exchanges will hopefully have become an established part of the normal relations between the two countries. Derivative from the original trilateral commission, will be numerous sub-commissions, some operating bilaterally, others continuing to function with representatives of the three countries, Egypt, Israel and the United States. While relations between Egypt and Israel will not necessarily be facilitated by presence of a third party, some of the projects proposed in this section will continue on a trilateral basis because they will be mutually advantageous to all three countries, or because material assistance from the United States will be necessary to finance them.

Establishment of a Sinai University. Many observers believe that the number of higher educational institutions in both Egypt and Israel already exceeds the requirements of these countries. In both Egypt and Israel, there are surpluses of university graduates in many fields and intellectual unemployment looms as a threat to the development process in both. Why then still another higher educational institution? The proposed Sinai University will not be an ordinary institution. Much of its uniqueness will derive from its location, from the special tasks in which it will be engaged, and from its symbolism as a meeting and working place of the best minds in both countries, and eventually of the best minds in the region.

The university will be located in Sinai, near the frontier, symbolizing the affinity in intellectual concerns that will have developed by the end of the

century between Israel and Egypt. The psychological importance of establishing an institution to build peace in an area that until recently was the focal point of four wars is significant. While both Egypt and Israel will have withdrawn their military forces from the vicinity of Sinai University, its presence will enable both to return for advancement of peaceful cooperation. Issues of national security, political domination, or establishment of a presence to assert sovereignty will not be at stake in this institution. Rather, it will be dedicated to peaceful development of both countries, and to development of the region as a whole.

The university will be situated in Sinai for very practical scientific reasons also. It will be a high level research institution, rather than an undergraduate facility. Research will be devoted to subjects given high priority in both countries, subjects for which a Sinai location is ideal. These will include arid area development and desertification, petroleum and mineral development, use of solar energy, desalination and oceanography. All of these subjects are of vital concern to both countries, and their scientists have devoted increasing attention to their study. Hopefully by the time conditions are suitable for establishment of a Sinai University, prospects for regional cooperation will have spread beyond Israel and Egypt, making it possible for other Arab states to join the cooperative efforts. In an atmosphere of peace, the university could become a genuine regional center for research and development of projects beneficial to other countries in the region. A major rationale for developing this as a regional university would be economic. The costs of research in the subjects enumerated above is extremely high, beyond the capabilities of financing by any individual country in the region, except perhaps Saudi Arabia. Coordination of research in these areas and cooperation in development projects related to them would be far more economical than establishment of numerous centers scattered

through the region, each with lesser quality than would be attainable through a combined regional effort.

The Sinai University would be organized as a research center along lines similar to those of Rockefeller University in New York, to develop a new generation of scientists carrying out research which they have initiated and continuing the activity of the senior scientists who have trained them. Because of the high overhead costs required for physical plant, scientific equipment, and high quality personnel, assistance will probably be required from the United States. But investment of American private or public funds in this institution will also be advantageous to the United States because many of the research projects are of vital concern to it, especailly in areas concerning conservation of energy, solar energy, desalination, and oceanography. Therefore, it would be useful to continue operation of this project within a trilateral framework, and if other middle Eastern countries are involved, to expand to a multilateral approach.

Establishment of Regional Research Institutes. Several regional research institutes devoted to specific problems of regional concern would be associated with the Sinai University, or as an alternative to it. These institutes would specialize in the research topics enumerated for study in the Sinai University (arid area development and desertification, petroleum and mineral development, desalination, solar energy, and oceanography). High research costs, costs of equipment and physical plant would necessitate third party funding; thus, these institutes would also be established on a trilateral or multilateral basis. They, too, would be expanded beyond the Egyptian-Israel area to become regional institutes, centers for scientists from other countries in the region as well as from the United States. The centers might be affiliated with universities in the United States or in other Western countries at which high level research is

undertaken in these subjects. The centers would deal with problems of concern not only to Egypt and Israel, but to the whole region; many of concern to the United States and Western countries also. The transnational activity of the centers would not only by symbolic of peaceful relations among the countries of the region, but would also enhance the prospects for peace and for the broad-based development of all the states and territories in the area.

Conclusions

The three phase plan for regional cooperation in education presented here attempts to take into consideration the existing social and political realities of the region, and future trends of social and political relationships among countries of the Middle East. Projects are presented in a three phase continuum, each phase interrelated to the other, in a plan that will lead to realistic programs, rather than programs based on idealized conceptions. Because of constraints of time and space, this report has concentrated on proposals for cooperation between Egypt and Israel where possibilities of cooperation seem most feasible in the immediate future. But even such cooperation must take into consideration psychological, social and political disparities between the two countries, the eagerness of one side and the hesitancy of the other. Without due consideration to these contraints, presentation of over-ambitious plans and projects could be disasterous leading to total frustration of cooperation. Healthy cooperation must develop from small, almost token beginnings. It must be nurtured carefully at all phases especially in the beginning when the first seeds could easily be destroyed by over-eagerness, by projects undertaken for political reasons rather than for their substantive value, or by a public relations approach which attempts to emphasize the visibility of plans rather then their content. With these reservations, a carefully articulated series of projects has been presented beginning at a level which could be implemented almost immediately.

The three phases assume a progression of increasingly greater success culminating in a form of cooperation which assumes that there is overall regional peace.

COUNTRY INDICATORS

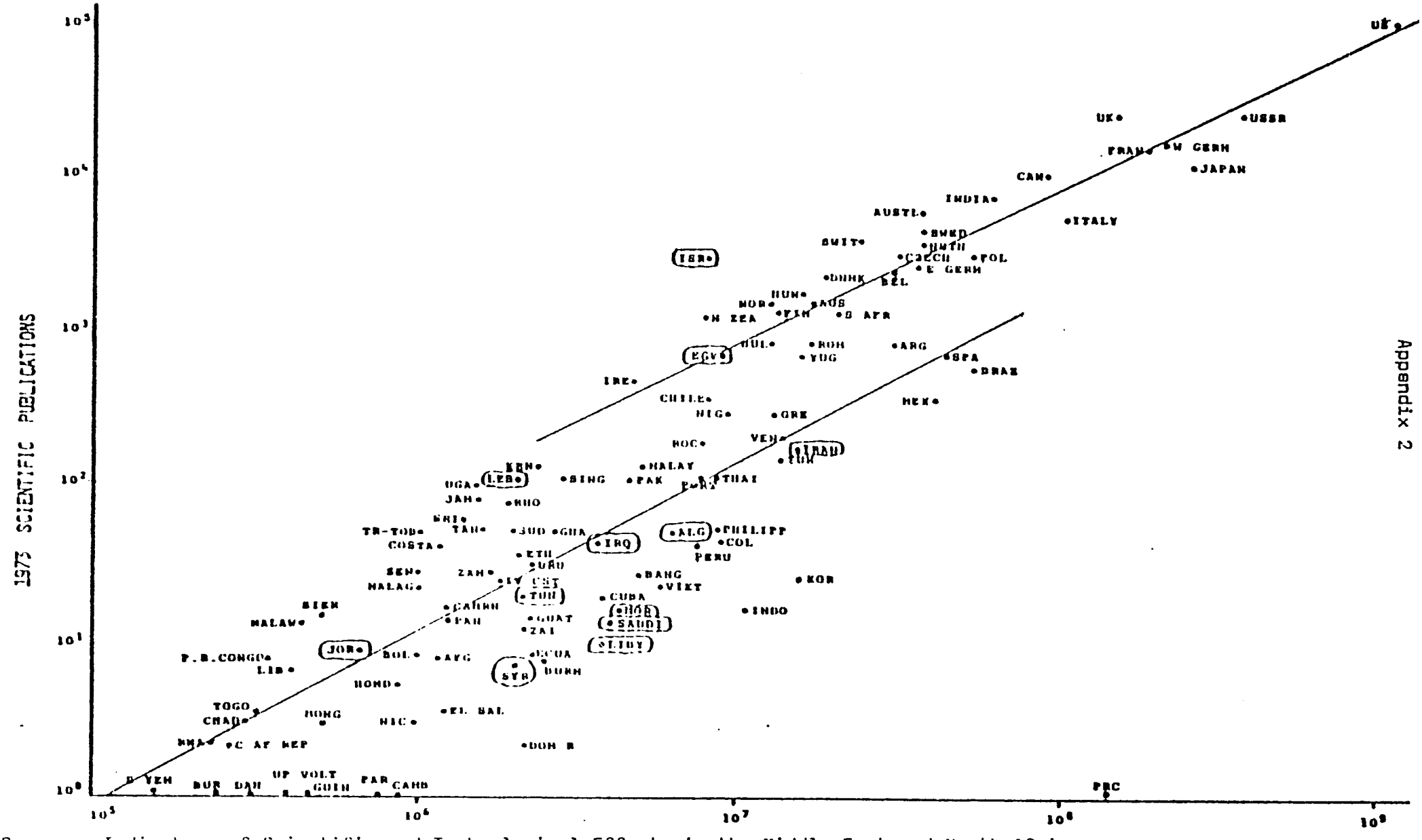
COUNTRY	POPULATION	PER CAPITA GNP US $	LITERACY RATE PER CENT	DAILY NEWSPAPER CIRCULATION	PER CENT OF LABOR FORCE IN AGRICULTURE
ALGERIA	16,776,000	570	25	265,000	50
EGYPT	37,233,000	250	40	773,000	53
IRAQ	11,124,000	850	26	226,000	59
ISRAEL	3,371,000	3,010	84	1,330,000	6
JORDAN	2,018,330	784	71	58,000	18
KUWAIT	991,390	12,050	55	80,000	2
LEBANON	2,869,000	940	69	293,000	19
LIBYA	2,444,000	3,530	22	N/A	37
MOROCCO	17,305,000	320	24	234,000	65
SAUDI ARABIA	8,966,000	1,610	15	96,000	61
SYRIA	7,355,000	400	40	64,000	54
TUNISIA	1,533,347	460	55	120,000	41

Appendix 1

COUNTRY	STUDENTS IN HIGHER EDUCATION (NATIONAL INSTITUTIONS)	STUDENTS IN HIGHER EDUCATION (ABROAD)	TOTAL DEGREES AWARDED	PER CENT OF GNP ON RESEARCH AND DEVELOPMENT	NUMBER OF SCIENTISTS AND ENGINEERS
ALGERIA	30,070	2,395	2,414	.13	242 (1)
EGYPT	326,493	5,064	32,673	.83	593,254
IRAQ	65,481	3,376	8,700	.25	43,645
ISRAEL	50,310	N/A	6,450	2.00	36,000
JORDAN	5,307	39,356	627	.40	1,422
KUWAIT	5,303	1,107	414	.01	10,754 (2)
LEBANON	43,758	5,238	4,073	.40	37,000
LIBYA	9,590	1,258	1,011	N/A	8,319 (3)
MOROCCO	25,524	3,650	1,898	N/A	253
SAUDI ARABIA	14,882	1,839	1,129	N/A	33,376 (4)
SYRIA	49,192	11,267	4,267	N/A	8,713
TUNISIA	9,246	3,749	551	.20	3,421

(1) Higher Education sector only.
(2) 8,903 are non-nationals.
(3) 6,533 are non-nationals
(4) figure includes non-nationals.

Appendix 1 (continued)



Source: Indicators of Scientific and Technological Efforts in the Middle East and North Africa.

Prepared for the Office of Science and Technology, Agency for International Development.

Computer Horizons, Inc., Washington, D.C.
September, 1978

S&T MANPOWER, EDUCATION & PUBLICATION INDICATORS

	Scientists & Engineers *	S&T Students at 3rd Level**	SCI Publications (1974)
Algeria	....	13,941	43
Egypt	593,254	130,937	720
Iran	127,793	55,401	173
Iraq	43,645	27,163	53
Israel	36,000	14,060	2703
Jordan	1,422	1,712	15
Kuwait	10,754	1,097	15
Lebanon	37,000	9,720	127
Libya	8,319	3,623	9
Morocco	253	5,960	18
Saudi Arabia	5,700	3,812	16
Syria	8,713	18,372	2
Tunisia	3,421	4,454	23

* Most data are for mid-1970s.

** Most data are for early to mid-1970s

(Sources: CASTARAB, Unesco, Computer Horizons, Inc.)

Source: Indicators of Scientific and Technological Efforts in the Middle East and North Africa.

Prepared for the Office of Science and Technology, Agency for International Development. Computer Horizons, Inc., Washington, D.C., September, 1978

SIZE NORMALIZED S&T INDICATORS

	S&T Professionals* per $1000 GNP (1973)	S&T Students* per $1000 GNP (1973)	Publications*** per 10^6 GNP
Algeria	...	1.67	5.156
Egypt	67.26	14.85	81.633
Iran	4.57	1.98	6.188
Iraq	4.92	3.06	5.968
Israel	3.76	1.47	282.386
Jordan	.90	1.08	9.482
Kuwait	1.01	0.10	1.413
Lebanon	13.26	3.48	45.520
Libya	1.09	0.48	1.181
Morocco	.05	1.17	3.543
Saudi Arabia	.46	0.30	1.283
Syria	3.11	6.56	0.714
Tunisia	1.35	1.76	9.091

* Most manpower data are for mid-1970s.

** Most student data are for early to mid 1970s

***Publication data is for 1974.

Source: Indicators of Scientific and Technological Efforts in the Middle East and North Africa.

Prepared for the Office of Science and Technology, Agency for International Development.

Computer Horizons, Inc., Washington, D.C., September, 1978

Source: Indicators of Scientific and Technological Efforts in the Middle East [illegible]

Prepared for the Office of Science and Technology, Agency for International Development.
Computer Horizons, Inc., Washington, D.C., September, 1978

Appendix 5

	Clinical Medicine	Biomed Res	Biology	Chemistry	Physics	Earth/ Space	Eng'g/ Technol	Psychol	Math	Total
Algeria	8	4	3	21	4	1	0	0	1	43*
Egypt	195	69	105	219	38	14	79	0	3	720
Iran	66	16	17	20	12	6	27	1	8	173
Iraq	19	5	7	13	2	2	5	0	0	53
Israel	715	433	296	343	430	97	194	61	133	2703
Jordan	1	1	3	6	0	0	3	0	1	15
Kuwait	3	0	1	5	2	0	5	0	0	15
Lebanon	46	24	12	9	20	1	4	5	6	127
Libya	0	0	3	3	1	0	3	0	0	9
Morocco	10	2	5	1	0	0	0	0	0	18
Saudi Arabia	3	1	1	2	1	1	6	0	2	16
Syria	0	0	0	0	0	2	0	0	0	2
Tunisia	10	2	1	2	2	1	0	0	3	21
WORLD (in%)	27.1	14.9	8.8	16.1	13.1	4.2	10.1	2.8	3.0	279,892

*Figures in table do not always sum to totals because they have been rounded to the nearest integer.

NUMBER OF PUBLICATIONS IN 2400 MAINSTREAM SCIENTIFIC JOURNALS
(SOURCE: COMPUTER HORIZONS, INC.)

Source: Indicators of Scientific and Technological Efforts in the Middle East and North Africa.

Prepared for the Office of Science and Technology, Agency for International Development.
Computer Horizons, Inc., Washington, D.C., September, 1978

	Clinical Medicine	Biomedical Research	Biology (Incl. Agriculture)	Chemistry	Physics	Earth/Space Sciences	Engineering & Technology	Mathematics & Statistics	Psychology	General Scientific Lit.	Subtotal	Social Studies	Humanities	Total
Egypt	16	2	16	2	0	4	2	0	0	2	44	13	1	58
Iran	6	1	7	2	0	7	4	2	0	3	32	3	0	35
Iraq	4	0	2	0	0	2	3	2	0	3	16	3	2	21
Israel	6	0	11	4	0	10	19	5	0	4	61	19	3	83
Lebanon	4	0	1	0	0	3	2	2	0	2	14	14	0	28
North Africa	4	0	9	0	1	8	3	6	0	4	35	11	0	46
Minor Arab States	2	0	0	0	0	4	0	3	0	2	11	6	1	18

NUMBER OF JOURNALS PUBLISHED IN THE MIDDLE EASTERN REGION

(SOURCE: COMPUTER HORIZONS, INC.)

Appendix 6

Source: Indicators of Scientific and Technological Efforts in the Middle East and North Africa.

Prepared for the Office of Science and Technology, Agency for International Development.
Computer Horizons, Inc., Washington, D.C., September, 1978.

	Agronomy	Fisheries	Food Technology	Forestry	Meteorology	Nutrition	Oceanography	Parasitology	Plant Genetics	Pollutions	Remote Sensing	Water Resources	Total
Algeria						1		1					2
Egypt	45		25		1	48	10	7	4	5	1	2	150
Iraq	2	1	2		1	4	1	2	4	1		4	22
Iran	7		3	4	2	19		8		3		6	51
Jordan			1			1							2
Kuwait								1			1		2
Lebanon			1			2		1					4
Libya						2	4					1	7
Morocco		2					1				1		4
Saudi Arabia					1	1	3			1		1	7
Syria	1		2										3
Tunisia	1	3					1	2				1	8

NUMBER OF PUBLICATIONS IN SELECTED SUBFIELDS IN A ONE YEAR PERIOD

EGYPTIAN AND ISRAELI ASSISTANCE TO AFRICA

Compiled from Amir (1974); Curtis and Gitelson (1976); and Ismael (1971).

Israel:

Botswana

Consultants to Ministry of Health in campaign against tuberculosis
Geological survey for development of potash exploitation

Egypt:

BURUNDI

1. Scholarships for university studies and agricultural training (12).

Israel:

Burundi

Survey for proposed establishment of a training farm at the School of Agriculture in Bujumbura, the capital

Israel:

Central African Republic

Advice on six cooperative villages and management of two model farms.
National youth movement and agricultural extension services.
Advice on youth.

Egypt:

CAMEROON

1. Scholarships for health and university studies and training in agriculture (7).

Israel:

Cameroon

Young Pioneer agricultural settlement program at Obala and Garoua.
Advice on urban youth clubs.
Management of two agricultural training centers and the settling of two new village centers (fifth year).
Vegetable growing and marketing program at Foreban.
Preparation of youth-training teachers at teachers' college.

Egypt:

CHAD

1. 20[illegible] scholarships for university and Islamic studies.

Israel:

Chad

Afforestation project of 2,000 hectares
Government printing office
Agricultural farm and youth training
(Projects in Chad discontinued after break in

Egypt:

CONGO (BRAZZAVILLE)

a. Experts in higher education and health (16).

b. Scholarships for agricultural training and university study (25).

Israel:

Congo (Brazzaville)

Poultry farm scheme (third year).

Israel:

Dahomey

Pioneering youth training.
Advice to government on information and broadcasting service.
Advice on State Lottery.
Experimental and demonstration citrus farm.

Egypt:

ETHIOPIA

a. Professors and instructors of university and Islamic studies (14), the same in Eritrea.

b. Scholarships for university study, agriculture and Islamic studies (1,032). Idem in Eritrea.

Ethiopia

Israel:

Fisheries development program.
Advice on road construction.
Advice on traffic engineering problems.
Advice on port maintenance.
Cotton farm at Abadir (second year).
Management and training at school for hotel management.
Establishment of blood banks in cooperation with the Ethiopian Red Cross.
Geological survey and mapping with Ethiopian teams led by Israeli geologists.
Development of pharmaceutical services.
Adoption of Natural Sciences Faculty at Haile Selassie I University of Addis Ababa by Hebrew University of Jerusalem, for a period of five years.
Advice on organization and the marketing of handicrafts.
Agricultural advice in Tigre Province.

Israel:

Gabon

Civic, rural and professional training center (fifth year).
Civic-physical education and handicrafts in schools.

Egypt:

GAMBIA

a. 39 scholarships for university studies and Islamic studies.

Israel:

Gambia

Advice in agriculture.
Course on agricultural extension services.

Egypt:

GHANA

a. Experts in health and higher education (8).

b. Scholarships for training in agriculture and for university and Islamic studies (61).

Israel:

Ghana

Cattle-raising at Tadzewu.
Advice and training at the laboratory of the Medical School.
Advice on textiles in the Bureau of Standards.

Egypt:

GUINEA

a. Experts in agriculture, hygiene and biology (7).

b. Scholarships for study and vocational training, notably in agriculture and university studies (135).

Egypt:

IVORY COAST

a. 15 scholarships for Islamic studies and 9 for university studies.

Israel:

Ivory Coast

Joint Israeli-Ivory Coast corporation dealing with heavy equipment and farm machinery.
Country-wide pioneer training program (6,500 men and women).
Pioneering training center at Bouake.
Twenty pioneering youth centers.
Cattle farm at Gangara.

Egypt:

KENYA

a. Scholarships in agriculture and higher education (57 scholarships).

Israel:

Kenya

Research in agriculture
Teaching in the university
Operations research in services for outpatients

Israel:

Lesotho

Several soil conservation programs (third and last years, respectively).
Advice to government on youth organization.

Egypt:

LIBERIA

a. Scholarships for university studies and agricultural training (28).

Israel:

Liberia

Training farm at Harrisburg.
Urban youth club program.
Eye clinic.

Israel:

Malagasy Republic

Citrus program in Morondava (third year).
Establishment of agricultural training center and regional settlement scheme.
Advice on women's organization.

Egypt:

MALAWI

a. Five scholarships for university and Islamic studies.

Israel:

Malawi

Young Pioneer Movement, central training school and district centers; agricultural plans for graduates
Ophthalmology
Courses on extension methods

Egypt:

MALI

a. Experts in agriculture, health, teaching and scientific research (11).

b. Scholarships for university and Islamic studies and agricultural training (88).

Israel:

Mali

Survey on establishment of national lottery
Fieldwork of participants in Mount Carmel course for kindergarten teachers
(Projects discontinued after break in diplomatic relations)

Egypt:

MAURITANIA

a. Health and hygiene experts (9).

b. Scholarships for university studies, Islamic studies and vocational training in agriculture (30). Contributions to the Nouakchott cultural center.

Egypt:

MAURITIUS

a. 17 scholarships for university and Islamic studies.

Israel:

Mauritius

Agricultural instruction to Young Farmers' Organization (second year).
Advice on bacteriology in Central Laboratory.
Lecturer in cooperation at College of Mauritius.

Egypt:

NIGER

a. One health expert and five professors of Islamic studies.

b. Scholarships for Islamic studies and agricultural training (45).

Israel:

Niger

Training program for youth movement.
Advice to government for establishment of training farm at Dalol Boso.

Egypt:

NIGERIA

a. Experts in agriculture, health, finances, irrigation, and also teachers of university and Islamic studies (31).

b. Scholarships in agriculture, health, university studies and Islamic studies (192).

c. Contribution to the Kano cultural center and to the Islamic center.

Israel:

Nigeria

Survey on use of computers
Survey on poultry farming
Preparations for training of kindergarten teachers

Israel:

Rwanda

Direction of ophthalmic service (with ambulant services).
Management of school of nursing.
Youth training program.
Advice on dental clinic.

Egypt:

SENEGAL

a. Scholarships for university and Islamic studies (156).

Israel:

Senegal

Bee-raising program
Advice on youth program.

Egypt:

SIERRA LEONE

a. Experts in agriculture, irrigation, civil aviation and meteorology (30 experts).

b. Scholarships for university study in agriculture (203).

c. Contribution to the Freetown cultural center.

Israel:

Sierra Leone

Advice on electrical engineering.
Preliminary survey on establishment of experimental farm at the University of Agriculture, Najela.

Israel:

Swaziland

Youth training (third year).
Course for youth instructors.

Egypt:

SOMALIA

a. Experts in agriculture, hygiene, justice, transportation, electricity and irrigation (19 experts), as well as teachers and other instructors (332).

b. Scholarships for study and vocational training in agriculture, university teaching and the teaching of Arab and Islamic studies (330).

c. The government of the U.A.R. also contributed a great deal to the construction of numerous university and Islamic institutions and a cultural center in Mogadiscio. The U.A.R. also donated

Egypt:

SOUTHERN RHODESIA

a. One scholarship for Islamic studies.

b. Two scholarships for university studies.

Egypt:

TANZANIA

a. Experts in agriculture, irrigation, transportation and electricity (31 experts), as well as teachers and other instructors in higher education (5).

b. Scholarships for the study of agriculture and for training in the agricultural centers of the U.A.R., and also for the teaching of Arab and Islamic studies (190 scholarships).

Egypt:

TOGO

a. Instructors of university subjects (6).

b. Scholarships for agriculture and university studies (35).

Israel:

Togo

Advice to government on juvenile delinquency.
Advice on pineapple growing and its industrialization.
Agricultural training center for young pioneers in Glidji.
450 Young Pioneers cultivating more than 500 acres in thirty-two agricultural clubs.
Model cooperative village at Togodo, established by graduates from Glidji.

Egypt:

UGANDA

a. Professors of university and Islamic studies (7).

b. Scholarships in agriculture, university and Islamic studies (75).

Israel:

Uganda

Citrus planting in four areas.
Lecturer in zoology at University of Makerere.
Consultant psychiatrist to Ministry of Health. (Program terminated in early 1972.)

Egypt:

UPPER VOLTA

a. 20 scholarships for university and Islamic studies.

Israel:

Upper Volta

Management of pediatrics department at Ouagadougou Hospital.
Advice on State Lottery.
Participation in polyvalent farm at Maturkos.

Israel:	Zaire	Medicine (pediatrics) Advisory services in hospital administration and medical training

Egypt:

ZAMBIA

a. Experts in transportation and communications (15).

b. Scholarships for university study, Islamic studies and vocational training (11).

Israel:	Zambia	Comprehensive agricultural plans in Kafubu and Kafulafuta regions Planning for new comprehensive projects

Appendix 9

A PLAN FOR REGIONAL COOPERATION IN POST-GRADUATE TRAINING AND EDUCATION RESOURCE DEVELOPMENT: EGYPT AND ISRAEL

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November 13, 1978

Appendix 9

A PLAN FOR REGIONAL COOPERATION IN POST-GRADUATE TRAINING AND EDUCATIONAL RESOURCES DEVELOPMENT

Cooperative education programs between Egypt and Israel are most likely to succeed when they are pursued in areas of maximum commonality of need and minimum current disparity of development. Both countries have relied heavily on North American and European universities to provide specialized post-graduate education. Universities in both countries have established their own post-graduate programs along American-European disciplinary lines. As such, current programs are nested within relatively inflexible academic hierarchies and disciplinary definitions. Thus adjustment of curricula to rationally perceived needs is crude, at best. There is no direct linkage between need, programmatic response, and manpower production.

In the following sections, a plan is discussed which aims toward initial trilateral cooperation in post-graduate education, with responsibility steadily flowing more and more to binational structures. The plan follows the general three-phased plan outlined in the major document, with the exception that Phase III of this supplement is anticipated to be obtainable more quickly than the broad plan for Phase III of the major document.

Primary emphasis has been placed on planning structures rather than program content on the grounds that success will be heavily dependent upon identification of common substantive needs and the establishing of institutional mechanisms for their fulfillment.

Egypt and Israel each have unique as well as common needs for development and modernization of post-graduate programs and education resource development. Consistent with the general phasing strategy discussed in the previous pages, this section of the study presents a plan for trilateral cooperative development of post-graduate training

programs and related educational resources. It envisions a cooperative structure between educators, researchers, and administrators from the United States and their counterparts in Egypt and Israel. It anticipates a set of steps with initial coordination and implementation flowing outward from one or more U.S. sites, with steady devolution of planning and execution to binational institutes and curricular--staffed and directed jointly by indigenous personnel.

The education infrastructures of Egypt and Israel, for obvious reasons and despite geographic proximity--have developed along quite different lines. The opening of opportunities for mutual study and cooperation, however, promise to highlight areas of common need and changes for beneficial sharing.

For maximum long-term effectiveness, education programs require attention not only to current goals, needs, and means, but also to the institutionalization of planning, implementation, and evaluation. Early attention to institutional networks and stable programmatic strategies is likely to pay off in durable patterns of amicable, task-oriented cooperation that may endure beyond the lifetime of particular projects and survive the buffeting of larger binational policy disagreements.

A substantial portion of this section of the study, therefore, is devoted to recommendations for institutionalizing post-graduate education program planning, implementation, and evaluation. The tasks are envisioned as beginning with a central U.S. role in a set of trilateral planning activities, with responsibility ultimately being lodged in a number of joint, binational institutional structures.

The development of regionally cooperative education programs involves the following general steps, which may be segmented along the lines of

a three-phase planning process:

(Phase I)

--Needs assessment

--Problem priority setting

--Identification of program options

(Phase II)

--Resource assessment

--Research and development of program alternatives

--Program planning

(Phase III)

--Program implementation, evaluation, review & revision

A systematic needs assessment and resource inventory are critical components of rational planning for cooperative regional post-graduate education program development. The initial inquiries upon which the present assessment and recommendations are based could yield only a very tentative and preliminary view of areas for potential cooperative development. No substantive priority ought to be inferred from this report. For purposes of illustration, however, a few examples of possible program areas may be put forth, bearing in mind that the list of examples is neither inclusive of all possible lines of development nor are the categories necessarily mutually exclusive.

Initial conversations and observations, however, support the following examples of possible areas of comparative graduate education and education research development:

--Education administration (including, e.g., structures of institutional governance and administration, resource management and allocation, institutional planning, curricular development and evaluation, etc.)

--Documentation (including, e.g., libraries, data acquisition and management, bibliographic services, machine-readable and computerized data facilities, R & D dissemination)

--Public policy evaluation (including, e.g., cost-benefit analysis, research design and statistical analysis, performance measurement, social indicator construction and management, evaluation reporting, etc.)

--Development project administration (including, e.g., economic and natural resource development, environmental education, capital planning, engineering assessment, etc.)

--Urban and regional planning (including, e.g., land use, social service planning, input-output modeling, etc.)

Planning and Implementation Mechanisms

The mechanisms suggested below are based on four premises:

--The content of post-graduate curricular and resource development should be problem-oriented rather than defined by existing academic or disciplinary categories.

--Program priorities should emerge from the common needs of the cooperating parties in the region rather than from the interests, priorities, or expertise of third party nationals.

--Initial plans should anticipate program continuity by building in mechanisms for on-going evaluation and periodic retrospective review.

--Institutional mechanisms should be phased into place which will survive beyond the duration of specific projects.

Phase I is primarily concerned with initial organization, identification of common needs, setting of tentative development priorities, and information and research planning.

The basic structure revolves around a set of Trilateral Program Task Forces (TPTFs). The overall plan could be initiated by a Program Organization Conference at the subministerial level (e.g., U.S. Office of Education). The task of the subministerial Program Organization Conference would be to organize a series of TPTFs, each focused on

problems of the range and scope implicit in the examples previously listed. Initially, ten to fifteen such TPTFs might be anticipated.

Given that an early task is problem identification and setting of programmatic priorities, however, the initial mandate of the task forces ought to be limited, to be revised after a series of Post-Graduate Education Problem Councils, held by each of the TPTFs.

The Trilateral Program Task Forces would be composed of university researchers and representatives of the relevant service areas (e.g., public administrators). It will probably be advantageous for the chair and staff to be initially housed in an appropriate U.S. university, with regional secretariats established at an appropriate, early time. Such an arrangement would facilitate ready access to model research resources and curricular expertise, as well as provide an element of initial political neutrality.

Each TPTF should organize a problem council--a trilateral conference designed to assess the extent of commonality of its problem focus across the region. The problem councils would, as an intended by-product enable Egyptian and Israeli specialists to become acquainted with one another. These problem councils are the initial steps toward specific needs assessment. Reports of the councils ought to specify the problem focus, weigh the likelihood of cooperative search for solutions, and estimate probable costs and benefits to be derived from joint progress toward solution.

Leaders of the task forces should be convened in plenary session, under subministerial sponsorship, to review the set of problem reports. The purpose of such a plenary review will be to set the form and priorities of the permanent Trilateral Problem Task Forces.

Establishment of the permanent TPTFs should be followed promptly by organization of a set of Needs Identification Seminars, involving research and policy personnel from the three countries. Such seminars, in addition to specifying needs and tentative priorities, would assist the TPTFs in identifying planning information requirements, documentation gaps, and initial program options.

By the end of Year 1, and Phase I, field teams for Phase II should be appointed.

Phase II concentrates on research and program resource development. The TPTFs primary role is continued monitoring of planning and implementation. The bulk of Phase II activity should be executed by Trilateral Research Teams, (TRTs), working in cooperation with TPTF secretariats, as the program administrative apparatus in the region.

The first task of the TRTs will be to conduct a thorough inventory of available expertise and resources in the region, pertinent to the problem area. In addition, appropriate sites for cooperative program assistance in the U.S. should be inventoried as well.

The primary focus should be to identify available and needed resources to sustain on-going, problem focused education research and post-graduate training. Care should be taken to account for administrative talents and facilities, documentation and informational resources,* analytical facilities (e.g., computation, data management, etc.) as well as laboratory and related training equipment needs.

Two years should be allowed for these tasks by the TRTs, with progress reports regularly submitted by team leaders to the Trilateral Program Task Forces.

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*E.g., consideration of the exportability of facilities such as the National Technological Information Service.

Each TPTF, in turn, while monitoring the activities of the research teams, should be refining implementation options and anticipating specific project plans, the latter to be in place at the end of Phase II (Year 3).

Phase III. The Trilateral Research Teams should be planned to expire with entry into Phase III and with the establishment of permanent program institutional arrangements. Continuity will be provided by the continuation of the Trilateral Program Task Forces, through a permanent evaluation, review, and planning function. Phase III envisions full curricular implementation and establishment of a permanent problem-oriented institutional structure.

The maintenance and development of cost-effective post-graduate education programs in the region will be based in a series of Joint Education Research and Documentation Centers (JERDCs). Permanent staff would be resident in Egypt and/or Israel. Continued U.S. (and possible other third party) national involvement would take the form of a set of trilateral contractual arrangements between the JERDCs and various U.S. institutions, ensuring a steady and predictable rotation of U.S. expertise and consultation, but a gradual elimination of U.S. administrative, policy, and financial responsibility. Each JERDC would not only conduct on-going education research, but would also serve as contracting agent for externally conducted research conducted jointly by the cooperating governments or private concerns.

The JERDCs would also serve as the regional documentation sites, bringing together and maintaining the resources identified and/or collected by the Trilateral Research Teams in Phase II. Library staff, computer personnel and facilities, etc. would be integral parts of the service

structure of each JERDC.

The JERDCs would also serve as sites for curricular development and coordination of the other major component of Phase III, i.e., post-graduate training programs. In the event of progress toward a Sinai University, the JERDC would constitute a core of post-graduate research institutions around which further university development could take place.

Again, it should be emphasized that the training programs will be structured on the basis of the foregoing process of need evaluation and option evaluation. They will be tailored to measured needs in the region and, in all likelihood, will require innovative, trans-disciplinary content. As such, it is unlikely that participants would derive maximum relevant benefit merely from pursuit of established U.S. degree programs. Individualized or small group instruction and supervision, with a highly flexible program mixing formal classes, research practica, structured field inquiry, and individual inquiry would be the norm of each program.

Recognizing the need for concentrated expertise, as well as the career needs of individual students, however, care should be given to programs that yield formal graduate degrees (masters and/or doctorates) and are credible by accepted standards of academic excellence.

Each JERDC should initially seek contractual relationships with one or more U.S. universities to obtain degree-granting programs for Egyptian and Israeli post-graduate students. Each curriculum should anticipate both classroom and field research experience alternatively in the U.S. and in the Middle East. The actual program of each JERDC becomes, in effect, a mobile miniature university. Care should be taken in establishing contractual relationships that the such constraints as the academic

calendar or the "customary" sequencing of American university programs not be controlling of the new programs' structure.

Careful monitoring of student and faculty performance should be incorporated into the programs to ensure overall quality as well as to achieve the appropriate mix of formal classroom instruction, research practica, analytical skill acquisition, etc. Evaluations based on such monitoring should be independently reviewed by both the JERDC secretariat and the relevant Trilateral Program Task Force. Sufficient consideration should be given early in the planning process such that program and performance indicators are collected from the outset and continuously throughout program operation.

In addition to building a research and training infrastructure, a major commitment of each JERDC should be formative and summative evaluation of program impact, efficiency, and effectiveness.

A central objective of the post-graduate programs is to train indigenous personnel such that the primary base for graduate programs ultimately shifts from the U.S. campuses to joint institutions in Egypt and/or Israel.

Episodically--probably at three year intervals--the various Trilateral Program Task Forces should report to the subministerial level for overall program review and priority reassessment. Episodic Plenary Review Councils would provide a mechanism for major program revisions--including, but not limited to, elimination of ineffective programs and establishment of new priorities, thereby triggering a new round of overall planning.