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Universities in Arab Countries

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The quality of higher education in the Arab world has suffered because of the rapid growth of university systems. Despite popular demand, several Arab governments are questioning the wisdom of continuing to expand these systems.

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Half the Arab universities in existence today were established after 1970. Enrollment has increased even faster — leading to overcrowding, unqualified faculty, and insufficient equipment and facilities.

Several Arab nations have already moved to control (in some cases, to reduce) enrollment. They have done this partly because of the fall in oil revenues and partly in recognition of the problems related to the rapid growth of the university systems.

Open admissions policies in some systems have led to high failure and dropout rates, as well as to the shunting of many students by default into “schools of last resort:” the arts, social sciences, and law.

As student enrollment expanded rapidly, the quality of education suffered and many universities became less attractive to highly trained fac-

ulty. This pattern has contributed to national and regional brain drain.

Overcrowding has also led to a greater reliance on lecturing as a means of instruction, a method not particularly conducive to the development of critical or incisive thinking. Faculty accessibility and strong faculty support for student development seem to be the exception rather than the rule at many Arab universities.

Instruction in French or English, sometimes necessary because of a shortage of Arabic-speaking faculty and a lack of appropriate Arabic texts, hurts students not proficient in those languages.

The cost of underwriting university education at a time of slow economic expansion raises the issue of whether it is better to have unemployed high school graduates or unemployed university graduates.

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Preface

Many developing countries face heavy pressures and demands for expanding educational opportunities in higher education. Often, the response resulted in accelerated quantitative growth and qualitative decline. Higher education also claims a substantial portion of educational budgets and the priorities of governments have been a subject of controversy. In light of this, and as part of its work program, the Education and Employment Division of the Population and Human Resources Department of the World Bank has initiated regional and country case studies on higher education with a view to assessing issues of efficiency, relevance, and finance.

This paper is a study of the status of universities in the Arab countries of the Middle East and North Africa. Its major objectives are:

- (a) To provide a general overview of the status of universities in the Arab countries of the Middle East and North Africa; and
- (b) To highlight issues and problems in higher education faced by universities.

The study is restricted to universities granting the bachelor's degree or higher and excludes polytechnic institutes and community colleges. It does not include non-Arab Middle Eastern countries like Iran and Turkey nor does it include Arab countries categorized in the Africa Region of the World Bank. Specifically, the following countries are covered: Algeria,

Egypt, Libya, Morocco, Tunisia, Bahrain, Yemen Arab Republic, People's Democratic Republic of Yemen, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, and the United Arab Emirates.

The report consists of the following three sections:

I. An overview of the status of universities in the Arab countries of the Middle East and North Africa. This is an extensive overview that starts with an introductory background and includes subsections dealing with governance, structure, admission and enrollment, financial resources, curricula and methods of instruction, foreign exposure, and women's education. Annex 1 provides information on 72 universities in the countries under consideration and Annex 2 gives percentages of foreign students in different host countries.

II. A list of higher education issues and problems faced by universities.

III. Concluding remarks.

Valuable comments and views were provided by Messrs. W. Haddad, R. Harbison, and J. Schweitzer and I am grateful to them.

An Overview of the Status of Universities in the Arab Countries of the Middle East and North Africa

Background

Higher education and learning in the Arab world may be traced several centuries back to the rich Arab culture and the recognized contributions of the Arabs in the various fields of science, medicine, astronomy, art, and literature. This was followed by a dark age spanning seven or eight centuries, the last four of which were dominated by the rule of the Ottoman Turks (1517-1917), an age of educational calamity to the Arabs. This educational state of affairs was somewhat shaken by the Napoleonic invasion of Egypt in 1798 and by the educational activities of both Protestant and Catholic missionaries during the nineteenth and early twentieth centuries. In Egypt, Mohammad Ali Pasha established a school of engineering and another of medicine back in the 1820s in addition to a school of languages. However, education in Egypt regressed later. The Ottomans established a school of medicine in Damascus in 1903 and a law school in Baghdad in 1908 and in Beirut in 1912.

In general, there was limited interest in promotion of education at the official or governmental level and, consequently, foreign and local private schools assumed special importance. It was in these schools that the revival of the Arabic language took place and the movement of Arab nationalism started. The role of missionaries during that period is represented by the establishment of the Syrian Protestant College (currently the American University of Beirut) in 1866 and Saint Joseph University of the French Jesuit Order in 1881, both in Beirut, Lebanon.

Any introduction to universities in the Arab countries will not be considered complete without reference to the old universities -- established about ten centuries ago -- whose main claim to fame for a long time revolved around higher religious Islamic studies. These higher education institutions were an extension to the mission of the Koranic schools which over the years had emphasized the transmission and the preservation of culture, especially that embodied in religion. Prominent among these universities are: Qaraouiyine University (which was founded in a mosque in Fez, Morocco in 859 A.D. and later

reorganized in 1788), which still concentrates on religion and the Arabic language and literature; Al-Azhar founded in Cairo, which became an institute of higher education in 988 A.D.; and the Al-Zaytounah Islamic Institute at Tunis, which was incorporated in 1960 in the University of Tunis. Al-Azhar was modernized in 1961 through the addition of faculties of medicine, of engineering, and commerce to the three existing faculties of Islamic studies, Islamic theology, and Arabic language.

The Arab countries under consideration cover a wide stretch of territory extending from Morocco on the Atlantic Ocean to Oman at the southeastern edge of the Arabian peninsula not far from the shores of Iran. The classical Arabic language is the language of the Qur'an and it is used in religious observance, broadcasting, newspapers, government documents, and formal writing among others. It is different from the spoken language which has a wide variety of regional dialects. In spite of the commonality of the Arabic language and predominance of the Islamic religion, there are variations in other cultural aspects and in the outlook to daily living that are a reflection of the diversity of the land and its natural resources as well as the influence of the colonial powers whose domination of some of these countries lasted past the first half of the twentieth century. The variations cover a wide range of areas including the political, economic, societal, and educational.

The Arab countries are generally governed by the values and traditions of Islam. However, conservatism and strict adherence to religious laws vary widely from one country to another and, sometimes, within the same country. The Arab countries long for progress but, at the same time, want to guard against perversion of spiritual values and ideas. Scientific literacy and technological innovations are expected to be integrated with long-heralded traditions.

In proceedings of a seminar on "Preparing the Arab Individual to Contribute in Science" published in December, 1985 with participation of high officials from governments, various

research institutions, and universities in thirteen Arab states, religion was brought up implicitly or explicitly in several presentations and commentaries. Citations and presentations intended to demonstrate that Islam supports and promotes science and its teachings and that there is no conflict between the two. Other statements were directed against those who claim that Islam stands in the way of scientific advances and development. In an intervention cited in the proceedings, Prince Hasan of Jordan explained that the Royal Association for Research in Islamic Culture is undertaking a serious review of the outlook of Islam towards education with the assurance that the role will be clarified.

The need for specialized manpower for governmental infrastructures and for development has motivated governments in the area to broaden the scope of existing colleges and to transform them into universities or to establish new universities. There was faith that education would create wonders and will enhance the economies of the countries. The faith is related to the fact that highly skilled manpower and professionals are the product of education. The models of the universities were bound to be patterned after those of the European countries which were influential in the respective emerging countries. Quick responses to pressures to expand education left little time for careful preparation,

Table 1

Arab Universities Established, 1900-1986

Country \ Period	Before 1900	1900-1950	1951-1960	1961-1970	1971-1980	1981-1986	Total
Algeria ^a	1			2	5		8
Bahrain					1	1	2
Egypt	1	4	1		7		13
Iraq			1	4	1		6
Jordan ^a				1	5	2	8
Kuwait				1			1
Lebanon	2	2	3	1			8
Libya			1		1	1	3
Morocco	1		1		4		6
Oman						1	1
Qatar					1		1
Saudi Arabia			1	3	3		7
Syria		1	1		2		4
Tunisia ^b			1				1
U.A.E.					1		1
Yemen, A.R.				1			1
Yemen, P.D.R.					1		1
Total	5	7	10	13	32	5	72

^a Includes the University Center of Tizi-Ouzou in Algeria, and West Bank universities under Jordan.

^b University of Tunis, founded in 1960, incorporated Al-Zaytounah Islamic University established around the 9th century, A.D.

and there were practically no in-depth studies to examine the needs of the countries in order to build educational systems responsive to those needs. Thus, the already-existing educational systems were broadened to take care of rapid quantitative growth.

Table 1 shows the number of universities that have been established during different periods by the Arab countries. Universities, in the modern sense, began to be established at a very slow rate during the first half of the century -- only twelve universities out of seventy two in Table 1 existed by 1950. The pace has intensified since then and culminated in the establishment of thirty two universities during the decade of the 1970s. The increasing financial capabilities of the oil-rich countries has contributed to the boost during this period.

It is difficult to discuss Arab universities as one group because, in spite of some similarities, there are basic differences that have a direct bearing on the size of universities and their potential. A country like Egypt has a population which exceeds at least that of ten other Arab countries put together. The per capita income ranges over a wide spectrum even between neighboring countries like the Yemen Arab Republic and Saudi Arabia. Some promising educational developments and practices in both Lebanon and Iraq have been disrupted if not shattered by extended military activities.

One commonality is that all the Arab countries are considered developing, although at different stages of development. It may also be appropriate to single out all the high-income oil-exporting countries as a distinct category. The changed economic circumstances caused by the drop in oil prices and lowered demand during the past few years may, in the long run, contribute positively to oil-rich countries in terms of budget control and efficiency and, more importantly, in terms of the attitudes of their people and the forced reorientation of their outlook to everyday living. It is concretely realized that oil is a dwindling and unreliable asset and, accordingly, a number of oil-exporting Arab countries are exerting efforts to diversify their economies in the shortest time possible. Science and technology assume or are presumed to assume a major role in the process of diversification of such economies.

With respect to higher education, some Arab countries have become captive to traditional policies and practices and are now facing new

problems engendered by new realities. This is exemplified by both open admissions policies and very generous support to students in higher education in countries like Algeria, Morocco, and Tunisia. Rapid growth in pre-university enrollment was bound to have its impact in terms of enrollment growth in higher education, making tuition support and subsistence assistance to students a budgetary burden.

Thus, publicly subsidized higher education has emerged as an issue in some countries and many questions are being raised about its place in overall educational funding and in overall public expenditure priorities. Jordan faced such problems squarely and managed to absorb societal pressure for higher education through its system of community colleges, many of which are private. Furthermore, although enrollment in the state universities has mushroomed, the government of Jordan has managed to maintain a tuition fee structure generating income to cover approximately one-third of the recurrent costs of its state universities.

In the following sections, consideration is given to many aspects of higher education as they characterize universities in the Arab countries: governance, structure, admission and enrollment, financial resources, curricula and the methods of instruction, status of faculty, facilities, research and graduate studies, language of instruction, foreign exposure, and women's education.

Higher education in the Arab countries is basically a state function. Out of seventy two state universities covered in this overview, twelve are private -- seven in Lebanon, four in the West Bank of Jordan, and one in Egypt. Based strictly on enrollment figures, private universities shoulder a smaller burden than may be suggested by their number. Available enrollment figures for 1983-85 for sixty five universities representing fifteen countries of those listed in Annex 1, derived from the *International Handbook of Universities*, 1986 show a total of about 1.3 million students with only about 43,500 or 3.3 percent in private universities. The overall enrollment figure includes approximately 48,000 listed as being external students. One of the sixty state universities, the Gulf University in Bahrain, is regional -- a joint achievement of the Gulf Cooperation Council that includes: Bahrain, Kuwait, Saudi Arabia, Qatar, United Arab Emirates, and Oman. It should be noted that more than half of the 1.3 million students were enrolled in Egyptian universities.

Table 2**Arab University Enrollment, 1983-1984 or 1984-1985 ^a**

<i>Country</i>	<i>Enrollment</i>	<i>Number of Universities</i>
Egypt	716,800	13
Syria	112,200	4
Morocco	87,200	5
Iraq	86,800	6
Lebanon	71,500	7
Algeria	71,200	8
Saudi Arabia	52,000	6
Jordan	33,400	7
Tunisia	29,600	1
Libya	18,300	3
Kuwait	17,000	1
United Arab Emirates	5,000	1
Qatar	4,700	1
Yemen Arab Republic	4,100	1
Oman	540	1
Total	1,310,340	65

^a Includes external students.

Source: Derived from information in *International Handbook of Universities*, 1986.

Table 3**Frequency Distribution of Enrollment in 65 Universities**

<i>Enrollment Size</i>	<i>Number of Universities</i>
90,000 or more	4
50,001 - 89,999	2
40,001 - 50,000	2
30,001 - 40,000	6
20,001 - 30,000	3
10,001 - 20,000	15
5,001 - 10,000	12
3,001 - 5,000	7
1,001 - 3,000	10
1,000 or less	4

Source: Derived from information in *International Handbook of Universities*, 1986.

Table 2 shows, by country, enrollment figures and number of universities in descending order. Approximately half of the sixty five universities with enrollment figures had 10,000 or fewer students; fifteen universities had enrollments between 10,001 and 20,000. Enrollment figures for four universities ranged between 90,000 and 121,500 -- all four in Egypt.

Table 3 shows the frequency distribution of enrollment in these sixty five universities, according to size.

Governance

State universities are, in most cases, governed by the Ministry of Higher Education or by the Ministry of Higher Education and Scientific Research (Algeria, Egypt, Iraq, Jordan, Saudi Arabia, and Tunisia). However, the controlling or policymaking authority is typically embodied in a Council for Higher Education or Supreme Council for Universities with broad representation of cabinet ministers, university presidents and, in some cases, representatives from some of the industrial and economic sectors. The functions of the Council may vary from one country to another but it generally addresses overall higher education policies, coordination among universities, and admission criteria and quotas.

The hierarchy and management system may be exemplified by the case of Kuwait University. According to Al-Ebraheem and Stevens (1980), the organization and structure of Kuwait University simply duplicated the common practice of the Arab world where a rector is formally nominated by the University Council, then recommended by the Minister of Education, approved by the government cabinet, and then confirmed through a royal or presidential decree.

In reality, however, the procedure usually starts from the top, frequently, even in the appointment of deans and sometimes department chairmen. Faculties or colleges are usually headed by deans and administered through a faculty council consisting of chairmen of departments. In most instances, a University Council approves decisions made by the faculty council. At Kuwait University, the University Council consists of the rector and vice-rectors, the deans, the secretary-general, and the Minister of Education who presides as Chancellor. There is also representation from other governmental agencies and from the private sector. The actual power base within the university is embodied in the

secretary-general who is responsible for administrative and financial affairs and is usually a non-academician with continuity of appointment. Through this type of organization, the State reserves ultimate control over all aspects of university affairs.

Educational systems tend to be extremely centralized at the pre-university cycles. For higher education, however, Qubain (p. 50) when describing the situation prior to 1966 states that:

With few exceptions, one of the main features of university organization in the Arab world is extreme decentralization and lack of coordination. Each college, and indeed sometimes each department within the same college, is a world unto its own. Each maintains its separate teaching staffs, courses, laboratories, libraries, and its students may not register for courses in any other college. There may even be separate, unconnected departments of the same subject within a university.

Qubain ascribes this situation to the influence of the European model, since some professional colleges or faculties were quite well-developed before they became part of universities.

However, it is difficult to accept that such extreme decentralization reflects current university organization in Arab countries. Although a considerable measure of autonomy may be exercised by Arab universities and their respective faculties in academic and routine matters that are free from political and socio-cultural overtones, the systems tend to be centralized especially at the higher administrative levels with the State exercising, directly or indirectly, the ultimate control of university affairs.

It may be safe to state that genuine autonomy of the universities and faculty academic freedom are generally neither the policy nor the practice. How can they be when every faculty and staff member of a state university is paid by the state and governed by civil service or other governmental regulations? There were a number of cases in which faculty members and/or university administrators had their services terminated when governmental power was taken by a different political group. In some situations, they were imprisoned or pressured/forced to leave the country.

In a recent article related to productivity of Egyptian labor, Henley and Ereisha (1987) point out that under state socialism there is, in

theory, a unitary system of bureaucratic control that extends from the head of state or collective leadership of the party via different parts of a state apparatus to enterprise level. They further state that

...the security police attached to each state enterprise have a 'hot line' to the prime minister's office, which both management and workers are probably aware of. While its primary function may be to monitor Islamic fundamentalism, it also provides a check on any managers who may feel inclined to go beyond the administrative code in exercising control over the labor process.

One wonders about the extent to which similar practices are applicable in the university system as a state enterprise. There are reports of such practices in some other countries. From another angle, state universities depend upon the government to approve their budget and to allocate them funds. Accordingly, development policies have to be approved by the government by virtue of its responsibility for recurrent and development expenses. Along the same lines, university related planning has to be integrated with central governmental planning.

With respect to private universities, eight of them influenced by the American system of education are governed by boards of trustees (four in the West Bank, the American universities of Beirut and Cairo, Beirut University College, and Haigazian College in Beirut). Three of the remaining four have direct religious linkages in their governance although it could be argued that Bethlehem University (in the West Bank) established by the American De La Salle Brothers should also be grouped in this category. From another angle, the Qaraouiyine University in Morocco, which is basically religious in its character, is headed by the Minister of State for Cultural and Traditional Education. Three other state universities in Saudi Arabia are religious in their programs.

About twenty of the universities listed in Annex 1 reported the conclusion of arrangements for cooperation with a wide range of universities from all over the world. In some cases, part of the cooperation is inter-Arab. The nature of the individual cooperation is unclear, but is expected to vary widely. Some arrangements involve the exchange of academic staff and students, and cooperation in research projects. The most numerous individual arrangements with nineteen cooperating institutions is that of Yarmouk

University in Jordan. The University of Petroleum and Minerals in Saudi Arabia has highly prestigious universities on its list. One case of clear-cut affiliation is that of the Beirut Arab University which is affiliated with the University of Alexandria, Egypt. Attempts at cooperation and coordination within the region are made through the Association of Arab Universities, meetings of Arab university presidents, and a variety of academic conferences.

Over the years, a number of universities had their names changed for political or nationalistic reasons as a reflection of changes in their nature or program. For example, the University of Cairo (a 1953 name) was called the Egyptian University in 1925 and Fuad I University in 1936 while the name of the University of Alexandria was formerly the royal name of Farouk I. The reverse trend is observed in the change of the name of Riyadh University to the King Saud University. At the time of the United Arab Republic union between Egypt and Syria, it was felt appropriate to de-emphasize country names, perhaps the reason for the change from Syrian University to Damascus University. Libyan universities underwent a change of names for what appears to be nationalistic reasons. In Iraq, the University of Salahaddin was formerly named the University of Sulaymaniyeh. The change in purpose from missionary to secular as well as the creation of separate states in the region spurred both the alumni and the administration in 1920 to argue for a change in the name of the Syrian Protestant College into the American University of Beirut. In many cases, separate professional colleges with their own specific names preceded universities and, as a result, these colleges are likely to be scattered in the university -- not on one campus. This pre-existence of colleges is sometimes responsible for a duplication in offerings. As an illustration, science and mathematics departments exist in the College of Education of the University of Baghdad as well as in the Faculty of Science.

Several Arab countries have resorted to the establishment of specialized institutes of higher study in order to fulfill needs for specialized manpower. The institutes in the Maghreb countries of Algeria, Morocco, and Tunisia deserve special mention because a number of them yield higher degrees. In Algeria, for example, study in an institute of agriculture (640 students -- all the figures in this section are for enrollments around the year 1984) and another

for telecommunication engineering (737 students) lead to the degree of Diplome D'Ingenieur. Excluding the field of education and pedagogy, there are many cases in which these institutes are sponsored by ministries other than those of Education or Higher Education. For example, in Morocco, the Ministry of Agriculture sponsors an Institute of Agriculture and Veterinary Medicine (1,950 students); the Ministry of Energy and Mines sponsors the National School of Mineral Industries (478 students); the Ministry of Planning sponsors the National Institute of Statistics and Applied Economics (510 students) -- all yielding university-type degrees. Similarly, in Tunisia, the National School of Veterinary Medicine (203 students) and Agriculture (547 students) are sponsored by the Ministry of Agriculture.

Jones (1981) states that in each Maghreb country, technical ministries have established their own university-length programs to prepare the kinds of engineers and other specialists they want. Students usually sign a contract with the Ministry and degrees are not given equivalence to university degrees, thus cornering graduates to take jobs intended for them and to remain in these jobs. This phenomenon of ministries other than education assuming a significant role in specialized training deserves further attention in order to probe the underlying factors and the extent of duplication with existing universities, objectives, and implications.

Structure

The current structure of universities in the Arab world is a product of their individual historical evolution, the conditions under which they were established, and environmental impact. Taking over from the colonizing countries meant continuing to build on this inheritance, or planning to build new systems emanating from the culture that are adequate to serve it (IAU Paper 19). Since new leaders had been trained and educated at the institutions of the colonizing powers, initiation of original approaches was not forthcoming; the new leaders were often more royalist than the king and adopted defensive attitudes with respect to proposed changes of the system.

A notable exception is the case of Algeria whose university before 1962, and for some time after independence, was a foreign institution, although this was partially compensated for by the relatively high percentage of

Algerians that could go to study in France. According to Dr. Chabou, Vice Rector of the University of Algiers (IAU Paper 14, 1977, p. 21), "...as the economic, social and cultural liberation of the country proceeded the university became a serious obstacle to development and a dangerous handicap in the training of really effective cadres."

Chabou further reports that with the 1971 reform, Algeria adopted an integrated university structure to provide programs of study "compatible both qualitatively and quantitatively with the requirements of precisely defined jobs and careers. The need to train graduates as rapidly as possible inevitably led to an increase in the work load and this was accommodated by abolishing the traditional winter and spring vacations and by adding two months to the academic year. Today Algerian university teachers and students have the same work load as the workers and peasants."

Basically, a modular system was adopted -- a variation of semester course credits -- and the degree program was shortened by one or two years. In this system, reorientation of a student is possible without excessive loss of time, and assessment is spread over time instead of being in the form of one major final examination. The integrated university in Algeria is made up of institutes corresponding to the major areas of knowledge, each providing services for other institutes. Reportedly, there are trends of decentralization to introduce socialist management of universities through committees of teachers and students.

With the exception of the management through committees, the preceding Algerian university model is, to a large extent, an American model. This transforms substantially the French university pattern of the old University of Algiers, which is still practiced with some variations in Tunisia and Morocco. The old Egyptian universities adopted a model that was a mixture of British and continental European, while some of the new universities have adopted the American semester system. When established, many of the Gulf universities adopted the old Egyptian model. This applies to Kuwait University and to King Saud University and it is understandable when it is realized that most of their senior faculty members and early executives were Egyptians.

Similarly, the University of Libya followed the pattern of Egyptian universities, particularly that of the University of Alexandria. In

the traditional European model, the individual colleges or faculties exercised a considerable measure of autonomy with little coordination. Thus specialization started early and there was practically no possibility for transfer of academic credit from one field of specialization to another.

The fact that some universities started as a collection of well established and scattered faculties implied that it was possible to have different organizational patterns within the same university. Diversity within the university system is illustrated by Szyliowicz (1973, p. 319) who reports that the University of Baghdad had modeled its Colleges of Art, Science, and Medicine after the British system; its College of Law after the French system; its College of Agriculture after the American system; and its Colleges of Engineering and Education of mixed patterns. This was reinforced by the variety of countries sponsoring aid to different faculties within the same university and by the variety of allegiance of administrators and faculty members, which often depends upon where they themselves have studied.

The American model with its emphasis on liberal education at the undergraduate level and with its semester credit system and frequent evaluation was introduced by the graduates of American institutions in the United States and the area. Its special appeal is in the transfer of credits from one area of study to another and its dependence on several examinations for evaluation. A number of universities have changed to the semester credit system -- Kuwait University, Bahrain University (newly-established by merging Bahrain University College and the Gulf Polytechnic), King Saud University and a number of the Egyptian universities. Universities in Jordan and a good number of the other Arab universities established since 1975 adopted the semester credit system from the start. Existence of several American models already operating in the area such as the American universities of Beirut and Cairo, the University of Petroleum and Minerals in Saudi Arabia, and the Jordanian universities helped in spreading the trend and in implementing smooth transitions.

In addition to the previously mentioned religious universities, some of which have a very long history, there are indications of a trend towards institutional specialization in higher education. Although it may still need the resolution of certain issues and streamlining, the 1986 division of the Yarmouk University into

Yarmouk University and the Jordanian University for Science and Technology follows this same trend. Similarly, the new Mu'tah University in Jordan is reportedly splitting into two: one concentrating on military and police studies, the other concentrating on civilian studies. Some other illustrations are embodied in the University of Petroleum and Minerals in Saudi Arabia, the University of Technology in Baghdad, and in Algeria the University of Science and Technology at both Algiers and Oran.

Examples of extreme application of the principle of specialization in higher education are to be found in higher institutes administered by ministries other than those of education. To illustrate, the Ministry of Industry and Energy in Algeria started its experience with large single-discipline technical schools when it established the National Institute of Hydrocarbons and Chemistry at Boumerdes in the 1960s in collaboration with the Soviet Union. In the mid-1970s, the Ministry collaborated with some American institutions to establish the National Institute of Electricity and Electronics (INELEC) at Tlemcen.

From the point of view of Vogler (1980), who is an architect and campus planner, an institute like INELEC can yield to the country dramatic savings both in the educational process and in the cost of physical plant and equipment when all the training capability of the country in electricity and electronics is concentrated in one institution. He further states that such an approach may be well adapted to the needs of many developing countries in the future. In contrast, there are arguments from others that highly-specialized institutes do not provide for cross-fertilization and are not likely to be staffed or disposed to offer interdisciplinary studies. Furthermore, at a time when the manpower needs of countries undergo rapid change, one wonders whether students should not be equipped with a broad, rather than narrowly specialized, base of skills and knowledge to enhance their adaptability to change.

Admission and Enrollment

Enrollment in higher education institutions of the Arab countries has increased at a very rapid and unprecedented pace during the past twenty years. In Jordan, for example, enrollment grew from 167 in 1962 when Jordan University was established, to 26,700 in 1985-86 (excluding community colleges). Combined enrollment at

Table 4

**Enrollment and Percent of Female Students in Universities and
Equivalent Institutions in Arab Countries**

	<u>1965</u>		<u>1975</u>		<u>1980's</u>		<u>Year</u>
	<i>Total</i>	<i>%Fem</i>	<i>Total</i>	<i>%Fem</i>	<i>Total</i>	<i>%Fem</i>	
Algeria	8,177	20.1	41,847	-	108,181	-	1984
Egypt	64,506	19.9	411,097	30.1	613,570	33.6	1983 ^a
Morocco	7,979	11.3	35,081	19.2	126,481	32.5	1984
Libya	1,646	7.2	11,997 ^b	15.8	27,535	25.5	1982 ^c
Tunisia	5,629	18.1	20,505	25.7	38,829	36.0	1984 ^c
Jordan	1,169	40.2	4,805 ^b	29.2	25,929	38.8	1984
Bahrain	-	-	703	52.6	2,085	73.3	1984
Iraq	28,337	26.9	71,456	29.3	84,751	33.5	1983
Kuwait	-	-	6,246	56.0	16,831	53.4	1985
Lebanon	20,338	18.1	-	-	70,510	39.0	1984
Qatar	-	-	779	57.4	3,894	62.7	1984
Saudi Arabia	3,625	3.3	26,437	20.1	79,356	35.8	1983
Syria	32,653	16.8	65,348	22.4	123,735	29.7	1983
U.A.E.	-	-	-	-	6,326	54.9	1984
Yemen, A.R.	-	-	2,408	10.2	4,519	11.2	1980
Yemen, P.D.R.	-	-	934 ^b	18.2	3,645	52.3	1983 ^c

^a Excluding Al-Azhar University.

^b Figures for 1974.

^c Third set of figures for all levels of higher education.

Source: UNESCO *Statistical Yearbooks 1977, 1986 & Current Surveys and Research in Statistics* (CSR-E-54, January, 1987).

Cairo, Ain Shams, Alexandria and Assiut universities in Egypt grew from 109,700 in 1963-64 (Qubain, p. 71) to about 405,000 around 1984. Adding to this the enrollment in the seven other Egyptian universities established in the 1970s and the figures increase appreciably.

The past two decades witnessed heavy demand for entry to universities, coupled with socio-political pressure to meet the demand. There has been strong parental motivation to educate children at higher levels, especially sons. Table 4 provides enrollment figures in universities and equivalent institutions (excluding the

non-degree colleges and institutes, unless otherwise specified) of sixteen countries during the period 1965-1985. It reflects the magnitude of the increase in enrollment since 1965 and of the percentage of females. As expected, the rate of the increase is greatest in countries where higher education has been introduced only recently.

It can be found from Table 4 that enrollment of university students grew from about 274,000 in ten countries in 1965 to about 1,336,000 in sixteen countries in the 1980s -- approximately a fivefold increase. Excluding countries which had no students in 1965, the

Table 5
Gross Enrollment Ratio (GER in %) at Second Level (II) and
Students per 100,000 Inhabitants at Third Level (III) ^a

	<u>1975</u>		<u>1980</u>		<u>1983</u>		<u>1984</u>	
	II	III	II	III	II	III	II	III
Algeria	20	261	33	425	43	...	47	529
Egypt	43	1323	54	1724	58	1957	..	...
Morocco	16	262	25	580	29	631	31	723
Libya	.	553	.	678	..	859	..	...
Tunisia	21	365	27	498	34	520	36	559
Jordan	.	457	76	1250	79	1722	..	...
Bahrain	52	259	64	550	77	1023	82	1031
Iraq	35	781	57	803	53	856	.	...
Kuwait	66	804	80	991	82	1196	82	1287
Lebanon	.	...	59	2962	62	2715	..	...
Qatar	52	455	68	1011	66	1712	68	1588
Saudi Arabia	22	364	30	662	38	830	..	...
Syria	43	990	47	1535	56	1568	59	...
U.A.E.	33	...	54	279	58	511	58	557
Yemen, A.R.	4	46	5	76	10	...	..	...
Yemen, P.D.R.	23	76	18	177	19	190	..	...

^a UNESCO *Statistical Digest*, 1986.

growth was most phenomenal in Saudi Arabia and Jordan each with an increase of more than twenty times, followed by the Moroccan and Algerian increases of sixteen and thirteen times respectively. There are currently reports ascribed to the Minister of Higher Education that Egypt is trying to decrease the number of its university students drastically in order to improve quality (AMIDEAST, No. 57). Again from the same source, another report states that, under a new reform program, Kuwait University will raise admission requirements to improve academic standards.

Table 5 lists gross enrollment ratios at the second level (II) as well as number of students per 100,000 inhabitants for the third level (III) of education. For the year 1983 in 15 countries, the gross enrollment ratio ranged between 10 percent

(Yemen) and 82 percent (Kuwait). The countries which started with low gross enrollment ratios in 1975 tended to increase the most as illustrated by figures for Algeria, Morocco, Tunisia, and Yemen PDR. The figures for Yemen Arab Republic, however, deviates from this pattern. For third level education the ratio of student per 100,000 people, computed between 1975 and the last year for which figures are provided (1983 or 1984), more than doubled in 7 of the 16 countries. This ratio is 2.8 for Morocco, 3.8 for Jordan, 4.0 for Bahrain, 3.5 for Qatar, 2.3 for Saudi Arabia, and 2.5 for Yemen, PDR.

As one moves from 1965 to the eighties, the percentage of female students increases in almost all Arab countries. In the 1980s Bahrain, Qatar, United Arab Emirates, Kuwait, and

Yemen, PDR had more females in their universities than males. A significantly high proportion of males from these countries pursue higher education outside their own countries no doubt affects these percentages.

At the recommendation of the respective university senate, the Supreme Council of Universities in Syria decides annually on the total number of Syrian students to be accepted in each college for the next academic year, as well as the total number of foreign students that might be accepted. It is not uncommon to vary the number or proportion of foreign students appreciably from one year to the next for political considerations. The Higher Council of Education in Jordan and the University Council in Kuwait take decisions determining admission criteria and quotas.

In a number of countries, passing of the national General Secondary Certificate of Education (GSCCE) Examination or Baccalaureate is the only academic requirement for admission to universities (Algeria, Morocco, Tunisia, Iraq). In other words, anyone who passes the Baccalaureate or equivalent has the right to pursue higher education. However, the choice of field of study is limited by the secondary school tracks that have been pursued and, recently, by the results of competitive examinations that have been required, and/or by scores on the Baccalaureate/GSCCE examination itself.

Students who were denied a place in the faculty of their first choice but still exercised their right for admission to universities ended up in faculties of letters, law, and commerce, contributing further to already overcrowded facilities. According to Jones (1981), Tunisia's School of Science also falls into this category and the Tunis School of Law and Economics, and the School of Science are reported to be "schools of the last resort" receiving students for whom no other place can be found.

One consequence of the admission/enrollment policies and practices is that the failure, repetition, and drop-out rates during the first two years are appreciable. Another consequence is that wherever specialization begins in the first year, it is difficult for a student to transfer to another field of study unless he is willing to start from the beginning in the new discipline. In countries like Algeria where the course unit system is followed, students repeat only the courses which they fail rather than the whole year.

Passing the national examination is only one of the prerequisites for university admission in some countries. Further screening and selection take place on the basis of the scores on these examinations. Generally, access to faculties of medicine, dentistry, and engineering is restricted due to limited laboratory space, equipment costs, and inability to handle a large number of students. Sometimes political considerations and favors in the form of exemptions or quotas are adopted in admission policies and practices. In Egypt in 1965-66, it was decided to give a ten percent bonus to all candidates who had a relative who was a veteran of the war in Yemen or who was affiliated with a university. Some students known to be politically reliable and others who excelled in sports have also benefited from this arrangement. Otherwise, admission to universities is determined officially by the results of the secondary school certificate examination and by the quota system established by each faculty. (Szyliowicz, p. 287)

To alleviate the problems of admission, Egypt introduced a system of "external students" as far back as 1953. Under such a system, anyone with a secondary school certificate who is prevented from registering as a regular student may sit for the same exams and receive the same university degrees as the regular students, but is barred from attending classes. The system is confined to colleges of arts, commerce, and law which have no attendance requirements at all. According to Qubain (1966, p. 150), colleges of arts, commerce, and law have become the dumping grounds of the university system in Egypt. Syria also experimented briefly with a system of external students and dropped it. Most of the students of the Arab University in Beirut are external students. Other approaches that were utilized to alleviate the problems of admission included the establishment of provincial universities in some countries like Morocco and Algeria with a requirement that students in the region must attend these universities if their major fields of study are offered. Another approach was in the establishment of higher institutes or community colleges to absorb a significantly large number of potential university applicants.

Financial Resources

The expansion in higher education in the Arab countries would not have taken place in the magnitude and proportions that it had assumed

were it not for the generous financial support by most of the governments. Egypt and Syria used to charge tuition fees but these were substantially reduced and financial aid was provided. Then in 1962, a presidential order in Egypt made all public higher education free -- no tuition fees were to be charged. (In 1982, thirty two percent of the public expenditure on education was at the tertiary level). Syria adopted the same policy and Yemeni students at the University of Sana'a of the Yemen Arab Republic are not charged fees. If President Nasser could implement such a policy in financially stricken Egypt, oil-rich countries had to go well beyond that when it was time for their universities to be established. In Libya, state universities not only do not charge fees but also provide generous allowance to all students. The situation is similar in Kuwait, Saudi Arabia, the United Arab Emirates, Oman, and Iraq which provide for their nationals or compensate them for living accommodations, meals, books, health care, transportation, and monthly allowance -- any variations being basically in the extent of the generosity. Some of these countries do not accord these privileges to their non-national students unless, of course, they are on scholarships sponsored by the host country. In the less affluent country of Algeria as well as in Morocco and Tunisia, free tuition, subsidization of housing and meals, and government stipends are enjoyed by most university students. Jones (1981) states that in 1977-78, the proportion of university-level students receiving scholarships was sixty five percent in Algeria, seventy five percent in Tunisia, and ninety nine percent in Morocco.

There are a few exceptions to the general country practices. For example, an annual fee of fifty dinars is reportedly charged to students at the University of Science and Technology in Oran, Algeria as well as at the University Center of Tizi-Ouzou. Egypt's Mansoura University charged foreign students a fee ranging between 300 and 600 Egyptian pounds for registration and tuition a couple of years ago. It is likely that this policy is applied at other Egyptian universities.

In contrast with practices in other countries, state universities in Jordan and Bahrain charge tuition fees on the basis of semester credits. Tuition fees in Jordan have been increased three times between 1977 and 1986 and are different for different faculties and levels of study, taking costs into consideration. Reportedly, one-third of the recurrent budget of universities is supported by tuition fees. Despite

this, about thirty two percent of public current expenditure on education in 1984 was at the tertiary level (UNESCO, 1986). It is also worth noting that a substantial number of students are on governmental scholarships, for example, approximately twenty percent at Yarmouk University in 1984-85.

Private universities charge fees that vary considerably from one university to the next. Thus although a significant proportion of students were sponsored by governments or aid agencies to attend the American University of Beirut, for example, the average student had to pay a fee considered quite high by local standards. The fees at Beirut University College are comparable to those of the American University of Beirut. Other private universities in Lebanon tend to charge less. During the past two years, because of the severe drop in the value of the Lebanese pound, such tuition fees in Lebanon have become very low for students whose source of support is outside Lebanon. The American University in Cairo charges foreign students fees in dollars whose equivalent is much higher than the fee charged Egyptian students. The fees of the private universities in the West Bank of Jordan ranged a couple of years ago from about \$210 per semester at Bethlehem University to about \$460 per semester at An-Najah National University.

Quite a number of private universities in the Arab countries benefited over the years from grants and donations from individuals, corporations, international organizations, and individual governments. The United States government has extended some support since the 1950s to the American University of Beirut and the American University of Cairo. The American University Hospital in Beirut has been assisted in the past few years by grants from the government of Saudi Arabia. In a similar manner, many of the religious-oriented institutions have benefited from their respective Orders and/or their sponsoring countries, among other sources. As an example, the hospital of the French Jesuit Order St. Joseph University in Beirut was a beneficiary of assistance from the French government.

Many specific university projects involve capital expenditure -- institution of new programs serving special interests, the of educational, public health, or community services, and applied research have been supported over the years by many international organizations like UNICEF, FAO, AND UNDP, among other agencies,

governments, foundations, and like institutions. Foundations with an international orientation such as the Ford Foundation have repeatedly supported selected projects in both private and state universities in the area. The University of Jordan -- a state university -- started in 1962-63 with aid from the Ford Foundation, the Kuwait government, and the Arab Bank in addition to Jordanian government funds. Sana'a University of the Yemen Arab Republic has had salaries for academic staff and capital expenditures on buildings and equipment financed by IDA and the Kuwait government.

Curricula and Methods of Instruction

Annex I provides the major fields of study and degrees offered by most of the seventy two Arab universities. There is a wide variation in offerings from the extremely specialized or the more limited program, to broad and deep undergraduate and graduate offerings in a wide range of subjects in the larger universities.

Except for Islamic religion studies and Arabic language offerings, the curricula in Arab universities are patterned after those in the west either directly or indirectly through the influence of other older universities in the area. The prevailing models are basically French, British, and American with the concomitant organizational structure for degree programs referred to earlier.

In universities following the French and British systems, specialization tends to begin during the first year and cross-registration in different colleges or faculties is usually not permitted. Subjects are arranged in such a way that one year must be passed before the student moves into the next. In contrast, the American pattern emphasizes liberal education at the undergraduate level and concentration on an area of specialization is delayed. The semester course system of credits enables students to transfer credits from one faculty to another.

The practice of continuous testing and evaluation is in contrast with the one or two examinations per year in the Egyptian version of the old French system. One of the factors contributing to the rigidity of curricula in Morocco and Tunisia, for example, is a conviction that a diploma in a certain field should mean equal preparation -- based on the same program of studies. To uphold standards, every student is expected to master the same material. Thus,

newly established Moroccan universities must teach exactly the same curriculum as the original university. This is in sharp contrast with the variations provided by the American system of electives.

It ought to be pointed out that it is difficult to single out any one country which completely utilizes the traditional French system completely in all its universities and faculties. For example, although the organization of Damascus University is strongly influenced by the French pattern, it has more coordination among faculties and common sharing of university services and facilities, as exemplified by one central university library. Although there are examinations at the end of each semester, students must register for the whole year in what is known as the "certificate system". A certificate usually consists of a group of related courses in a certain field of specialization and, in order to graduate, students must complete a certain number of certificates. Promotion is on a year-by-year basis and there is a make-up exam.

In describing methods of instruction in Egyptian universities in the 1960s, Qubain (pp. 80-81) states that lectures given in large halls were attended by a very large number of students -- 500 or more in the colleges of arts, law, and commerce. Attendance is not required nor recorded. Although the lecture sections are much smaller in science colleges, there is little, if any, provision for class discussion. Because of the very large number of students, university instructors have to spend months correcting and scoring thousands of examination papers. Success or failure depends almost entirely on the results of one major final examination.

The situation as described for Syria is not much different and students depend most heavily on memorizing lecture notes and textbooks (p. 448). The situation has not improved in the 1970s with the rapid increase in the number of students unmatched by an increase in qualified faculty and facilities. In Egypt, the emphasis upon formal lectures remained and students were accorded little opportunity for discussion, questioning, or meeting with professors.

The average faculty-student ratio throughout the Arab world was reported to be about 1:85 in the humanities and 1:27 in the sciences (1974-75); the highest overall average of 1:452 was at Al-Mansoura University in Egypt (Al-Ebraheem and Stevens, 1980). Szyliowicz (1973, p. 274) described the situation as follows:

For most teachers the only pedagogical technique is memorization, and at all levels little attention is paid to stimulating students to think for themselves. The normal pattern is for the teacher to condense textual materials into notes that they either dictate or hand out and for the student to further abridge and memorize them as thoroughly as possible in order to pass the final examination. Various efforts to mitigate the traditional emphasis upon the memorization of facts so as to produce independent, flexible thinkers have been largely unsuccessful, one reason being the importance to the student of passing the examinations at the end of each cycle.

In a variety of their aspects, the methods of instruction in different Arab universities have more recently been described as still close to the preceding situation as presented by Klausner (1986) for the University of Al-Mansoura in Egypt, Bickering (1981) for the University of Tishreen in Syria, Esmael (1983) for the University of Mosul in Iraq, Safi (1986) with respect to memorization at the University of Kuwait, and Khashan (1984) for King Saud University in Saudi Arabia. It should be pointed out, however, that the preceding references are often based on experience limited to certain university faculties. Along with such poor practices, some good teaching utilizing effective methods is taking place in practically all countries of the region as corroborated by the achievement of many Arab postgraduate students in different advanced countries. Szyliowicz (1973, p. 317) views the role of the American universities of Beirut and Cairo as most significant in development of higher education and in providing higher quality training. This role has been shared lately by a number of emerging universities with high potential. The troubles in Lebanon since 1975, however, have contributed to an erosion of the leading role of the American University of Beirut.

Status of Faculty

In general, professors, instructors and staff of state universities are civil servants by law and as such are governed by the rules and regulations applicable to government employees. At Egypt's Al-Mansoura University, the registrar's office maintains the daily roster on which staff record the time of their arrival and departure (Klausner, 1986). To a certain extent, there is

social and professional prestige in university teaching and salaries were not bad until the countries were hit by inflation and private institutions and enterprises in oil-rich countries started paying much higher salaries. "Brain drain" to foreign countries and to better-paying positions in other Arab countries, as well as the internal "brain drain" to the government or private sector -- have both created critical continuous shortages of qualified faculty. This was compounded by rapid expansion of universities and the establishment of new ones during the past two decades.

Lack of highly trained nationals leads some universities, especially the new ones in the Arabian Gulf countries, to depend on non-nationals from other Arab nations. In cases where instruction in a foreign language was both permissible and feasible, non-Arab foreigners are recruited. Another approach to alleviate the problem of shortage of faculty is an extremely liberal policy for outside or additional employment in Egypt and Syria. Although the official policies in Lebanon are not supportive, additional employment or seeking another source of income is increasing. A relatively high proportion of faculty members in Syria have outside employment of one kind or another or take extra teaching loads at the university itself.

Because of competition, members of the teaching staff in Egypt were allowed to have their own practice or to work for government and/or for private organizations "as long as this does not conflict with their teaching duties." But outside employment is available in some areas more than others and to alleviate discriminatory implications a special allowance was accorded to those professors who devote full time to the University. The situation in Egypt at present is anything but better. According to Klausner (1986), most faculty members of Al-Mansoura University slept in Al-Mansoura one, two, or sometimes three nights a week, before traveling to teach at some other provincial universities -- sometimes earning two or three government salaries. This led Klausner to ask: "Under these circumstances, who has the time for professional literature, research, writing, supervision of students, or even class preparation?" Tutoring is common, but is denied to graduate assistants because they have access to examinations. Reportedly, there are situations where members of the faculty solicit favors from students and sell their mimeographed lecture notes to supplement their salaries.

According to the results of a questionnaire administered to students at the King Saud University, Khashan (1984) reports that students try to befriend expatriate faculty and offer to do personal favors. In return, the students expect high marks. He further reports that eighty seven percent of the respondents answered positively that the expatriate faculty accept favors. Al-Shami (1983) reports that some faculty members in Saudi Arabia operate private businesses in addition to their university responsibilities.

Al-Shami (1983) states that during the academic year 1979-80 a total of 1756 Egyptian faculty members were employed in Saudi higher education, 509 of whom were females; Sudanese accounted for 193 (17 females); Syrians 128, Jordanians 93, and Palestinians, 61. The non-Arab staff during the same period totalled 829. Expatriate faculty in Kuwait, United Arab Emirates, Yemen Arab Republic, and Oman also constitute a very high proportion of the higher education teaching cadres.

Safi (1986) reports that faculty turnover at the University of Kuwait is great because of short-term contracts with non-Kuwaiti faculty and secondments from other universities. He also reports the low morale among this faculty because of career uncertainty, job insecurity, and heavier than regular teaching load. Khashan (1984) reports that expatriate faculty are treated poorly by the university administration and that they do not enjoy the status of the Saudi professors. The physicist Esmael (1983) reports that the College of Education at the University of Mosul in Iraq has been very much understaffed, entailing a teaching load of occasionally as much as thirty hours of teaching per week. As a national of Ireland from Egyptian origin, he advised professors to keep "a few light years away from matters of politics; for only then precious self respect and pride can be guaranteed."

Many universities in the Arab countries are doing their utmost to alleviate their staffing problems. Hundreds of potential faculty members are sent overseas to complete their higher studies -- mostly at the Ph.D. level -- by the universities of Jordan. Corresponding numbers sponsored by the various universities in Saudi Arabia, Kuwait University, the United Arab Emirates and the other Gulf countries are quite high. One problem is related to the overseas education of Saudi females, where tradition prevents a female from studying abroad unless accompanied by a male member of the family.

Unless this changes, teaching of females in segregated Saudi universities will continue to depend on expatriate female faculty. (Al-Shami, 1983)

Facilities

Appropriate buildings, libraries, centers of communication, modern equipment, sophisticated computers, textbooks, and facilities all contribute to the quality of a university and enhance its image. However, the facilities by themselves do not represent advancement or high standards. The quality of faculty and staff as well as the manner in which facilities are utilized have an important bearing. As expected, the quality of facilities on the campuses of the universities in the Arab countries under review varies widely from the multi-billion dollar new campus of King Saud University in Riyadh to the make-shift premises in former secondary school compounds for the College of Arts of Al-Mansoura University in Egypt and the Faculty of Letters of Tishreen University in Syria. Both the campuses and facilities of the universities in Jordan are quite impressive, as are those of the University of Petroleum and Minerals in Dhahran, the University of Qatar, and Colleges that constitute the new university of Bahrain.

As stated earlier, some universities start without a master plan because of governmental pressure; others follow plans then abandon them when they are forced to absorb many more students than originally planned for. Kuwait University has its campus in five locations and its present buildings were intended to be used for five years following the establishment of the University in 1966. The same buildings are still being used after twenty years. (Safi, 1986)

Laboratory facilities and equipment generally leave much to be desired in the heavily-populated poor universities while expensive equipment adorns small research laboratories adjacent to faculty offices in other universities. In the Student Survey Evaluation involving Kuwait University students conducted by Safi (1986), laboratory facilities were described as somewhat adequate but mishandled and in need of repair. Reference is made to the improper utilization and/or handling of laboratory apparatus. There is evidence of improper maintenance, and resources are ordered through bureaucratic procedures with delays of up to a year common before delivery. Szyliowicz (1973, pp. 290-291),

citing different sources, refers to the quite critical deficiencies in Egyptian physical facilities, including inadequate laboratory equipment, problems of maintenance, and underutilization of sophisticated equipment because faculty are inadequately trained. In the poorer countries, supplies of imported equipment, apparatus, and spare parts depend on the government authorities in charge of allocating foreign-exchange.

A review of available figures on Arab university library collections in Annex 1 reveals a wide range of acquisitions. This varies from an impressive collection of 1.1 million in King Saud University, 1 million in Cairo University, and 920,000 in University of Helwan to 92,000 in Ain Shams University (which has the highest enrollment of all universities). The universities of Basrah, Jordan, Kuwait, King Abdul Aziz, and the American University of Beirut have collections exceeding 300,000 volumes. Some of the provincial universities like Al-Mansoura in Egypt, Al-Fateh in Libya, and Al-Baath in Syria do not seem to have adequate libraries. A number of the universities did not provide figures for their library collections.

Special mention has to be made of efforts to modernize certain libraries in the oil-rich countries -- particularly in Saudi Arabia and Kuwait. Safi (1986) argues that the twelve libraries of Kuwait University should be integrated into one central library for better service of the University community. But, as they are, Kuwait University libraries have an online access for databases through the Kuwait University computer services system. In addition, the National Scientific and Technical Information Center (NSTIC) in Kuwait had nine regional universities and many research centers among its participating libraries in 1983. With online catalog and a machine-readable database of book collections. It utilizes an information storage and retrieval IBM system called STAIRS and was, in 1983, developing a version that allows user retrieval of Arabic documents using Arabic commands. In 1983 a program was launched in NSTIC to catalog and store online all Arabic material pertaining to Kuwait (Khalid, 1983).

Another bright library spot is in the University of Petroleum and Minerals (UPM) in Saudi Arabia where careful planning has made its library a leading science information system in the Middle East. In 1980, the UPM library began utilizing an online integrated, interactive system licensed by IBM supporting all major library

operations. Searching of international databases became online. In 1983, the library had about 3500 titles of periodical subscriptions. (Ashoor, 1983)

Many universities have facilities for student dormitories and faculty housing. Of the seventy two universities listed in Annex 1, forty three reported having residential facilities for students with twenty five of them having also residential facilities for academic staff. Faculty residential facilities are not likely to be found in capital cities like Algiers, Cairo, Baghdad, and Damascus, and are usually found in the provincial universities. On the other hand, universities which recruit a high proportion of non-nationals, such as the universities in the Arabian Gulf, have housing provisions as part of their benefits packages. One extreme is represented by UPM in Dhahran, Saudi Arabia where the whole student body, faculty, and staff live on campus, according to Ijaz and Khan (1981).

Research and Graduate Study

Back in the mid-1960s, Qubain (p. 507) wrote that "For all practical purposes, universities in the Arab world are still transmitters rather than producers of knowledge." Graduate studies were a recent introduction in most universities existing at the time or they were in the process of being introduced. In Egypt, the bulk of research was undertaken outside the university system at the National Research Center, established in 1956, and in other similar organizations. The Center had laboratories and equipment which were quite advanced and generally far superior in number, variety, and quality to anything in the state universities. Many faculty members and some graduate students used to carry out their research projects at the Center. Moving to the 1970s, Szyliowicz (1973, pp. 319-320) pointed out that graduate training in Egypt has been almost totally neglected. He attributed this to the general feeling of professors that their responsibility is to undergraduate teaching and the fact that few professors ever carried on any research. It was recognized that attempts were being made to reverse the lack of research through financial grants.

Although, at present, there are indications of more research and greater involvement in graduate study in many Arab countries, the

Table 6

Students and Graduates of Post-Graduate Study ^a

<i>Country</i>	<i>Enrollment</i>	<i>No. of Graduates of Post-Graduate Study</i>
Algeria	8,697	...
Egypt (Exc. Azhar)	61,058	8,629
Morocco	6,561	...
Tunisia	4,334	406
Jordan	1,449	...
Kuwait	41	...
Lebanon	...	366
Qatar	256	81
Saudi Arabia	3,779	572

^a UNESCO 1986 *Statistical Yearbook*.

interest in research and experimental development relative to what is taking place elsewhere is quite low. The estimated expenditure for research and experimental development of the Arab States (including four countries in addition to those covered in this study) as percent of GNP was 0.27 in 1980 compared to a world total of 1.78 (UNESCO, 1986). This is the lowest percentage of those reported for any continent, major area, or groups of countries, and the corresponding figure reported for 1970 was slightly better. Table 6 shows enrollment in post-graduate study and the number of students who have received post-graduate university degrees or equivalent for one of the years between 1982 and 1984. The reported post-graduate enrollment figures of eight countries add up to 86,225 students. Of these, Egypt claimed 61,058 students or about seventy one percent; Algeria, Morocco, and Tunisia together claimed 19,592 students or about twenty three percent; and Saudi Arabia had 3,779 students.

Table 6 indicates that graduate study has improved quantitatively from its meager status as described in the 1960s. There are also indications that research output is on the rise. In a study carried out by the Arabic Development Institute in Lebanon (Qubaysi, 1981), it was determined that 7,460 scientific and technological research publications that appeared in internationally recognized journals in 1977 were ascribed to Arab researchers working in Arab countries and to researchers outside the Arab world of Arab origin. Of these 3,056 about forty percent were carried out by researchers in Arab countries; the rest in

the United States and Europe. Research output of the countries in descending order was: Egypt, Iraq, Saudi Arabia, Sudan, Lebanon, Kuwait, Libya, Tunisia, Jordan, Algeria, Morocco, and the remaining Arab countries. It is noteworthy that Egypt contributed about seventy percent of the articles involving research carried out in Arab countries. The National Science Research Center in Egypt is reportedly active in publications. It would be interesting to find out the contributions of university researchers versus those of non-university centers and institutions and the extent to which setting up a national research center in Egypt, for example, has influenced R&D activities in universities.

The University of Petroleum and Minerals in Saudi Arabia had plans to intensify its research efforts and to strengthen its graduate program (Ijaz & Khan, 1981). A research institute was established at the University around 1980 with about seventy research scientists. Quite a few of its research projects yield several publications in refereed journals each year. Funds are available for research and faculty who have an approved research project get financial support as well as reduction in their teaching load. There is some emphasis on applied research relevant to the kingdom's needs, but it is hard to stick to this rule. It may be premature to seriously debate the merits and demerits of purpose-free basic research and of goal-oriented applied research in countries where research output is still relatively meager. Nevertheless, there seems to be a need to explore the current involvement and

contributions of universities in the development of their respective countries.

Although there are positive indications of an increased research output, there is a long way to go. In a recent seminar, the former president of Yarmouk University in Jordan (Badran, 1985) stated that so far universities in the Arab countries have not achieved the twin goals of scientific research and technological development. There is no coordination of research between the universities and those responsible for state development plans, neither is there any coordination among universities. Badran goes on to point out that requirements for promotion and publications underlie much of faculty research which tends to be continuation of previous research of faculty in their overseas studies and not closely related to the problems of society and the country.

The problems facing research include: weak graduate study and/or its absence, scientific literature not easily available, limited financial resources, lack of properly trained support staff, translation problems, inadequate facilities, heavy teaching loads, the transient nature of a large proportion of faculty in many Gulf universities, and resort to external employment by faculty members in universities of poor countries. However, a major problem facing research and graduate studies in the Arab universities is the relatively high "brain drain" mostly to western Europe and the United States. The critical mass of researchers and of scientists necessary for

teamwork on specific research and development problems is being continuously eroded by international and regional "brain drain". This is discussed in the section "problems and issues".

With respect to graduate study per se, an apparent trend in some of the Arab universities is to institute a college of graduate study. At times, research is added to the title of the college, with an administrator with the rank of a dean. The universities of Jordan and Kuwait, as well as the University of Petroleum and Minerals are among those which have instituted such colleges. There was confusion at Kuwait University about graduate study because of conflicting academic goals highlighted by an early decision to permit departments to offer programs leading to masters and doctoral degrees and a cancellation of this policy in 1976 (Al-Ebraheem & Stevens, 1980). Currently, Kuwait University offers a degree program of study and research for a period of two years full-time study and three years part time study towards the M.S. degree in mathematics, the natural sciences, medicine, and engineering; the program is managed by the College of Graduate Studies and taught in English.

Language of Instruction

When the American University of Beirut was established in 1866, the language of instruction was neither Turkish nor English but Arabic. American and European scholars wrote in and translated books into Arabic. A setback was faced

Table 7

Number of Universities by Languages of Instruction

<i>Language(s)</i>	<i>No. of Universities</i>
Arabic	15
English	4
French	2
Arabic & English	27
Arabic & French	10
Arabic, English & French	5
English & French	1
Total	64

when some of the pioneering medical professors who wrote and taught in Arabic resigned in 1882 over an issue related to Darwin's theory of evolution. It was then that English substituted Arabic as a language of instruction in order to accommodate replacement professors -- new arrivals from the United States who did not know Arabic (Dodge, 1958, p. 22).

At the time of independence, the countries that had been under French domination taught many of their primary subjects and most of the secondary ones in French. A minority of schools in Lebanon used English as a medium of instruction with the majority of schools teaching through French. In the North African countries, it was not till the early 1950s that Arabic became a subject for the official examination, the Baccalaureate. Syria and the other Arab countries taught through Arabic. At the university level, Damascus University is probably the only one of the early universities in the Arab countries in which Arabic was and continues to be used as a medium of instruction in all subjects including medicine.

Table 7 indicates the number of universities with each language and/or combination of languages of instruction for the sixty four universities in this study. It is noteworthy that seven out of the ten universities teaching through Arabic and French and one of the two teaching through French only are in Algeria. The fifteen universities which reported teaching only in Arabic include six that concentrate on Islamic religion and Arabic language studies in their programs, and the four universities in Syria. Three of the four which teach only in English are private.

The official language of instruction of the majority of the universities under review is Arabic. This is a cultural-nationalistic policy commitment that most, if not all, countries have enacted in laws pertaining to higher education or in decrees related to the establishment of universities. These same regulations usually include a clause to the effect that instruction in a foreign language may be allowed, if necessary. Accordingly, whenever instruction is through a combination of languages, the general practice is to teach subjects in the arts and letters, business, law, and education through Arabic and to teach scientific-engineering subjects, including that of medicine, through English or French.

As an illustration, the 1976 law that established Yarmouk University of Jordan stated explicitly that Arabic be the medium of instruction, but that the University Council, "may

approve using another language for instruction when deemed necessary." Zughoul and Hussein (1985) report that "in the Faculties of Natural Sciences, Engineering, Economics and Administrative Sciences, the use of Arabic has become the exception rather than the rule." They relate this to several factors including: twenty percent of faculty members are non-Arabic speaking; a number of the administrators and Jordanian faculty members favor the use of English as a medium of instruction, as they themselves were trained; and the serious lack of textbooks and reference materials in Arabic. They also pointed out that dissatisfaction by various segments in society and by a considerable number of faculty members culminated in hot deliberations of the issue in the Jordanian Parliament in 1985.

Although committed to the advancement of Arabic, Kuwait University utilizes English as a medium of instruction in four of its nine colleges representing forty three percent of the student body. In reporting this Safi (1986) states that lack of fluency or proficiency in English puts students in an extremely disadvantaged position and that students are then further handicapped because most books and references, even in the libraries of Arabic medium colleges, are in English.

Inadequate foreign language proficiency of incoming students is a major problem encountered by universities teaching certain subjects through a foreign language. As a result, large numbers of students in many universities are required to spend their first year at university absorbed in intensive foreign language courses in order to upgrade their fluency in the language of instruction. Practically all of the universities in the Arabian Gulf have such intensive language programs in English.

There are indications, however, that foreign language backgrounds are so weak that a one-year program is usually insufficient to enable students to study university subjects through English (Al-Shami, 1983). A physics professor at a Saudi university points out that, in spite of English language teaching at the university, students face a great difficulty in fully understanding all the technical terms. Thus physics instruction must proceed slowly and material needs a longer period to be covered (Ahmed, 1984). At Yarmouk University, results of the questionnaires administered by Zughoul and Hussein (1985) indicate that actual classroom teaching is conducted mostly through

English but that some Arabic is used in classroom discussion. The textbooks, references, and examinations are in English. But, in the opinion of the faculty, a sizable percentage of the students are not sufficiently competent in English to comprehend lectures.

Arabicization constitutes a major adjustment problem in an educational context in the three Maghreb countries Algeria, Morocco, and Tunisia, particularly because it is still not very well-established in the pre-university cycles. The three school systems have made some progress in Arabicization. However, shortage of Arabic-speaking teachers of science and of mathematics necessitates continuing the teaching of scientific subjects in French at the secondary level. Apparently, some secondary schools in Algeria have separate Arabicized and bilingual sections and this has a bearing on further study as students who studied through Arabic have found that their options at the university are more limited when many science courses are taught only in French (Jones, 1981). Reportedly, such limitations on options at the university level have led to prolonged strikes in support of the demand that students who study in the national language be accorded greater opportunity in university study.

Slight shifts from French to English are noticeable in the higher institutes sponsored by ministries other than education. For example, the Algerian Petroleum Institute's GAS engineering program was modified for students to receive their instruction in English rather than French. Accordingly, an intensive program in English is to precede instruction in engineering. Similarly, instruction in the National Institute of Electricity and Electronics sponsored by the Algerian Ministry of Industry and Energy is through English. In Moroccan universities, most arts subjects are taught in Arabic; law and public administration are offered in both Arabic and French; the other subjects are taught only in French (Salmi, 1987). He emphasizes that many Moroccan students are handicapped in their studies because they are taught in French, which is not mastered well by a significant proportion of the students.

The issue of Arabic versus English or French as a language of instruction in the Arab universities has been a subject of discussion and debate in most of the educational and scientific conferences that dealt with higher education in the Arab world. A bureau for coordination of Arabicization was established in 1961 backed and

financed by all Arab countries through the Arab League's Educational, Scientific and Cultural Organization. In its conferences, recommendations were drawn to reach the state of comprehensive Arabicization by the year 2000 (Barkho, 1984). Most of the factors and pros and cons pointed out by Qubain in 1966 (pp. 88-89) and expanded upon by Szyliowicz in 1973 (pp. 292-93) still persist. An emerging factor may be embodied in the fact that with the expansion of education at the pre-university level and with the greater assertion of Arabic as the language of governmental and business transactions, the overall quality of foreign language teaching has been deteriorating to the extent that only one year of intensive preparation at the university level is not bridging the gap adequately for a significant proportion of involved students.

From another angle, the expansion of higher education in conjunction with "brain drain" has caused severe shortage of qualified faculty especially in the scientific and technological areas. Hence, many universities, in particular those in the oil-rich countries aspiring for quality, have resorted to recruitment of significant numbers of non-Arabic speaking foreign faculty. In the Maghreb countries, the formerly subordinate position of the Arabic language further complicated the problem.

Foreign Exposure

The American University of Beirut, A.U.B., established in 1866, and St. Joseph University, which was established in 1881, have had tremendous impact on life in Beirut, in Lebanon, and in the region. The respective American Presbyterian and French Catholic influence was reinforced in the twentieth century by the establishment of the Junior College in 1924 which became a liberal arts college in 1950 (currently, Beirut University College - Presbyterian); Al-Hikma University established in Baghdad in 1956 (American Jesuit); Bethlehem University in the West Bank (American De La Salle Brothers); and the American University in Cairo, A.U.C., which was established in 1919 (non-sectarian). With time, the religious outlook of A.U.B. disappeared. Al-Hikma University in Baghdad, which had concentrated on business administration and on engineering physics, established a reputation for excellence in training and academic standards (Qubain, 1966). However, since the introduction of free education in Iraq about 1970, private

schools and colleges -- run for the most part by religious orders and commercial concerns -- have been abolished and taken over by the state, leading to a unified educational scheme (Esmael, 1983). Thus, Al-Hikma University in Baghdad has been closed and is not listed in Annex 1.

Many glowing remarks and descriptions have been made about A.U.B. throughout its history. Qubain (p. 346) states that "This institution has woven itself so intimately into the fabric of life in the Middle East and has made such a deep imprint it is difficult to think of higher education in the area without immediately associating it with the American University of Beirut." In his turn, Szyliowicz (p. 317) wrote that A.U.B. and A.U.C. are essentially able "to provide higher quality training and to promote more research than is the case in practically any national institution. They enjoy greater financial resources, have closer contact with scholars in other countries, are more selective in admissions, and are able to recruit more able faculty...."

As stated earlier, the unsettling conditions in Lebanon since 1975 have had their impact on A.U.B. in its ability to recruit and, lately, to retain high quality faculty. Furthermore, many new Arab state universities rely on exceedingly superior financial resources which cannot be matched by any private institution. It should also be mentioned that St. Joseph University in Beirut is a very important institution of higher learning in Lebanon, having had a deep influence on the intellectual life of Lebanon and its progress. Faculties of medicine, dentistry, law, and engineering, among others, have been known to be of good quality.

Following the Suez crisis in 1956, Egypt first nationalized British and French schools and later, in 1958, all foreign schools, and placed controls on the minority schools. Szyliowicz (1973, p. 199) states that:

...the place of foreign schools in the national system of education became increasingly controversial throughout the Arab world as nationalist feelings spread. Missionary schools were criticized for religious proselytizing and some foreign schools, especially the French and Italian, for serving as centers of propaganda for their countries of origin and for neglecting the teaching of the national culture. All foreign schools were accused of contributing to the perpetuation of divisions within the state. Such feelings led to legislation in

every country regulating the activities of these schools in various ways and bringing them more or less completely under state control....

Such regulations have not been legislated in Lebanon.

Decisions on where students from Arab countries are sent for further training depend upon a number of factors: competence in the language of instruction, financial support from the host country, familiarity with the system of education, preferences or biases of governmental or university officials in country of origin, availability of and admission to field of primary interest, and acceptability of foreigners in host country. In order to shed more light on the outlook towards external higher education of the respective Arab countries, an examination was made of the external countries, foreign and Arab, which host students from Arab countries. The data are tabulated in Annex 2, based on the 1986 UNESCO *Statistical Yearbook*, indicating the country of origin of foreign students enrolled at higher education institutions in fifty countries selected on the basis of the number of foreign students enrolled. Lack of sufficient information has excluded the Soviet Union, Brazil, Romania, Bulgaria, and Sudan in the Yearbook. In a sense, the information in Annex 2 reflects the major cultural orientation of several Arab countries. The tabulated data are not exhaustive but do represent the higher percentages.

Annex 2 shows that it may have been easier for some Arab countries to break their political ties with former colonial powers than their educational ones. Of a combined 55,830 students from Algeria, Morocco, and Tunisia studying outside their respective countries, 43,306 or about seventy eight percent studied in France in 1983. The figures for Lebanon and Syria are smaller with twenty nine and sixteen percent respectively of their 1983 students hosted in France. The United Kingdom has been attracting fewer Arab students, with the highest percentages in 1983 coming from Libya (26 percent), Iraq (21 percent), Bahrain (15 percent), and the United Arab Emirates (12 percent). Policies of charging relatively high fees to foreign students may have contributed to a reduction in the number of students from poorer Arab countries studying in the United Kingdom.

The 1984 figures for the United States reflect a special attraction for students of the Arabian Gulf countries of Saudi Arabia, Kuwait,

the United Arab Emirates, and Qatar with about 80, 77, 70, and 66 percent respectively of their external students studying in the United States. Lebanon and Libya also had more than forty percent of their students in the United States. In 1983, Saudi Arabia enrolled high percentages of students from Democratic Yemen (66 percent), Yemen (29 percent), Bahrain (24 percent), and Oman (13 percent). A peculiar situation is that of Lebanon with figures claiming 54, 39, and 26 percent of Egyptian, Syrian, and Jordanian students respectively enrolled in external universities in 1982. There are indications that most of the students were enrolled as external students in the Arab University of Beirut.

Women's Education

Female enrollment in tertiary education in all Arab countries has increased approximately six times between 1970 and 1984 from 105,000 to 628,000. The corresponding percent of females in total tertiary education has increased from twenty four to thirty three percent. (Table 4 on page 9, indicates percent of Arab female enrollment.) Reference was made earlier to the high percentages of female enrollment in the universities of some Gulf countries. The establishment of national universities in these countries has made higher education readily accessible to women at the local level and, at the same time, has made it less available for them externally. After the opening of national universities, Kuwait, for example, has changed an old policy related to studying abroad which was favorable to women while Qatar introduced rigid laws preventing women from seeking their university education abroad (Al-Misnad, Ch. 7). Such policies have an adverse effect on the post-graduate education of women.

The place and role of women in Arab society vary widely from one country and region to another. Intermingling with foreigners, wider travel abroad, the impact of foreign practices prior to independence, and the mass media all influenced the outlook of the Arab and Moslem societies towards women.

However, the major determinant of public behavior of and towards women remains rooted in the Islamic religion and interpretations of it by the various religious leaders and governments. In conservative Arab countries, the freedom of movement of women is restricted and their contact with others is constrained. This is

particularly true in Saudi Arabia, with its leading religious role as the home of the major holy places in Islam.

Al-Hariri states that "It is true that Islam laid down a few rules for regulating the movement, dress and speech of women, but it nowhere expressly forbade them to take part in economic, social or political activities." (1987) She goes on to point out that "Islam has no specific statement about separating men from women in the field of education and labor. But it does insist on keeping women in a position that ensures their stable family life." Al-Hariri reports that the first international conference for Islamic education held in Mecca in 1977 "insisted that girls' education should be separated from boys'...."

Elementary and secondary schools in the Arab countries are more often than not segregated into boys' and girls' schools. University education, however, is coeducational in most Arab countries, even though there are situations in which seating arrangements in the same classroom separate males from females. One major constraint at the university level is the huge financial burden that is imposed by application of the principle of gender segregation at an increasing number of universities. In Saudi Arabia where the universities are segregated, women's university education is the responsibility of the General Presidency for Girls Education along with the Ministry of Higher Education. The University of Petroleum and Minerals in Dhahran has neither female students nor instructors.

When women are enrolled in the same university as men, as at King Saud University in Riyadh, educational facilities, staff, instructors, and students are segregated along gender lines. In the absence of women professors, the female students receive their instruction through closed circuit television. Therefore there is pressure to increase the number of women faculty members. University education in Qatar is segregated by gender, but male instructors are allowed to teach female students. At the University of Kuwait, eight of nine colleges are coeducational (the ninth -- the college of arts -- has campuses for each group of students). The University of Bahrain is coeducational, but the new Arab Gulf University in Bahrain, which receives financial support from all Gulf States, is sex-segregated (Al-Misnad, 1985, p. 327). In some universities, special preference is given for women students in residential facilities and supervised dormitories. In Iraq, the university students are obliged by state

law to dress in a prescribed manner (and color), thus removing any sign of class distinction. Various social, class and cultural differences do not, therefore, show (Esmael, 1983).

Coeducation was officially introduced at the American University of Beirut in 1924 with seven girls enrolling in the Faculty of Arts and Sciences. For a long time many families were more comfortable with sending their daughters to the all-girls Junior College, which was later called

Beirut College for Women until it admitted men students in the 1970s and changed its name again to Beirut University College. The number of female students in King Saud University grew from 4 in 1962 to 19,860 in 1982. As stated earlier, at present females outnumber males in a number of universities in the Arabian Gulf. Higher prices and inflation encourage women to seek higher education and employment especially in the less affluent Arab countries.

II. Issues and Problems

The accomplishments and achievements of universities are related to the manner in which they respond to or face challenging issues and problems. Universities in the Arab countries have educated generations of leaders, government officials, doctors, engineers, agronomists, educators, and teachers, among others, who were essential in improving the quality of life of segments of the population. Nevertheless, these universities still face critical issues and problems that are linked to a variety of historical, cultural, financial, and social factors. From another angle, universities are unique institutions and their achievements as well as their problems do vary from country to country and within the same country. Hence, the following issues and problems are likely to be more pronounced in some countries or universities than in others. Whenever feasible, an attempt will be made to relate the issues and problems to the specific countries and/or universities to which they apply most.

Quantitative Growth Versus Quality

Should the Arab governments continue to establish new universities and expand existing ones in an attempt to satisfy an insatiable appetite for higher education or for university degrees? Table 4 reflected a phenomenal increase over the past two decades in the number of students enrolled in Arab universities. It is often pointed out that quality was sacrificed in the process of quantitative growth. Even some of the universities in the oil-rich countries fell into the trap of rapid expansion without planning. It is generally true that quality may have not been high to start with. However, as was demonstrated in the previous subsection, 'Curriculum and Methods of Instruction', it would also have been wise to pay closer attention to quality. Rapid growth in enrollments led to much overcrowding, recruitment of less-qualified faculty, and insufficient equipment and laboratory facilities for adequate operations. Furthermore, universities were not able to absorb all the admitted students into their choice of specialization, resulting in graduation of large numbers of students in fields in which they were not interested, or needed.

The concern of educating people for whom there will be no jobs triggered the following question: Which is better for a country,

having unemployed high school graduates or unemployed university graduates? In other words, other factors being equal, "How wise is it to invest in raising the educational standards of the population as a whole irrespective of employment opportunities, especially if the educational expenses can be afforded?" There are indications of plans intended not only to halt the growth in enrollment but to reduce it. As stated earlier, officials in Egypt have expressed interest in reducing future university enrollments in order to improve quality. Kuwait University has already reduced the size of its admissions for 1986-87 and there is reference to a reform program indicating that it will be raising admission requirements in order to improve academic standards. (AMIDEAST, No. 57)

University Admission Policies and Practices

University and government authorities in some Arab countries are concerned about maintaining quality, controlling costs, and ensuring jobs at a time of rapid growth in university enrollment. The national examination administered at the end of the secondary cycle is the major determinant of university admission and placement. Such an examination is administered in all the Arab countries covered by the review, except Kuwait and Qatar which recently adopted respectively a system of credit units and cumulative scores for the secondary cycle. Those who pass the examination (or complete requirements in the case of Kuwait and Qatar) receive the General Certificate of Secondary Education (GCSE), Baccalaureate, or equivalent, which are prerequisites for eligibility to university study. In the Maghreb countries of Tunisia, Algeria, and Morocco, however, the Baccalaureate is equivalent to more than just a secondary school diploma since it also represents satisfactory performance on a national university entrance examination.

Although officials and administrators in these countries complain that "guaranteed admission for all *bacheliers* hampers their efforts to plan yearly facilities, outright abrogation of this principle is politically risky" (Jones, 1981). Weighted formulas derived primarily from the Baccalaureate scores, ranking five to ten desired fields of study, competitive exams for entry to professional colleges with high demand such as

medicine and engineering, and sorting out students into fields of study on the basis of predetermined ranges of national examination scores -- all have been experimented with or have been utilized to make more sense of admission policies. But, for countries with open admissions policies (Iraq and the Maghreb countries), large numbers of students are by default enrolled in the "schools of last resort" -- in the arts, social sciences, and law.

Enrollment is supposed to be determined by the capacity of universities and not by the number of students who happen to pass a national examination. Furthermore, examinations are not standardized for the most part, and their difficulty or facility are determined by subjective factors related to the examining committees. From another angle, the general manpower needs of the country, its government policies, societal pressure and expectations -- all impact in raising or lowering the rates of success in secondary school leaving examinations. In some Arabian Gulf countries with a relatively high proportion of secondary school students of other countries, university admission quotas are set for both nationals and non-nationals by the University Council or by some other authorities. In order to meet the quotas, the minimum GCSE examination scores required for admission may vary by twenty percent or more to increase the eligibility of the nationals. In other countries, selection to universities usually involves preferential quotas for children of government officials, for the military, university personnel, and other influential groups.

It is ironic that the national examinations which are so important in university admissions tend to be completely controlled by the Ministry of Education and outside the jurisdiction of universities. It is justifiable to raise the question: How valid is the national examination to serve the dual purpose of assessing (a) the students' readiness to leave secondary school, and (b) their readiness to enter college? There is a need for in-depth studies of both examination practices and university admission policies, including a determination of the extent to which examinations predict university achievement. However, such studies are not feasible as long as the examinations remain unstandardized.

The implications of the open-door, quota, and exemption policies in university admission are exhibited in internal inefficiency factors such as high rates of failure, repetition, and drop-out

as well as frequent changes of major field of study. Jones (1981) stated that as long as entry to universities in the Maghreb countries is not subjected to across the board post-Baccalaureate restrictions, one can expect failure rates to remain elevated in the largest faculties as a matter of covert policy.

Brain Drain and Shortage of Qualified Faculty

Higher level training without commitment to one's village, region, or country leads to both internal and external "brain drain". The internal "brain drain" usually manifests itself when professionals and skilled manpower are concentrated in the cities. Although provincial universities or branch universities are a step in the right direction, in some countries these suffer from low overall quality and inadequate facilities. The urban universities generally attract better professors and a system of incentives needs to be developed in order to attract qualified professors to rural areas.

Universities are often raided by the government and the private sector which draw the more promising faculty to more prestigious or lucrative positions. In the Arabic Gulf countries, many of the key administrative non-university positions had to be filled by the first waves of graduates trained overseas. The percentage of Saudi faculty in six of the Kingdom's universities ranged in 1979-80 between a low of three percent to a high of sixteen percent (Al-Shami, 1983). The rapid expansion of university systems created a pronounced need for more and more faculty with the result that many less qualified faculty were recruited.

Life in different cultures and the years of absence from the home country can often lead to alienation. Training in a foreign more-developed country and exposure to higher standards of living influence the general outlook and desires of foreign students. Even in the professional context, universities back home usually cannot support returning faculty members in the manner to which they have been accustomed during training in terms of research facilities, support staff, maintenance and repair of equipment, etc.

Upon returning home, dissatisfaction and frustration result when desires and expectations are not satisfied or met. Attempts to emigrate follow. A large proportion of the medical graduates from the American University of

Beirut emigrated after spending a few years of residence training in the United States. Defection to the United States of highly trained scholars is a problem for Egypt. After a study tour of several Middle Eastern countries, Marks and others (1980) stated that "the alluring opportunities in the United States for lucrative employment, and/or advanced research with the most modern resources, constitute a stimulus to "brain drain"; and unless it is stopped the purposes of international exchange are circumvented. The situation poses potential dangers for the area as a whole."

Although statistics related to "brain drain" from Arab countries may not be very exact, its order of magnitude is in the thousands for each of the fields of medicine, engineering, and natural sciences (Zahlan, 1981). The figures related to "brain drain" are predominantly for Egyptian, Iraqi, Syrian, Lebanese, Palestinian, and Jordanian nationalities. Badran (1985) refers to a report by the Iraqi government stating that eighty percent of the Iraqi citizens sent on fellowships to study outside the country do not return to Iraq after completion of their studies.

This is ironic if one considers that Iraq (through the Qualified Persons Law), and Libya exerted serious efforts to establish advanced research centers and attract Arab scholars or those of Arab origin from all over the world in what could well be described as reversal of indigenous migration at the regional level. In spite of the material incentives and highly favorable employment conditions, the projects did not succeed. Extraneous factors like the Iran-Iraq war may have contributed to the lack of success. Within the region, large numbers of faculty members left their relatively established universities in countries like Egypt, Syria, Jordan, and Lebanon to join universities in oil-rich countries.

The Gulf States have pretty well resolved the issue of "brain drain" by assuring their returned grantees (most of whom are on government grants) attractive opportunities in the form of important or challenging jobs. Ijaz and Khan (1981) held the viewpoint that these jobs are so attractive to nationals that the Saudi government need not worry about getting back the thousands of young graduates who go to the United States for higher education and training. It is reasonable to assume that a similar situation exists for nationals of Kuwait, the United Arab Emirates, and Qatar. This may be one positive return for the preferential personnel policy accorded to nationals of these countries when compared to

expatriate faculty.

Another approach that could be followed to combat "brain drain" is to strengthen the quality of graduate study in the region. It has to be admitted that retention of highly trained specialists is largely the responsibility of the country of origin, but foreign institutions can help. For example, foreign Fulbright scholars in the United States must spend a minimum of two years in their country of origin before being allowed to emigrate to the United States, if they are entitled. A number of Arab governments enter into contractual agreements with grantees requiring them to serve one or two years for each year of sponsored training or pay back all the funds spent on them.

Methods of Instruction and Learning

The prevalence of lecturing as a model of teaching especially in the "faculties of last resort" which tend to have very large student/teacher ratios is apparently not contributing to the development of critical thinking in students nor the realization of other higher cognitive objectives. What renders lecturing a particularly poor model of instruction is the examination practices that appear oriented toward considerable emphasis on memorization. According to El-Koussy (1973), there is domination of oralism or prevalence of the spoken word in the Arab countries. He stated that "Education has become largely repetition of words". There exists a circular relationship among teaching, learning, and examinations which tends to shape education in the Arab countries. Szyliowicz (p. 197) stated that "whether the child was an Egyptian, an Iraqi, or a Jordanian, he usually had to memorize a mass of data with limited applicability to his environment or to the national situation in order to pass the appropriate examinations".

Methods of instruction and learning cannot be divorced from the adopted educational pattern -- outright specialization versus a liberal education base; one major final exam versus a system of continuing evaluation; a year-program as a unit versus semester course credits; and the nature or philosophy of the examination system. The average university student in the Arab world, as in many other regions of the world, responds more to pressure and a system of periodic checks and balances than in the system of one yearly final examination.

The trend is to favor systems of education demanding more regular and systematic study and more frequent evaluation. In view of the continuous changes in science and technology, it is argued that, in the teaching-learning processes, more attention needs to be given for the development of critical thinking and attitudes, the inculcation of scientific methodology, and training in skills that will help the learner adapt to job mobility and to new requirements mandated by the changing manpower needs of the labor market.

Complaints are often voiced about the low academic quality of student input to universities. Whether these are justified or not does not free the universities from the responsibility to provide quality education and a diversified program that will help fill gaps in the academic background of their incoming students. Furthermore, universities can contribute to pre-university education through better teacher education programs; the development school curricula; and the quality of teaching in foreign languages and/or subject matter in their own preparatory non-credit first year at the university.

Faculty accessibility, one-to-one academic advising and discussion of problems, and a genuine traditional university environment in which belonging to the institution is part of education -- seem to be the exception rather than the rule in a number of universities in the Arab countries. Unfavorable student/faculty ratios and lack of full-time commitment of faculty are factors adversely affecting these problems.

Language(s) of Instruction

The issue of what language to adopt as a medium of instruction is pedagogically difficult. There are so many interrelated factors impinging on the choice. These include: pre-university preparation in foreign language; language proficiency; availability of references and textbooks; shortage of qualified faculty who can teach through Arabic; attitudes of administrators and professors; and nationalistic and cultural attitudes and feelings. As already mentioned in this paper's 'Overview' section, policies regarding language of instruction are not definite and, in most cases, dualistic practices are adopted within the same university with the foreign language being utilized in scientific fields. Teaching through a foreign language enabled several universities to inject new blood into their faculties by hiring

foreigners. The major problem is students' lack of proficiency in the foreign language and the need to spend an extra university year to improve language proficiency as an essential prerequisite to later studies. Even that one-year preparation does not seem to be sufficient.

Will fuller use of Arabic as a medium of instruction result in more effective teaching/learning situations? The issue is complex and has special ramifications in countries like Algeria, Morocco, Tunisia, and Lebanon where pre-university teaching especially of the scientific subjects of the secondary cycle has not been completely Arabicized. Lack of adequate textbooks and references in Arabic and the enormous task of timely and quality translation that is needed in order to depend totally on Arabic are problems that must be surmounted before a university education in the Arab countries can be universally conducted in Arabic.

Financial Policies

Liberal policies of tuition-free university study and of varying amounts of support for living expenses are widespread in the universities of the Arab countries. In some of these countries, such policies may have been decreed for political reasons to appease students; while in others, the need to build and expand governmental infrastructures has been the compelling factor. Be that as it may, the growths in enrollment and inflation have rendered such financial support to university students a budgetary burden in the poor countries of the region, a burden from which they are finding it extremely difficult to disentangle themselves. As in the case of open admissions, the policies on scholarships, tuition support, and subsidies are charged political issues. Although the pressure is greatest in the less affluent countries, there are indications that some oil-rich countries plan to reduce the magnitude of their generous support. From another angle, universities tend to be relatively generous in their personnel budgets while their facilities, libraries, laboratories, equipment and apparatus, and maintenance are not allocated a reasonable share.

Research and Publications

Much of the limited research that takes place in the universities is driven more by pressure to publish so as to get promoted rather than by a genuine desire to seek knowledge.

Thus, the type of research is related to what is likely to be published in journals acceptable by the university community or, at least, university decisionmakers. In the Arab world, few scientific journals are refereed or issued regularly, their distribution is limited, and they are not referred to except rarely, according to Zahlan (1985). Furthermore, journals tend to be not specialized, as the same journal publishes in different fields.

Future research capability is dependent upon appropriate numbers as well as quality of individual scientists and scholars. The working relationships of universities, on the one hand, and research councils or institutes, on the other, should be complementary rather than competitive. From another angle, dissipation of faculty orientation resulting from the existence of several departments of the same subject in the same university is not conducive to zeroing in on specific areas of research through the evolution of research teams within each field. Thus, there might be a department of chemistry in each of the Faculties of Science, Engineering, and Pharmacy in some Arab universities in Egypt or in those patterned after Egyptian universities. These dispersed departments of the same field of study tend to be characterized by a lack of coordination and the absence of any appropriate channels of communication. (Al-Ebraheem & Stevens, 1980)

Motivation of Students in Oil-Rich Countries

Ahmed (1984) expresses the view that lack of motivation of national students in oil-rich countries is explained by their view of a university level degree as important for social prestige rather than for the pursuit of a livelihood. In the opinion of some observers, "substantial sectors of Arab societies in the Gulf have become so wealthy that the need to work to obtain wealth is not clear to them" (Al-Ebraheem & Stevens,

1980). They hypothesize that the policies of unequal admissions affect adversely the attitudes of nationals, making them assume as a natural condition of life that they need not strive to achieve excellence. The recent slump in oil prices and the concomitant effect on the economy of oil-rich countries may have a positive effect on the motivation and attitudes of the youth of these countries.

Relationship between Universities and Colleges/Institutes

The credits earned by students in the community colleges of Jordan are not recognized by the Jordanian universities. The issue is under study and the trend is toward transferring of credit of a small minority of exceptional students who satisfy a set of academic conditions. Some specialized institutes in some Maghreb countries which are sponsored by ministries other than education have challenging programs leading to a university degree. However, these degrees are not considered to be equivalent to those granted by universities. The students feel frustrated when they want to continue higher studies but cannot when their degree is not recognized.

One position calls for streamlining that leads to some form of integration of the institutions of higher learning or to a regularization of the relationships among them. In contrast, Professor Heckhausen argued with great energy at an International Association of Universities Seminar "that universities might contaminate other forms of post-secondary education by causing them to lose their own specific nature" (IAU Paper 14, p. 9). There may be merit in keeping non-university institutions well apart from university influence, not based on university criteria in terms of requirements, nature of offerings, and organization.

III. Concluding Remarks

Universities are called upon to pioneer in discovery, change, and development as well as to be guardians and transmitters of culture and heritage. The challenge facing universities in many Arab countries is to innovate and encourage development without disrupting the culture. The issue is to find a formula that will enable universities to realize these diverse functions harmoniously. Education and the military have played important roles in social mobility in many Arab countries, particularly the less affluent. Nevertheless, some Arab countries hoped to get much more from higher education than realized so far. Probably, the economic pay-off was more for the benefit of the individual rather than the state. Falling short of realizing goals may be due to: (a) unrealistic expectations from higher education, (b) rapid and large increases in enrollments, (c) mismatch between the specializations of students and manpower needs, (d) problems of language of instruction, (e) the lack of commitment on the part of many faculty members, (f) limited financial resources in some countries, and (g) the problem of "brain drain". Over-educating in the wrong fields is apt to yield unemployed university graduates and widen the gap between expectations and accomplishments.

The three commonly acknowledged functions of universities are: teaching, research, and service. So far, in the universities of the Arab countries under review, the concentration has been on teaching and, apparently, its quality leaves much to be desired (even though it is recognized that there exist sporadic areas of quality performance). Research within universities has not seriously expanded because of excessive preoccupation with teaching, but there are some recognizable efforts for improvement in some of the Arab universities. With respect to the function of service, it is this author's judgment that voluntary service for the benefit of the community and society is not widespread among the professors of the Arab universities, although they may be heavily involved in external activities and participation in committees, as well as fee-paying involvement in extra employment.

In the Gulf countries, rapid expansion of secondary education engendered a great need for qualified teachers and created a demand for higher education. Although the pressure was for the establishment of advanced teacher training

institutes, it is viewed by some that national pride was involved in the establishment of national universities. There were strong positions taken against establishment of certain universities mainly on the basis that they would not be viable in view of the small size of national populations.

In retrospect, it can be argued that the universities have made higher education easily accessible to large segments of the respective populations and have contributed greatly to the expansion of the education of women. It is doubtful that it would have been better in the long run to have trained an equivalent number of citizens abroad. However, there may have been room for closer coordination and for cooperation in order to avoid duplication in areas or fields of study which are highly specialized and/or not in great demand.

Judging from Table 1 (p. 2), it seems that the period of rapid growth in the number of universities of the 1970s has moderated in the 1980s. This may be traced to the severe drop in oil income in oil-rich countries and recession in others which is of course not completely divorced from the former factor. Such an economic climate is conducive to evaluation and reexamination of roles and objectives, the assessment of status and achievements, and more realistic planning for the future.

This may have already led to attempts to control growth in university enrollment in several Arab countries. Some countries attempted to alleviate the problem of rapid growth in university enrollment through diversification in higher education. This took the form of institutes in some countries like those of Al-Maghreb and community colleges in others like Jordan. Although these do not strictly fall within the category of university education, they do have ramifications that can influence the state of affairs at the universities. From another angle, the planners of Jordan's Al-Quds Open University (Head office in Amman) hope to open new horizons by providing extensive opportunities in higher education and/or training through evolve close ties of cooperation with all universities and institutions of higher education in the West Bank, Gaza, and the Arab countries.

The problems and issues facing universities in the Arab countries of the Middle East and North Africa cover a wide number of areas

including quality of instruction, admission policies and practices, shortage of local qualified faculty, and limited research. These are not strikingly different from problems and issues reported about universities in Africa and Latin America. There are, however, a few aspects about higher education that may be more characteristic of universities in the Arab countries. These pertain to the practices related to language(s) of instruction and the segregation of students in

some countries on the basis of their sex. Another characteristic relates to the financial ability of some countries in the Arabian Gulf to invest heavily in establishment of universities during relatively short periods of time. But for a greater understanding of the issues and an appreciation of the characteristics of universities in the region, it is necessary to undertake in-depth studies using a representative sample of these universities.

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Universities in the Arab Countries

<u>Country</u>	<u>University & Location</u>	<u>Year</u>	<u>Language</u>	<u>Acad. Staff</u>	<u>Students</u>
Algeria	U. of Algiers, Algiers	1859/ 1909	A, F	c 1,530	c 17,086
	U. of Science & Tech. H. Boumediene, Algiers	1974	A, F	c 1,300	c 13,000
	U. of 'Annaba, 'Annaba	1975	A, F	c 970	c 8,800
	U. of Constantine, Constantine	1961/ 1969	A, F	c 1,000	c 12,000
	U. of Oran, Oran Es Senia	1961/ 1966	A, F	c 1,000	c 9,000
	U. of Science and Tech. of Oran, Oran	1975	F		84-85 c. 828
	U. of Setif, Setif	1978	A, F	c 480	c 5,800
	Univ. Center of Tizi-Ouzou, Tizi-Ouzou	1977	A, F	84-85 465 F.T.	83-84 4,672
Bahrain	University of Bahrain, Isa Town, Manamah	1978/ 1986	A, E		
	Gulf University, Manamah				

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^b Ag=Agriculture; Ar=Architecture; A=Arts; Cs=Computer Sc.; D=Dentistry; Ed=Education; E=Engineering; Ft=Food Techn.; Ln=Languages; L=Law; M=Medicine; P=Pharmacy; R=Religious Studies; S=Sciences; T=Technology; Vm=Veterinary Med.

Annex 1

<u>Library</u>	<u>Ac. Year Semes.</u>	<u>Fees St./Pr. ^a</u>	<u>Major Faculties & Degrees ^b</u>
	Tri.	MOHESR	M, L, A, Ln, Ed/ Lic., Magister, Med. Doc.
	Sem.	MOHESR	S/ Lic., Mag., Ing., Doc.
	Sem.	MOHESR	M, D, S, A, T, Ln/ Lic., Ing., Mag.
	Sem.	MOHESR	M, S, Ln, Ed, E, A, Ft, L, Vm/ Lic., Med.
	Sem.	MOHESR	M, A, L, S, Ln/ Lic., Med.
	Yr.	50 Dinars MOHESR	T., Electronics/ Ing., Mag.
35,000	Yr.	MOHESR	S, T, Ar, M, Ln/ Lic., Mag.
	Sem.	50 Dinars MOHESR	E, Ag, A, L, T/ Lic., Ing., Mag.
Comb. of GP & BUC		c. \$18/credit, MOE	A, S, Ed, E, BA, Eng., MA
		Regional	M

Universities in the Arab Countries

<u>Country</u>	<u>University & Location</u>	<u>Year</u>	<u>Language</u>	<u>Acad. Staff</u>	<u>Students</u>
Egypt	Ain Shams, Cairo	1950	A	84-85 1,870	84-85 121,513
	Al-Azhar, Cairo A.D.	988	A	c. 3,600	c. 90,000
	U. of Alexandria, Alexandria	1942	A, E	c. 3,180 + P.T.	96,900 + 28,830 ext
	Assiut University, Assiut	1957 opened	A, E	84-85 2,225 + P.T.	84-85 44,660
	Cairo University, Cairo	1908	A, E, F	5,750	113,600
	U. of Helwan, Cairo	1975	A, E	c. 1,100	33,300
	Mansoura University, Mansoura	1972	A	84-85 930, F.T. 222, P.T.	84-85 42,141
	Menoufia University Shebin El-Kom	1976	A, E	760 F.T. 250 P.T.	16,500
	Minya University, Minya	1976	A, E	340 F.T. 260 P.T.	16,120

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<u>Library</u>	<u>Ac. Year Semester</u>	<u>Fees St./Pr. ^a</u>	<u>Major Faculties & Degrees ^b</u>
92,000	Yr.	O O	M, E, A, Ag, Ar, L, S, Ed/ BA, MA, Doc.
80,000	Yr.	O St.	Ln, L, Ed, Ag, D, P, S/ BA, MA, Doc.
210,000	Sem.	St.	A, L, S, M, D, Ed, Vm, P, E./ BA, MA, Doc.
	Sem.	O St.	S, E, M, Ag, Ed, Vm, L, P/ BA, Eng., MA, Doc.
1,000,000	Yr.	St.	Ag, Vm, L, D, Ar, E, M, Ln, S/ BA, MA, Doc.
920,000	Yr.	O St.	E, S, A, Ed
	Sem.	Foreign St.P200- 400	Ed, S, E, Ag, L, A, P, M, D/ BA, MA, Doc.
Central 800 + Fac Tec. Libr	Yr.	O St.	Ag, E, Ed, S/ BA, MA, Doc.
88,500	Sem.	St.	Ag, A, Ed, E, S, M, Ln/ BA, MA, Doc.

Universities in the Arab Countries

<u>Country</u>	<u>University & Location</u>	<u>Year</u>	<u>Language</u>	<u>Acad. Staff</u>	<u>Students</u>
Egypt	Suez Canal University, Al Ismailia	1976		c. 730	c. 7,900+ 1,100 Ext.
	Tanta University, Tanta	1972	A, E	84-85 578 F.T. +11 P.T.	84-85 33,795
	Zagazig University, Zagazig	1974	A, E, F	84-85 2,236	84-85 67,869
	American University in Cairo, Cairo	1919	E	84-85 138 F.T. 85 P.T.	84-85 2,587
Iraq	University of Baghdad, Baghdad	1958	A, E	c. 1,990	c. 35,300
	University of Basrah, Basrah	1964	A, E	84-85 697 F.T.	84-85 c. 11,000
	University of Mosul, Mosul	1967	A, E, F	83-84 954	83-84 15,684
	Al-Mustansiriyah University, Baghdad	1965/ 1974	A, E	C. 430	c. 11,000

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La=Languages; L=Law; M=Medicine; P=Pharmacy; R=Religious Studies; S=Sciences; T=Technology; Vm=Veterinary Med.

<u>Library</u>	<u>Ac. Year Semester</u>	<u>Fees St./Pr. ^a</u>	<u>Major Faculties & Degrees ^b</u>
		St.	S, Ag, Ed, M, E
190,000	Yr.	St.	Ed, A, S, M, P, D, L/ BA, MA, Doc.
	Sem.	O St.	Ed, Ag, Vm, A, L, M, P, E, S, T/ BA, MA Doc.
185,000	Sem.	P1,085/ Sem. Foreigners \$5,300 Private	E, S, Ln, Cs, A/ BA, MA
c. 270,000	Sem.	O MOHESR	Ag, S, P, D, M, Vm, E, Ar, A/ BA, MA, Doc.
c. 400,000	Sem.	O MOHESR	S, E, M, Ag, A, Ed, Cs/ BA, MA, Doc.
250,000	Sem.	O St.	M, E, S, Ag, A, Ed, Vm, D, L, Cs/ BA, MA, Doc.
c. 120,000	Sem.	O St.	A, S, Ed, M, A, Ln/ BA, MA, Doc.

Universities in the Arab Countries

Country	University & Location	Year	Language	Acad. Staff	Students
Iraq	University of Salahaddin, Erbil	1968	A, E	84-85 541 F.T.	84-85 5,823
	University of Technology, Baghdad	1975	A, E	84-85 269	84-85 7,993
Jordan	Bethlehem University, Bethlehem, WB	1973	A, E	84-85 94 F.T. 27 P.T.	84-85 1,574
	Birzeit University, Birzeit, WB	1972	A, E	84-85 209 F.T. 2 P.T.	2,393
	University of Jordan, Amman	1962	A, E	84-85 630 F.T. 32 P.T.	84-85 11,123
	Hebron University, Hebron, WB	1980	A	84-85 46 F.T. 3 P.T.	84-85 1,830
	Mu'tah University, Mu'tah	1981	A, E	c. 20	c. 300
	An-Najah National U., Nablus, WB	1977	A, E	84-85 214 F.T.	84-85 2,825

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<u>Library</u>	<u>Ac. Year Semes.</u>	<u>Fees St./Pr. ^a</u>	<u>Major Faculties & Degrees ^b</u>
100,000	Sem.	O St.	S, E, Ag, A, Ed, M/ BA, MA
c. 30,000	Sem.	O St.	E, T, Ar, S/ BS, M.Sc.
29,684	Sem.	70 Din./ Sem. Pr.	A, S, Ed/ BA
85,000	Sem.	90-110 D/ Sem. Pr.	A, S, E/ BA, MA
308,000	Sem.	6-20 D/ Credit Hour St.	P, D, L, E, Ed, Ag, M, S, A/ BA, MA, Doc.
17,000	Sem.	150 D/Yr Pr.	A, Ln, R/ BA
Sem.	St.		Police, Military, A S, E/ BA
70,000	Sem.	c. 156 D/ Sem. Pr.	A, S, Ed, E/ BA

Universities in the Arab Countries

<u>Country</u>	<u>University & Location</u>	<u>Year</u>	<u>Language</u>	<u>Acad. Staff</u>	<u>Students</u>
Jordan	Yarmouk University, Irbid	1976	A, E	84-85 479 F.T. 93 P.T.	13,359
	Jordanian University for Science & Tech., Irbid	1986			
Kuwait	Kuwait University Kuwait	1966	A, E, F	c. 600	c. 17,000
Lebanon	Lebanese University, Beirut	1953	A, E, F	c. 530	c. 39,000
	American University of Beirut, Beirut	1866	E	84-85 367 F.T.	84-85 4,500
	St. Joseph University, Beirut	1881	F, E	84-85 230 F.T. 681 P.T.	84-85 5,684
	Beirut Arab University, Beirut	1960	A, E	84-85 67 F.T. 194 P.T.	84-85 3,872+ 13,554 ext
	U. of the Holy Ghost, Jounieh	1971	A, F	84-85 67 F.T. 298 P.T.	84-85 2,813

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<i>Library</i>	<i>Ac. Year Semes.</i>	<i>Fees St./Pr. ^a</i>	<i>Major Faculties & Degrees ^b</i>
112,994	Sem.	6-20 D per credit St.	M, E, P, A, Cs, Ln, Ed/ BA, MA
	Sem.	6-20 D/ Credit, St.	M, P, E, from Yarmouk
348,300	Sem.	O St.	A, Ed, S, L, E, M/ BA, MA, Doc.
	Sem.	St.	S, L, Ed, A/ Lic, Dip., Doc.
435,000	Sem.	LL7,000- 16,000/ Sem. Pr.	M, E, Ar, Ag, Ed, Cs/ BA, MA, Doc.
	Sem.	4,000- 17,000 L.L. Pr.	R, M, P, D, E, L, A, Ln/ Lic., Dip., Doc
^c 200,000	Yr.	LL. 1,200- 5,000/yr Pr.	A, L, E, A, S/ Lic., BA, MA
140,000	Sem.	LL. 3,000- 7,000 Pr	R, A, L, Ed/ Lic. Dip., Doc.

Universities in the Arab Countries

<u>Country</u>	<u>University & Location</u>	<u>Year</u>	<u>Language</u>	<u>Acad. Staff</u>	<u>Students</u>
Lebanon	Lebanese Academy of Fine Arts, Beirut	1937			
	Haigazain College, Beirut	1955	E	20 F.T. 30 P.T.	360
	Beirut University College, Beirut	1950	E, A	c. 60 F.T. 130 P.T.	1,700
Libya	U. of Garyounis, Benghazi	1955/ 1974	A, E	c. 510	4,720+ 4,040 ext
	U. of Al-Fateh, Tripoli	1957/ 1974	A, E	c. 830	c. 7,500
	Sebha U., Sebha	1983	A	84-85 120	84-85 2,000
Morocco	Hassan II Univ., Casablanca	1975			c. 21,000
	Mohammed I Univ., Oujda	1979		c. 350	c. 7,000

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<u>Library</u>	<u>Ac. Year Semester</u>	<u>Fees St./Pr.</u> ^a	<u>Major Faculties & Degrees</u> ^b
			A, Ar, Music, Painting
38,000	Sem.	Pr.	S, A, Armenian/ BA
40,000	Sem.	Pr.	S, A, Ln, Ed/ BA
250,000	Sem.	O MOE	Ed, L, E, A, D/ BA
10,000	Sem.	O MOE	S, Ag, E, T, M, P, Vm, Ed/ BA, MA
71,140		St.	Ed, S
			L, M, P, S, D
	Tri.	O	S, A, L/ Lic.

Universities in the Arab Countries

<u>Country</u>	<u>University & Location</u>	<u>Year</u>	<u>Language</u>	<u>Acad. Staff</u>	<u>Students</u>
	Mohammed V Univ., Rabat-Chellah	1957	A, F	c. 1330 90 P.T.	39,160
	U. Sidi Mohammed Ben Abdallah, Atlas-Fes	1975		c. 350	c. 15,000
	Qadi Ayyad U., Marrakech	1978	F		
	Qaraouiyine U., Fes	859 A.D.	A	c. 90	c. 5,000
Oman	Sultan Qaboos U., Muscat	1986		c. 130	c. 540
Qatar	U. of Qatar, Doha	1973/ 1977	A	84-85 405	84-85 4,658
Saudi Arabia	King Saud U., Riyadh	1957	A, E	83-84 2,419	83-84 21,246
	King Faisal U., Dammam	1974	A, E	c. 500	c. 1,430

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<i>Library</i>	<i>Ac. Year Semes.</i>	<i>Fees St./Pr. ^a</i>	<i>Major Faculties & Degrees ^b</i>	<i>Branch Campuses</i>
370,000	O	O St.	L, S, M, P, D, E, Ed/ Lic., Dip., Doc.	
	Yr.	O	L, S	Meknes (A) Tetouan (F)
	Sem.		L, S	
	Tri.		L, Ln, R/ Lic., Dip., Doc.	Marrakech, Tetouan, Agadir
	Sem.	St.	Ed, E, S, Ag, M, Ln, R, Cs/ BA	
115,000	Sem.	O St.	Ed, R, E, A/ BA	
1,150,851	Sem.	O St.	A, Ed, Ag, Vm, P, D, S, E, M, Cc, Ar, Ln/ BA, MA, Doc.	Qassim, Abha
	Sem.	O St.	Ag, M, Ar, Vm	Ahsa'

Universities in the Arab Countries

<u>Country</u>	<u>University & Location</u>	<u>Year</u>	<u>Language</u>	<u>Acad. Staff</u>	<u>Students</u>
	Islamic U., Medina	1961	A	c. 350	c. 2,740
	Islamic U. of Imam, Muhammad Ibn-Saud, Riyadh	1974	A	1983 946	1983 7,532
	U. of Petroleum and Minerals, Dhahran	1963/ 1975	E	84-85 780	84-85 4,500
	King Abdul Aziz Univ., Jeddah	1967/ 1971	A, E	1,840	c. 14,570
	Umm al-Qura Univ., Makkah	1979	A		
Syria	U. of Damascus, Damascus	1903/ 1923	A	c. 960 F.T. 440 P.T.	c. 56,260
	U. of Aleppo, Aleppo	1960	A	c. 760 280 P.T.	c. 33,300
	Al-Baath University, Homs	1979	A	84-85 101 F.T. 143 P.T.	84-85 8,560
	U. of October (Tishreen), Lattakia	1971	A	134 F.T. 335 P.T.	84-85 14,108

^a MOE=Ministry of Education; MOHESR=Ministry of Higher Education and Scientific Research

^b Ag=Agriculture; Ar=Architecture; A=Arts; Cs=Computer Sc.; D=Dentistry; Ed=Education; E=Engineering; Ft=Food Techn.; Ln=Languages; L=Law; M=Medicine; P=Pharmacy; R=Religious Studies; S=Sciences; T=Technology; Vm=Veterinary Med.

<u>Library</u>	<u>Ac. Year Semester</u>	<u>Fees St./Pr. ^a</u>	<u>Major Faculties & Degrees ^b</u>	<u>Branch Campuses</u>
156,000		O St.	R, Ln/ BA, MA, Doc.	
	Yr.	O St.	R, A, L/ BA, MA Doc.	Qassim, Medina, Abha
188,000	Sem.	O St.	S, E, Cs, Ln, Ar, S/ BA, MA, Doc.	
c. 400,000	Sem.	O St.	A, S, M, E, Ed/ BA, MA	Medina
		O St.	R, Ed, S, E	Taif
122,460	Sem.	O St.	L, S, M, D, P, E, Ar, Ed, R, A, Ag/ Lic, MA, Doc.	
15,000	Sem.	St.	E, Ar, S, Ag, M, D, Cs/ BA, MA, Doc.	
10,000	Sem.	St.	D, Vm, S, E, Ar/ BA, MA, Doc.	
21,955	Tri.	St.	Ag, E, M, Ed, D, S, A/ BA, MA, Doc.	

Universities in the Arab Countries

<u>Country</u>	<u>University & Location</u>	<u>Year</u>	<u>Language</u>	<u>Acad. Staff</u>	<u>Students</u>
Tunisia	University of Tunis, Tunis	1960	A, F	c. 1,320 590 P.T.	c. 29,570
United Arab Emirates	The United Arab Emirates University, Al-Ain, Abu Dhabi	1976/ 1977	A, E	c. 270	c. 5,000
Y.A.R.	Sana'a University, Sana'a	1970	A, E	c. 250	c. 3,520+ c. 600 ext
Yemen P.D.R.	University of Aden, Aden	1975	A		

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^b Ag=Agriculture; Ar=Architecture; A=Arts; Cs=Computer Sc.; D=Dentistry; Ed=Education; E=Engineering; Ft=Food Techn.; L.=Languages; L=Law; M=Medicine; P=Pharmacy; R=Religious Studies; S=Sciences; T=Technology; Vm=Veterinary Med.

<u>Library</u>	<u>Ac. Year Semester</u>	<u>Fees St./Pr. ^a</u>	<u>Major Faculties & Degrees ^b</u>
186,000	Sem.	MOHESR	S, M, D, P, L, Ed, E, Ar, A, Ln/ Lic., Dip., Doc
c. 50,000	Sem.	O St.	A, S, Ed, L, E, Ar, M/ BA
c. 36,630	Yr.	O St.	S, A, L, Ed, M, E, Ln/ BA Ed, Ag, M, E/ BA

Arab University-Level Students Studying Outside Their Country of Origin ^a

Country of Origin		Percentage of Total in Host Country		
<u>Country</u>	<u>Total in 50 Selected Countries</u>	<u>U.S. 1984</u>	<u>France 1983</u>	<u>U.K. 1983</u>
Algeria	13,506	4.9	78.9	3.7
Egypt	13,345	15.4	-	4.4
Libya	2,557	40.1	-	25.7
Morocco	31,464	2.1	77.9	-
Tunisia	10,860	5.1	75.1	-
Bahrain	1,811	20.5	-	14.8
Yemen, PDR	2,188	-	-	-
Iraq	7,427	17.8	-	21.0
Jordan	24,480	23.6	-	2.0
Kuwait	4,438	76.7	-	5.5
Lebanon	14,225	41.7	28.6	-
Oman	1,382	25.0	-	-
Qatar	1,051	65.8	-	5.7
Saudi Arabia	8,302	79.9	-	-
Syria	15,681	11.9	16.5	-
U.A.E.	1,584	69.9	-	12.3
Yemen	2,431	18.5	-	-

^a Source: UNESCO *Statistical Yearbook*, 1986.

<i>West Germany 1983</i>	<i>Egypt 1982</i>	<i>Saudi Arabia 1983</i>	<i>Other Countries</i>
3.2	-	-	--
5.6	-	8.4	Lebanon '82: 54.4%
-	8.4	-	Canada '82: 7.2%; Italy '83: 6.8%
2.7	-	-	Canada: 3.6%; Belgium '84: 10.6%
-	9.8	24.4	Belgium: 3.7%; Algeria '84: 3.7%
-	20.4	66.5	Morocco '83: 3.5%
3.8	-	-	U.A.E. '84: 8.8%; Kuwait '84: 6.0%
3.7	-	7.8	Kuwait: 4.0%
-	6.9	3.8	Yugoslavia '83: 14.8%; Poland '84: 8.9%; Kuwait: 5.2%; Italy '83: 5.0%; Turkey '84: 3.6%
2.2	-	-	Lebanon: 26.4%; Kuwait: 7.7%; Italy: 5.8%; Yugoslavia: 5.7%; Turkey: 2.9%
-	25.2	12.8	--
-	11.5	6.0	Italy: 4.8%; Belgium: 4.5%; Canada: 2.1%
5.0	5.9	-	Jordan '83: 13.6%; U.A.E.: 7.9%
3.1	-	5.3	Jordan: 4.0%
-	8.1	-	--
-	19.8	29.2	Lebanon: 39.3%; Turkey: 4.1%; Yugoslavia: 3.3%
			--
			India '79: 7.3%; Czechoslovakia '84: 4.4%; Kuwait: 4.2%

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