A PROFILE OF CURRENT ACADEMIC PROGRAMS AND FACULTY QUALIFICATIONS IN JORDAN'S PUBLIC AND PRIVATE COMMUNITY COLLEGES

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CHAPTER I

INTRODUCTION

Purpose of the Study

The primary purpose of this historical and descriptive study was twofold: to identify the current professional programs offered at both public (government) and private community colleges and to summarize the faculty qualifications at the 52 colleges in the East Bank of Jordan. A secondary purpose was to identify the most and least needed programs for the Jordan labor market, and to determine whether graduates of selected programs should be able to transfer to universities in Jordan and abroad.

There is no question that Jordan's community college system is already contributing to the social and economic development of the country. What remains to be seen is how research results, as well as administrative and legal changes, will affect the ultimate character of these institutions and their relations to other educational institutions and to the labor market in Jordan.

Background Information

Jordan, as a legal and political entity, has existed since 1921 when the British carved the Emirate of Trans-

Jordan out of Palestine. The Emirate was later transformed into the present-day Kingdom of Jordan, ruled by the British until 1946.

Unlike other Middle Eastern Arab countries, Jordan is poor. It lacks oil and has few other valuable natural resources. The country, however, earns foreign exchange from remittance of Jordanians working in wealthier neighboring countries. In recent years, there has been accelerated economic growth as a result of heavy investment in the public and private sectors. This pace of development, however, has been tempered by recurrent wars and instability in the Middle East and through Jordan having to shoulder part of the major burden of harboring and supporting displaced Palestinians (UNESCO, 1982).

Religious beliefs and values dominate all aspects of Jordanian society, and the family has great influence on the individual. Decisions are made for individuals by "elders" who are considered experienced and knowledgable in all areas. The dictum, therefore, becomes: to criticize is to err; to obey is a virtue. Hence, much more importance is attached to what "elders" say (or the Holy Quar'n explains) and not to what research findings demonstrate (Abu-Zeina & Jaradat, 1981).

The population of Jordan is 2,670,000 million with a growth rate of 3.9% per year. A total of 60% of the total population lives in urban areas with 1.5 million people now residing in the Amman/Zarqa region (Ministry of Planning,

1986, p. 68). Only 23% of the population is economically active (Jordan Geographic Center, 1987).

Over the years, in coping with the double-edged challenge of limited resources and a dramatic increase in population, Jordan has looked to education as the key force in advancing its socioeconomic growth. As important as filling immediate educational needs has been the kind of long-term planning needed to enhance the country's future productivity prospects. Since the early sixties, when Jordan launched the first of its comprehensive development plans, the primary economic goal has been to increase the country's industrial, commercial and services potential and thus create more jobs for more people. With equal emphasis, it has been concentrating on training a qualified work force to fill those jobs (Sullivan, 1986).

A significant shift in Jordan's socioeconomic conditions was brought about through the regional oil boom of the early seventies, which vitalized the economy and increased the inflow of Arab aid and Jordanian expatriate monies. During this period, the government initiated a number of major development projects, but their implementation often was hampered by labor shortages in crucial areas. To solve the problem, foreign agricultural, construction and industrial workers were imported. On the other hand, the government, reassessing its educational priorities in light of these and future requirements, began

expanding its vocational and technical training programs. With the increase in attractive job opportunities, the demand for this type of education had begun to rise. During the last decade, dozens of new centers, offering training in a number of vocational specializations, were established in various regions of the country by the Ministry of Education and the Vocational Training Corporation (an independent agency formed in 1976 to develop skilled technical cadres for industry in close association with the Ministry of Labor).

However, a turning point in Jordan's economy occurred in 1983, under the impact of the world recession and the concurrent reduction in Gulf oil revenues. The extended Iran-Iraq conflict also has had its adverse effect--Iraq, one of Jordan's major customers, had to curtail its non-essential imports. Although the overall labor shortage began to subside, certain skills were still in short supply, and the country continued to depend largely on foreign workers. In the corps of professionals, however, unemployment began to surface--particularly among physicians, engineers, and teachers. New university graduates found themselves competing for choice jobs with the well-experienced Jordanians who were beginning to return from the Gulf (Sullivan, 1986).

Foreshadowing aggravated employment problems in the future is the fact that a third of Jordan's population is

in school; and, despite current realities, most are receiving a purely academic education. Most Jordanian parents still want a traditional university education for their children--the higher the level, the better. Jordan's four universities, however, are able to accommodate only a small percentage (25% of high school graduates who passed the General Certificate Exam) of the aspirants, and many families have been sending their sons and daughters to universities abroad.

Community College Concept

His Majesty, King Hussein, addressing the Conference on Educational Process in Developing Jordanian Society, said:

> It is time now to redirect the educational policy toward a practical and useful education for our society, and to stop the rush toward theoretical education which is not related to our society's needs and interests. Thousands of our youth are enrolling in secondary education and they are seeking acceptance in universities in our country and abroad irrespective of their standards and without any guidance or counseling from the educational establishment toward the current choice of applied, vocational and technical education in the light of our society's needs and the students' interests. Our society is in need of skilled workers, craftsmen, technicians as well as professionals . . . We have to face this great responsibility which is directing education to cope with our society's needs and with the planning of our well balanced social and economic development (Abdul-Hamid, 1980, p. 20).

The concept of establishing teacher training institutes was implemented in 1951 at Hussein College in

Amman. The purpose was to train teachers for two years after high school for employment in the teaching profession (Ministry of Higher Education, 1985, p. 53). In January of 1980, the Board of Education in Jordan decided to convert teacher training institutes into two-year community colleges. The reasons behind this decision can be summarized as follows:

1. To recognize that Jordan's teaching profession can not employ and does not need all the graduates of these institutes.

2. To meet the demand for business, industry and semi-professional technical labor.

3. To meet the great annual need for high school graduates in college-level vocational education.

4. To demonstrate, through the community college, democratic concepts and principles in terms of admission policy and programs offered to meet the needs of the community (Ministry of Higher Education, 1985, p. 104).

This shift introduced the framework for a program of job-oriented higher education that would be realized with the participation of private colleges and the government's training institutes. In the same year (1980), the Council of Higher Education was formed to act, in coordination with Jordan's three autonomous universities, as the policy-making arm of the government's effort to channel students into more varied types of education. Then in April of

1985, a separate Ministry of Higher Education was created, which assumed both the responsibilities of the Council and those of the Ministry of Education previously related to the administration of the community college system.

In the fall of 1980, ten teacher training institutes and ten private or other public government institutes were transformed into Jordan's first two-year community colleges, with a total enrollment of approximately 17,000 students (Amid East, 1986, p. 7). The institutions offer nationally recognized "associate degrees," which do not qualify students for transfer to university-level programs. A national community college examination was initiated in 1981 and is administered by the Ministry of Higher Education at the completion of all academic programs of study. It has proven a useful tool in assessing students, staff and resources at diverse institutions administered by different authorities and in establishing a uniform standard for all community colleges.

One of the Council of Higher Education's first tasks was to conduct research on Jordan's developmental needs and labor market and define the objectives of the overall higher education policy (Council News, 1983). Working closely with the Ministry of Education and other concerned bodies, the Council drew up a detailed set of by-laws for an overall community college policy, including specific requirements for the licensing, accreditation and

regulation of such institutions in Jordan (Council News, 1984).

Currently, Jordan has 52 licensed community colleges administered by over 30 different agencies, all operating under the regulatory authority of the Ministry of Higher Education which administers twelve of these colleges. They are located at Salt, Irbid, Ajloun, Howwara, Zarqa, Karak, Shobak (agricultural), Marka and Al-Husn (polytechnics), and Amman (three colleges, one of which is for women only and another of which is specifically for hotel training). Most of these still offer teacher training along with the newer professional specializations. Another 16 colleges are administered by other governmental ministries and departments, each offering highly specialized studies in fields such as aviation, cartography, cooperative sciences, finance, health, religious guidance, social work, statistics, and telecommunications. For training in medical skills, the Ministry of Health has two paramedical institutes (in Amman and Irbid), while additional nursing, mid wifery and health technology programs are offered by colleges in Karak and Zarqa. The United Nations Relief and Work Agency (UNRWA) runs two colleges, one for men and one for women, which provide teacher training and other professional studies to Palestinian refugee students in the Amman area. Twenty-two other community colleges, operated by private groups, vary widely in size and the number of

programs offered. More than half of these are concentrated in Amman, with the remainder in Zarqa, Jerash, Irbid and Mafraq. While a few of the colleges are exclusively for women and others specialize in single subject areas--computer sciences, for example--the majority provide a fairly broad range of programs in a coeducational setting (Sullivan, 1986).

The community colleges, as a whole, offer nearly 100 different specializations in nine major professional categories: agriculture, commerce, communication and transport, education, engineering, hotel management, paramedical technologies, and social professions such as journalism, law, library science, and social work (Ministry of Higher Education, 1986).

By 1984/1985, there were 27,966 students enrolled throughout the system. Each year young Jordanians take advantage of the community college option. The emphasis on applied skills combined with academic study also has attracted students from other Arab States and foreign countries. Some 1,400 other non-Jordanian Arab students currently enrolled in Jordan's colleges have found the instruction in the Arabic language along with English, as well as in the Arabic cultural environment, a practical and less expensive alternative to study outside of the region (Sullivan, 1986, p. 5).

In regard to employment opportunities, Jordan's community college graduates seem to be meeting with success. Many go on to work in family-owned enterprises; others find jobs in industry, business or in government offices by virtue of their acquired skills. A 1984 employment study indicated that community college graduates are in high demand in many fields, among them cartography, computer operation, industrial maintenance, office work, and statistics (The World Bank, 1984, pp. 691-692).

Need for the Study

In 1980, the Ministry of Education sanctioned the concept of community colleges in Jordan and established the Directorate of Community Colleges to oversee and standardize curricula and examinations. The motivation for the official approval of the community colleges was rooted in the social and economic plans for Jordan. Dr. Ahmad Al-Tall, the first director of the community college directorate at the Ministry of Education, confirmed the expectations for the community college programs "to be the best educational network that can meet the demands of the students and the community alike" (Jordan Times, 1981, p. 3).

One of the most important decisions in life is the selection of an occupation or career. Phillips (1968) reports that what one chooses for his life's work is a decision of lifetime importance. One aspect which must be considered in the process of career choice is the training required for entry into and successful participation in the occupation.

As enrollment in community colleges in Jordan continues to grow--from more than 17,000 students in 1981 to about 30,000 in 1986 (Ministry of Higher Education, 1986)--the need for information about academic programs as well as faculty qualifications is essential. The pressures to increase enrollment and limited financial resources, coupled with the goal to maximize human resource development, point up the need for effective educational planning. Finally, educational programs must be planned to fit the particular talents and needs of students attracted to a program, on the one hand, and Jordan's socio-economic needs on the other. Persons who are responsible for planning, evaluating, and modifying programs should have considerable knowledge of student interests and community needs.

The problem of planning an effective system of academic programs and providing accurate information on faculty qualifications appeared to justify the need for this profile study.

It was expected that the results of this study would be useful to educators, parents, and counselors in advising students into areas consistent with their aspirations. Moreover, it was also expected that this study would provide information which would be useful in the design of additional research in the area of the Jordanian community college. With the wide expansion of academic programs and the increase of teachers at both public and private colleges, the need is greater than ever before to identify the most and least needed programs as well as to survey faculty qualifications. Detailed knowledge of these is of utmost importance to planners at the Ministry of Higher Education and other government and private agencies dealing with education in Jordan.

Statement of the Problem

The generally accepted goal of community colleges is to serve the needs of the society as well as the needs of students in their occupational choice and their future aspirations. In spite of the general expansion in the establishment of community colleges in the last five years, especially in the private sector, little is known about the most and least needed academic programs offered on the one hand, and about faculty qualifications in Jordan public and private community colleges on the other; or about the labor market needs of the graduates of these colleges.

Scope of the Study

This study was limited to the 52 public (government) and private community colleges in the East Bank of Jordan. The population sample included all 52 community colleges for identification of:

1. The current academic programs offered at public and private community colleges.
2. The faculty qualifications of those who teach and administer these colleges.
3. Certain academic programs, the graduates of which, are likely to be needed by labor markets in Jordan.

Objectives of the Study

The following objectives were formulated to achieve the purpose of this study:

1. To identify various academic programs offered at both public and private community colleges in Jordan and to determine the level of duplication in such programs.
2. To survey the faculty qualifications of people teaching at and administering these colleges and to determine their level of training.
3. To determine which programs are most needed and which programs are least needed by comparing enrollment figures and labor market needs.

4. To determine whether certain types of programs should be transferable to universities in Jordan and abroad.

Procedures

In order to gather the data necessary to accomplish the objectives of this study, information was derived from primary sources and secondary sources. Primary sources consisted of government documents, publications and statistical educational yearbooks. Secondary sources primarily consisted of books and articles on education in Jordan, especially on the community college. The data used in this study will be summarized in descriptive statistics.

Assumptions

For the purpose of this study, it was assumed that there were certain duplications in the academic programs offered at both public and private community colleges in Jordan. Therefore this profile study might point out such programs. It was also postulated that the faculty qualifications might not meet the minimum requirements set by the Ministry of Higher Education, especially for teachers who teach at community colleges. It was hoped that this study would identify areas of weaknesses and make some useful recommendations to improve the quality of

education and raise the standards of teaching at these colleges.

Limitations of the Study

The following limitations of the study were recognized by the investigator:

1. The implications of this study may not be applicable to other programs and/or other types of post-secondary institutions outside Jordan.

2. The characteristics of faculty qualifications in this study may not be considered a complete profile of teachers and administrators in other higher education institutions in Jordan such as universities.

3. Labor market needs in Jordan may change rapidly, and predictions of future needs may not give a clear picture of what really happens in the end.

4. This study was not meant to answer questions concerning what happens to students of community colleges after their graduation. These concerns are beyond the scope of this profile study.

Definition of Terms

Profile is defined as a set of data portraying the significant features and traits of current academic programs and faculty qualifications at community colleges

in Jordan. The concept incorporates graphs, tables and figures.

Academic programs are defined as professions, fields of specializations and subjects offered through curricula at both public and private community colleges such as commerce, education, engineering, etc. Each profession has branches and students usually choose to specialize in one of these, such as teacher education.

Faculty is defined as instructors and administrators who teach and administer community colleges in Jordan.

Qualifications are defined as qualities, skills, characteristics, abilities, and knowledge of persons acquired by training or experience for a given purpose. These requirements fit a person for a position, office, profession, etc. In this study, qualifications refer to academic degrees and diplomas, such as high school, A.A., B.A., or M.S., etc. In Jordan, and in education, in particular, the faculty and staff qualifications run as follows from top to bottom: doctoral degree, master degree, baccalaureate and education diploma degree, baccalaureate degree, associate diploma, and high school certificate.

Public colleges are defined as colleges run by Ministries of the Cabinet or semi-government departments. In this study, these colleges included Ministry of Higher Education 12 colleges, the 16 colleges administered by other Ministries and government departments, and the two

UNRWA colleges. Students admitted in these colleges get free education and have some type of scholarships. In return, they have to work in an assigned office after graduation.

Private colleges are defined as those 22 colleges administered by private interest groups. Students admitted in these colleges have to pay tuition every semester and they are free to work wherever they like after graduation.

Community college is the phrase which often refers to the two-year post-secondary institutions in Jordan--offering diplomas and associate degrees in various fields, e.g., agriculture, engineering, nursing, teacher education, and technology.

Section is defined as an academic option. In this study for example, the English language field of study in the Education profession is referred to as a section.

Ministry of Education (MOE) is defined as a central governmental body which is responsible for elementary, preparatory and secondary public education in Jordan. MOE is the principal body regulating and controlling education provided by all agencies in all schools in the country, with the exception of community colleges and universities.

Ministry of Higher Education is defined as a newly established (April, 1985) ministry in the government of Jordan. Though it is called the Ministry of Higher Education, this "cabinet-level" government entity has

regulatory authority over community colleges, both public and private, in Jordan and not with the universities for the time being.

Board of Education is defined as a National Board of Education established in Jordan in 1964. It serves as an advisory body to the Minister of Education in most education-related matters. One of the Board's most important responsibilities is to advise on policy in regard to curriculum matters. The Board is composed of sixteen members appointed by the Cabinet, and includes representatives from MOE, the Ministry of Planning, the Civil Service Commission, the Youth Welfare Ministry, the private sector, parents and teachers. The purpose of the Board is to insure continuity in educational policy and efficiency in educational administration.

Council of Higher Education was established on May 1, 1982. It is headed by the Prime Minister and includes twelve other members: the chairpersons of the Board of Trustees of the universities in Jordan, the presidents of these universities, the Minister of Planning, the Minister of Education, the Minister of Higher Education, the Secretary General of the Ministry of Higher Education, and three other members appointed for two year terms by Royal Decree. One of the Council's most important responsibilities is to plan and set policies for higher

education in order to insure meeting Jordan's socio-economic needs.

Law of Education is defined as the 1964 Jordanian law of Education No. 16 and its amendments which established the general philosophy, aims and obligations of education reflecting the spirit of the constitution of the Hashemite Kingdom of Jordan.

United Nations Relief and Works Agency (UNRWA) is defined as an agency administratively responsible for implementation of vocational programs for the Palestine Arab refugee communities since 1950. It also administers two community colleges in Jordan. UNRWA/UNESCO educational services follow the same structure, curricula, and textbooks as those established by the Ministries of Education and Higher Education.

CHAPTER II

REVIEW OF LITERATURE

Introduction

This chapter reviews the literature related to academic programs offered at community colleges, major characteristics of faculty qualifications, and related studies in this field.

Since the public community college was born in Joliet, Illinois in 1901, this review is focused on programs and faculty in community colleges in the United States as well as available literature related to Teachers Training and Technical Institutes in Jordan.

For purposes of organization, the literature review of academic programs in both the United States and Jordan will be subdivided into the following areas: general education, and occupational and career programs. The faculty qualifications literature review will be subdivided as well into: preparation, part-time instructors, and the role of instructors in community colleges in both the United States and Jordan. Additionally, the role of community colleges in the areas of socio-economic status, community

education, collegiate function and type of research will be reviewed next. Finally, there will be a summary of the review of literature.

Academic Programs

General Education in the United States

General education is the process of developing a framework on which to place knowledge stemming from various sources, of learning to think critically, develop values, understand traditions, respect diverse cultures and opinions, and, most importantly, put that knowledge into use. It is holistic, not specialized; integrative, not fractional; suitable more for action than for contemplation. General education has also been defined as that which everyone should know. Mayhew said it should establish "a common universe of discourse--a common heritage" (1960, p. 16). Boyer and Kaplan argued for a common core that should be taught to all students. They spoke of a need for "comprehensive literacy" and "an awareness of symbol systems" that everyone in contemporary society must have (1977, p. 67).

Greenfield (1984) stated that general education, broadly defined, involves the study of basic liberal arts and sciences; stresses a breadth of understanding of human knowledge; strives to foster integration and synthesis of knowledge; encourages appreciation of one's own and others'

heritage; examines values; and fosters the development of personal qualities. Given this definition and its goals, the general education curriculum would, therefore, include advanced learning skills courses, breadth or discipline distribution courses, and integrative courses.

Moreover, general education is often defined in terms of the competencies to be gained by those whom it touches. A group studying general education in California community colleges in the early 1950s (Johnson, 1952) offered a list of eleven competencies to be exercised by those who were generally educated:

1. Exercising the privileges and responsibilities of democratic citizenship.

2. Developing a set of sound moral and spiritual values by which the person guides his life.

3. Expressing his thoughts clearly in speaking and writing and in reading and listening with understanding.

4. Using the basic mathematical and mechanical skills necessary in everyday life.

5. Using methods of critical thinking for the solution of problems and for the discrimination among values.

6. Understanding his cultural heritage so that he may gain a perspective of this time and place in the world.

7. Understanding his interaction with his biological and physical environment so that he may adjust to and improve that environment.

8. Maintaining good mental and physical health for himself, his family, and his community.

9. Developing a balanced personal and social adjustment.

10. Sharing in the development of a satisfying home and family life.

11. Taking part in some form of satisfying creative activity and in appreciating the creative activities of others.

That list, or portions thereof, still appears verbatim in many community college catalogues because it gives the appearance of being competency-based even though it is sufficiently broad to justify any course or program (Cohen & Brawer, 1984, p. 319).

Thus, the community colleges had attempted to devise general education patterns. Medsker (1960) reported the number of these courses offered in 78 colleges in 1956. These courses appear on Table I.

Courses for general education had also been centered on contemporary problems: race relations, drug use and alcoholism, ecology and the environment, evaluating social controversies, world peace. In the 1930s, such courses were often built on political problems at that time--facism versus democracy; in the 1950s it was communism versus democracy. In the 1960s, political problems gave way to issues surrounding the individual, and courses such as "The

Individual and Society," "Understanding Human Values," and "Intergroup Relations" became more prevalent (Cohen & Brawer, 1984, pp. 329-330).

TABLE I

FIELDS IN WHICH COURSES ESPECIALLY DESIGNED FOR GENERAL EDUCATION WERE OFFERED IN TWO-YEAR COLLEGES, 1956 (N=78)

Subject	Number of Colleges	Number of States	Percentage of Colleges
Natural science: general courses in physical and biological science and special courses in specific natural science fields	67	11	86
Social science: general course and special courses in specific fields	62	11	79
Psychology and personal development: applied psychology, orientation to college, family life education, and personal development	52	8	67
Language arts: communication, English, speech, and others	46	10	59
Humanities: general course, Western civilization, philosophy, world literature, Great Books classes, and others	40	10	51
Fine arts: music and art appreciation, special art courses	19	4	24
Mathematics: special courses	16	5	21
Health education	15	3	19
Homemaking: home economics, consumer economics, personal finance, and others	11	3	14
Preprofessional orientation: introduction to business, engineering orientation, and others	10	5	13
Miscellaneous: courses with "general education" or "general curricula" labels	9	8	12
Occupational orientation: vocational planning, work experience, industrial relations	4	2	5
Agriculture and conservation	4	2	5

Source: Medsker (1960, p. 60).

Many colleges that tried such courses subsequently returned to distribution requirements based on a variety of courses. As an example, Lukenbill and McCabe (1978) reported that when Miami-Dade College opened in 1960, instructors were hired especially to develop and teach an integrated humanities course. However, by 1978 Miami-Dade had developed a core of five multidisciplinary courses: "Communications," "The Social Environment," "The Natural Environment," "Humanities," and "The Individual."

Cohen and Brawer (1984) summarized the general education programs in the United States by saying that

> spokespersons for most community colleges would say they pursue general education, but an examination of their catalogues reveals they are defining the term as distribution requirements . . . The programs in liberal arts, business administration, general science, pre-engineering, accounting, architectural technology, and so on state various numbers of minimum semester hours to be taken outside the main field. The social science electives may be selected from courses in anthropology, economics, political science, psychology, sociology; the science electives from courses in physics, chemistry, biology, astronomy; the humanities electives from courses in music appreciation, art history, literature, philosophy; and the courses in communication from composition, speech, journalism, or writing. That is the most prevalent pattern. The rationale is based on freedom of choice for the students. But the result is curricular chaos (pp. 333-334).

General Education in Jordan

Community colleges in Jordan emerged from the Teacher Training Institutes. The first teacher training institute

was opened in 1951 when "Al-Hussein College," a secondary school, began to accept students in one-year "teachers' training classes." Students were chosen from graduates of secondary schools. Two groups graduated from this system, one in 1951 and the other in 1952 (Ministry of Higher Education, 1985, p. 53).

The original plan was to have teachers trained before they entered the service as teachers. This would qualify them to become elementary school teachers. However, the system was expanded to a two-year program to be taken subsequent to the completion of secondary school.

The curriculum included courses in behavioral studies, general education and special education. The basic philosophy for this level of education was set out in Education Law No. 16 of 1964 which provided that:

> Education in the Teachers' Training Institutes aims at the development of human resources required by a developing society which needs persons of a mid-level training, that is the level which falls between secondary and university training in the fields of education, agriculture, secretarial work, and accounting and others. This, in addition to the attainment of the general philosophy of the education system, at a level commensurate with the degree of maturity of the students at that level of the education system, and without prejudice to the special goals of the compulsory and secondary systems, in a way that would provide the students with a higher level of maturity and expertise (Ministry of Education, 1982, p. 22).

In 1956, the Village Teachers' Institute in Howwara was established by the Ministry of Education to serve as an

experimental center for basic education. A special one-year experimental curriculum was prepared for the Institute. By 1957-1958, a two-year program was adopted.

According to the Ministry of Higher Education in Higher Education in King Hussein's Time (1985, pp. 57-61), in the academic year 1963-1964, curricula of all the Teachers Training Institutes were unified. Courses offered were compressed into one subject matter and renamed "serving society." In the year 1965-1966 new programs began to be offered such as:

1. Teacher Training: to train teachers to teach business courses to secondary students and other subjects to elementary students.

2. Accounting: to train qualified accountants with adequate depth of knowledge.

3. Secretarial and Office Work: to prepare secretaries and office managers.

The 1960s also witnessed the opening of additional institutes. In 1964 the Shobak Agricultural Institute was opened to train agricultural instructors, and the Women Teachers' Institute was also established in Ajloun. In 1960, The United Nations Relief and Work Agency (UNRWA) opened the Wadi El-Seer Training Institute for training men and women teachers. In addition, the Ministry of Social Welfare opened its own Jordanian Social Service Institute

in 1966, and private interests established the Arts Institute in Amman in 1967. In the 1970s the following institutes were opened: Amman Training Institute, 1971; Alia Institute, 1972; the Engineering Technology Institute, 1972; and Men and Women Teachers' Institute, 1975. In 1978, a Teachers' Training Institute was opened in Irbid, and it was followed in 1979 with a similar institute in Karak. A private institute, the Arab College, was opened in Amman in 1975.

Table II shows the academic programs, courses and credit hours required for the Teachers' Training Institutes in the four-semester program which lasted for two years. This plan of study was approved by the Board of Education on July 4, 1972 (Abdul-Hamid, 1972).

In summary, the curriculum of the Teacher Training Institutes was divided into general education, psychology and pedagogy, and a major field of specialization: Arabic and Islamic Religion, English, Social Studies, Physical Education, Home Economics, Science or Mathematics (Al-Bukhari, 1973, p. 36). Attached to each of the Teacher Training Institutes was a demonstration school--to carry out experimentation in new fields of education, especially methodology, and to allow students to practice teaching. Students with secondary education certificates were normally admitted to the institutes. Since the number of applicants was generally in excess of the number of vacancies, selection of students was made by a committee.

TABLE II

ACADEMIC PROGRAMS, COURSES, AND CREDIT HOURS REQUIRED AT TEACHERS' TRAINING INSTITUTES, AS APPROVED BY THE BOARD OF EDUCATION, 1972

Academic Program	Course	Credit Hours				
		First Semester	Second Semester	Third Semester	Fourth Semester	Total Hours
1. General Education	Arabic Language	3	2	2	--	7
	English Language	3	2	2	--	7
	Physical and Medical Education	1	1	1	1	4
	Fine Arts	1	1	1	--	3
	Islamic Studies	1	1	1	--	3
	Jordan Society	--	--	2	--	2
	Current Critical Issues	--	--	2	--	2
	Economic Geography (For Scientific Students only)	--	2	--	--	2
	Workshops (For Males)	2	--	--	--	2
	Home Economics (For Females)	2	--	--	--	2
	General Math (For Literary Students)	3	--	--	--	3
	General Science (For Literary Students)	3	--	--	--	3
Total:	Scientific Stream Students	11	9	11	1	32
	Literary Stream Students	17	7	11	1	36
2. Behavioral Psychology And Pedagogy	Introduction to Education	2	--	--	--	2
	Developmental Psychology	2	--	--	--	2
	Educational Psychology	--	2	--	--	2
	Teaching Principles	--	2	--	--	2
	Audio-Visual Aids	--	1	1	--	2
	Practical Education	--	1	1	4	6
	Behavioral Studies	--	--	2 (Scientific)	3 (Literary)	5
	Curriculum	--	--	--	2	2
	Measurement and Evaluation	--	--	--	2	2
	School Administration	--	--	2	--	2
Total:		4	6	6	11	27
3. Courses for the Major	Major Courses for Scientific Stream Students	7	7	7	7	28
	Major Courses for Literary Stream Students	--	9	9	6	24
	Elementary Education Major	--	9	9	6	24
Total:	Scientific Stream Students	22	22	24	19	87
	Literary Stream Students	21	22	26	18	87
	Elementary Education Students	21	22	26	18	87

Source: Abdul-Hamid, Minutes of Board of Education Meetings, Ministry of Education, 1972, p. 47.

On the whole, general education in the Teachers' Training and Technical Institutes included the following courses: Arabic Language, English Language, Physical and Medical Education, Fine Arts, Islamic studies, Jordan Society, Current Critical Issues, Economic Geography, Workshops, Home Economics, General Mathematics, and General Science. Since the Ministry of Education was the sole agency which supervised education in Jordan, the institutes had to follow lesson plans, curricula, credit hours, and policies and regulations put out by the Ministry.

Occupational and Career Programs in the United States

Occupational or career programs were established with the intention of serving industries by supplying them with trained workers. Program need was ascertained by pursuing employment trends in the local area and by surveying employers there. Solmon (1976) argued that community colleges could and should work closely with employers to facilitate students' passage through to the labor market. To the extent they do, everyone benefits: students, their families, colleges, business, and the general public.

Calls for occupational education in two-year colleges had been made from earlier times. Arguments on behalf of occupational education were raised at gatherings of the American Association of Junior Colleges (AAJC). At its

organizational meeting in 1920 and at nearly every meeting throughout the 1920s and 1930s, occupational education was on the agenda (Cohen & Brawer, 1984, p. 193). In 1940 terminal programs were offered in about 70% of the colleges. The most widely offered included business and secretarial studies, general courses, home economics, music, and teaching. About one-third of the terminal students were in business studies; enrollments in agriculture and home economics were quite low. Table III presents data on the numbers of colleges and programs classified as terminal or vocational in junior colleges, 1917 - 1937.

Terminal programs meant all studies not applicable to the baccalaureate, and programs designed to lead to employment dominated the category. Occupational seemed to encompass the greatest number of programs and, along with career, was used most often by the 1970s for all curricula leading to employment. As late as 1960, Venn pointed out that only one-fourth of community college students were enrolled in occupational programs, half of them in California and New York and another 20% in Illinois, Michigan, and Pennsylvania (Monroe, 1972). Table IV recounts the proportions for later years.

TABLE III

PERCENTAGE OF TOTAL CURRICULAR OFFERINGS CLASSIFIED AS TERMINAL OR VOCATIONAL IN JUNIOR COLLEGES, 1917-1937

Year	All Junior Colleges		Public Junior Colleges		Private Junior Colleges	
	Number of Colleges	% of Offerings Terminal	Number of Colleges	% of Offerings Terminal	Number of Colleges	% of Offerings Terminal
1917	47	14	19	18	28	9
1921	58	29	23	31	35	25
1930	279	32	129	33	150	29
1937	---	---	195	35	---	---

Source: Eells (1941a, p. 22).

TABLE IV

TWO-YEAR COLLEGE TERMINAL-OCCUPATIONAL PROGRAM ENROLLMENTS AS A PERCENTAGE OF TOTAL ENROLLMENTS, 1963-1985

Year	Total Enrollments	Terminal-Occupational Program Enrollments	Percentage of Total	Percentage Increase
1963	847,572	219,766	26	---
1965	1,176,852	331,608	28	50.9
1969	1,981,150	448,229	23	35.2
1970	2,227,214	593,226	27	32.3
1973	3,033,761	1,020,183	34	16.7
1975	4,001,970	1,389,516	35	22.4
1985	4,730,235	1,675,309	35.5	---

Source: U.S. Department of Health, Education and Welfare (1963-1975) and AACJC (1986).

Cohen and Brawer (1984, pp. 165-166) observed that the most successful programs had several elements in common, even when they were not based on a technology of instruction. Many of the career programs included programmatic funding from outside the college, examinations administered by an external licensing bureau, criteria-based achievement examinations designed and administered by the faculty, follow-up surveys of student job entry, success, and attitudes toward the program, special admission requirements, entrance and diagnostic examinations; sequenced courses required of all matriculants, and staff identification with the program.

But why did the career programs fail to flourish before the 1960s?

Cohen and Brawer (1984) listed three reasons. First, their terminal nature was emphasized, and that tended to turn potential students away; few wanted to foreclose their option for further studies. Another handicap to the growth of career programs was the small size of the colleges. A third reason for limited terminal offerings was the association of many early junior colleges with high schools. Costs were an important factor. Many career programs used expensive, special facilities: automotive repair shops, clinics, machine tools, welding equipment.

The major shift that began in the second half of the 1960s is revealed in the enrollment figures. In 1968 the

Bureau of Labor Statistics reported 40% of all full- and part-time students in two-year colleges were enrolled in career programs (Bushnell, 1973). As reported in Lombardi's monograph Resurgence of Occupational Education (1978a), data from several states showed that, beginning in the mid 1970s, the rise in occupational enrollment more than kept pace with the large increase in total enrollment and in most states outstripped the rise in transfer enrollment. As Table V shows, the number of occupational program graduates reached parity with the general or liberal arts graduates by 1973 and by 1978 had reached a 60-to-40 ratio.

This rise in career education is attributable to many causes: the legacy from early leaders in the junior college movement and the opportunities, goadings, and sometimes barbs of later leaders to prod community colleges to develop occupational curricula and courses; the Vocational Education Act of 1963 and later amendments; the increase in part-time, women, disadvantaged, handicapped, and older students; and the community colleges' absorption of adult education programs and postsecondary occupational programs formerly operated by the secondary schools. In its state-wide master plan for the years 1978 to 1987, the Maryland State Board for Community Colleges reported that the:

TABLE V

ASSOCIATE DEGREE CONFERRED BY UNITED STATES INSTITUTIONS OF HIGHER EDUCATION BY TYPE OF CURRICULUM, 1970-1971 TO 1984-1985

Year	All Curriculums	Arts and Sciences or General Programs	Percentage of Total	Occupational Curriculums	Percentage of Total
1970-1971	253,635	145,473	57.4	108,162	42.6
1972-1973	318,254	161,291	50.7	156,943	49.3
1974-1975	372,969	167,643	46.2	195,335	53.3
1976-1977	409,942	172,631	42.1	237,311	57.9
1979-1980	405,378	152,169	37.5	253,209	62.5
1984-1985	468,894	206,047	44	262,847	56

Source: National Center for Education Statistics (1978, 1981) and AACJC (1986).

> increasing emphasis on occupational programs reflected changing values and attitudes among students and their families as to the level of education required to qualify for desirable employment opportunities. This shift is reflected in national projections predicting that throughout the next decade, 80 percent of available jobs will require less than the bachelor's degree (Maryland State Board for Community Colleges, 1977, p. 34).

To sum up, occupational and career education had become the major function in most community colleges in the United States, but the high growth rates experienced since 1964 could not be sustained forever. Unless more community colleges become exclusively vocational-technical post-secondary institutions, enrollments in career programs will probably hover around 50% of the total credit-course enrollment in the 1980s (Cohen & Brawer, 1984, p. 219).

Occupational and Career Education in Jordan

A significant shift in Jordan's socioeconomic conditions was brought on by the regional oil boom of the early seventies, which vitalized the economy and increased the inflow of Arab aid and Jordanian expatriate monies. During this period, the government initiated a number of major development projects, but their implementation often was hampered by a labor shortage in crucial areas. Reassessing its educational priorities in the light of these and future requirements, the government began expanding its vocational and technical training programs (Sullivan, 1986, p. 3).

Table VI provides a summary of distribution of Technical Training Institutes in the year 1979-1980 regarding the controlling authority, field of occupational education, students enrolled in each program, and number and sex of teachers.

It was evident that there were 13 such institutes, controlled by the Ministry of Education, Ministry of Defense, Ministry of Health, Ministry of Social Development, Ministry of Waqf (Islamic Affairs), Ministry of Industry and Commerce, Royal Scientific Society, UNRWA, and Private Interest Institution. The programs offered were: business, computers, engineering, Islamic studies, midwifery, nursing, nutrition, social service, and statistics. There were 7,148 students (6,148 males and 1,000 females), and 222 teachers (162 males, 60 females).

In 1980, the Ministry of Education converted its teacher training institutes into two-year community colleges. This introduced the framework for a program of job-oriented higher education that would be realized with the participation of private colleges and the government's training institutes. Table VII provides number of students admitted in the first year in community colleges by profession and academic year (see Figure 1).

TABLE VI

DISTRIBUTION OF TECHNICAL INSTITUTES, CONTROLLING AUTHORITY, TYPE OF EDUCATION, SEX, INSTITUTES, CLASS-UNITS, STUDENTS AND TEACHERS FOR THE YEAR 1979-1980, JORDAN'S TECHNICAL INSTITUTES

Controlling Authority	Type of Education	Sex	Institutes	Class Units	Students	Teachers
Grand Total		Total	13	214	7,148	222
		Male	2	49	6,148	162
		Female	-	13	1,000	60
		Co-ed	11	152	-	-
Ministry of Education	Commercial	Male	1	7	186	6
	Secretary	Female	1 (Section)	4	103	4
	Nutrition	Female	1 (Section)	2	43	3
	Libraries	Female	1 (Section)	1	20	2
	Engineering	Co-ed	1	32	829	63
Ministry of Defense	Nursing	Co-ed	1	3	155	9
Ministry of Health	Nursing	Co-ed	1	5	221	13
	Midwifery	Female	1 (Section)	2	40	7
	Para-Medic	Co-ed	1	11	11	1
Ministry of Social Development	Social Service	Co-ed	1	2	70	6
Ministry of Islamic Affairs	Islamic Studies	Male	1	2	70	6
Ministry of Industry and Commerce	Statistics	Co-ed	1	2	21	1
Royal Scientific Society	Computer	Co-ed	1	2	75	1
UNRWA	Commercial	Co-ed	2 (Sections)	8	189	16
	Engineering	Co-ed	-	3	98	10
	Para-Medic	Co-ed	1 (Section)	1	19	1
Private Institutes	Commercial	Co-ed	2	80	3,178	40
	Engineering	Co-ed	4 (Sections)	39	1,552	21
	Para-Medic	Co-ed	1 (Section)	3	120	4
	Computer	Co-ed	1	2	73	2

Source: Ministry of Education, The Statistical Educational Yearbook 1979-1980, p. 244.

TABLE VII

NUMBER OF STUDENTS ADMITTED IN THE FIRST YEAR IN JORDAN'S COMMUNITY COLLEGES, BY PROFESSION AND ACADEMIC YEAR

Academic Year		Education	Commerce	Engineering	Para-Medical	Others	Total
1980/81	Number	4,909	4,189	1,755	488	496	11,837
	Percentage	41.5	35.4	14.8	4.1	4.2	100
1981/82	Number	4,442	5,684	2,403	821	480	13,830
	Percentage	32.1	41.1	17.4	5.9	3.5	100
1982/83	Number	4,855	6,151	2,051	786	602	14,445
	Percentage	33.6	42.6	14.2	5.4	4.2	100
1983/84	Number	6 161	7,227	2,446	834	749	17,417
	Percentage	35.4	41.5	14.0	4.8	4.3	100
1984/85	Number	3,778	4,345	1,623	1,021	429	11,196
	Percentage	33.8	38.8	14.5	9.1	3.8	100

Note: These numbers and percentages do not include Jordan's nursing colleges.

Source: Ministry of Higher Education, The Higher Education in King Hussein's Time, Jordan, 1985, p. 165.

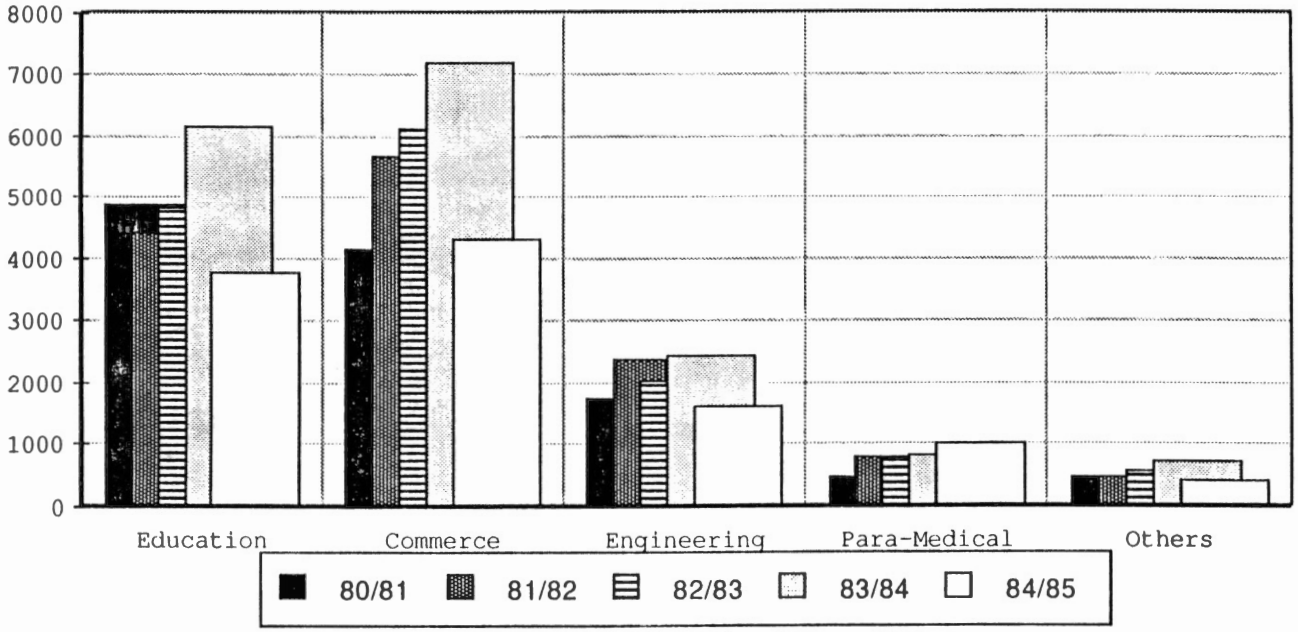


Figure 1. Number of Students Admitted in the First Year in Jordan's Community Colleges

As the preceding table shows, economic opportunities were a strong impetus for great enrollment in the occupational and career programs. Thus community colleges adapted themselves to the development of Jordan's economy in the late 1970s and early 1980s and became a factor of good investment.

Faculty Qualifications

An Overview

The proportion of community college faculty to students, both in the United States and Jordan, is higher than in universities and lower than in secondary schools. Most of the faculty members hold academic baccalaureates or master's degrees or equivalent experience in the occupations they teach; they are less likely to hold advanced graduate degrees than university professors. Their primary responsibility is to teach. They rarely conduct research or scholarly inquiry, and they have only a modest formal connection with institutional management. They are more concerned with subject matter than are their counterparts in the secondary schools, but less so than university professors. On a full-time basis they conduct four or five classes per term, twelve hours a week. Many have prior or concurrent experience teaching at other types of institutions; more than half are part-time employees at their colleges.

Preparation of Faculty in the United States

When the size and number of community colleges was expanding, the question of proper training and experience for instructors was frequently debated. Should instructors have prior experience in the lower schools? Should they hold doctorates? What qualities were needed?

Eells (1941) reported a study done in the 1920s showing that 80% of junior college instructors had previous high school experience. In the 1950s Medsker (1960) found 64% with previous secondary or elementary school experience. Around 44% of new teachers of academic subjects entering two-year colleges in California in 1963 moved in directly from secondary schools, and others had prior experience with them (California State Department of Education, 1963-1964). However, in the 1970s, more were coming from graduate programs, from the trades, and from other community colleges.

The master's degree obtained in a traditional academic department was the typical preparation. The doctorate has never been seen as the most desirable degree. During the 1920s, 4% of the two-year college instructors held the doctorate. By the 1950s, the proportion had climbed to between 6% to 10%, and there it remained for two decades. By the mid 1970s, it had reached 14% as relatively more instructors without the degree were concurrently receiving advanced degrees.

Table VIII shows the proportions of instructors holding bachelor, master, and doctoral degrees from 1930 through 1979. Graduate degrees were rarely found among teachers in career programs, where experience in the occupations along with some pedagogical training was considered the best preparation (Cohen & Brawer, 1984, p. 76).

TABLE VIII

HIGHEST DEGREE HELD BY TWO-YEAR COLLEGE INSTRUCTORS (PERCENTAGES)

Year	Less Than B.A.	Bachelor	Master	Doctorate
1930	7	29	59	5
1941	3	27	64	6
1957	7	17	65	10
1969	17 (includes both)		75	7
1972	3	13	74	10
1979	3	8	74	15

Sources: Brawer and Friedlander (1979); Eells (1941a, p. 103); Monroe (1972, p. 248); U.S. Department of Health, Education, and Welfare (1970, 1980).

On the other hand, few community college instructors were prepared in programs especially designed for their level of teaching. By the late 1960s, several well-integrated graduate-school-based programs for preparing community college instructors had been established, but they never became a major source of two-year college teachers (Cohen, 1968).

In addition, several types of in-service preparation programs have been established. The most common have been discipline-based institutes, released time, sabbatical leaves, and tuition reimbursements for instructors to spend time in a university-based program, as well as short courses or workshops on pedagogy sponsored by single institutions or by institutional consortia. A 1970 survey revealed that 276 in-service programs were conducted that year--37% in academic areas, 33% in education, 13% in administration, 10% in occupational areas, and 7% in student services (O'Banion, 1971, pp. 141-142).

Preparation of Faculty in Jordan's Teaching Training and Technical Institutes

The Law of Education of 1964, Article 22, Section 3, stipulates that:

> A teacher of higher educational institutions and post-secondary institutes is required to have a specialized university degree (M.S. or its equivalent). In case of teacher training institutes, it is preferable that a teacher has, in addition to the above requirement, some training in education and psychology (Ministry of Education, 1982, p. 24).

The Ministry of Education originally assigned the most qualified and best teachers to teach at the Teachers' Training Institutes. Those teachers had longer years of experience and had proved their effectiveness in teaching at secondary schools. Often, secondary school teachers were asked to teach certain courses and/or hours at a nearby Teachers' Institute as part of their teaching assignment, or as an extra job. Instructors were also recruited from private business or other governmental agencies to teach certain subjects as part-timers.

According to the Statistical Educational Yearbook published by the Ministry of Education each academic year, most faculty members at Teachers' Training and Technical Institutes had no more than a baccalaureate degree. Prior to 1980--the year in which the Ministry of Education sanctioned the concept of the community college--there were 20 such institutes governed locally or by private entities (Amid East, 1986).

Tables IX and X reveal the faculty qualifications at Jordan's Teacher Training Institutes. Table IX shows the distribution of teachers by qualification, specialization, sex and controlling authority in 1979-1980 whereas Table X identifies the principals (presidents) of Jordan's Teacher Training Institutes by qualification, sex and controlling authority for the year 1979-1980.

TABLE IX

DISTRIBUTION OF TEACHERS BY QUALIFICATIONS, SPECIALIZATION, SEX AND CONTROLLING AUTHORITY, 1979-1980, JORDAN'S TEACHER TRAINING INSTITUTES

Controlling Authority	Sex	Secondary Cert.	T.T.	Secondary Voc.	Under Graduate Voc.	Under Grad.	1st University Degree																											1st Deg. + Dip.			M.A.																Ph.D.					Grand Total
							Vet. Medicine	Nutrition	Agriculture	Decor. Eng.	Science	Biology	Chemistry	Physics	Mathematics	Home Economics	Politics & Econ	Sociology	Commerce	Geography	History	Fine Arts	Physical Ed.	Psychology	Education	English	Arabic	Shari'a	Total	History	Education	Total	For. Lang.	Nursing	Fine Arts	Philosophy	Agriculture	Science	Chemistry	Mathematics	History	English	Psychology	Education	Arabic	Shari'a	Total	Education	History	English	Arabic	Total	
Grand Total	T.	1	8	1	1	2	1	1	1	1	7	3	4	5	21	6	2	2	1	11	10	25	29	15	17	31	26	19	238	1	62	63	1	1	1	1	1	3	1	3	4	3	2	13	5	4	43	1	1	2	1	5	362
	M.	1	4	1	1	2	1		1		2	1	3	3	11			1		7	4	16	15	6	12	16	9	9	117	1	46	47			1		1	2	3	2		9	5	4	29	1	1			2	204
	F.		4					1		1	5	2	1	2	10	6	2	1	1	4	6	9	14	9	5	15	17	10	121		16	6	1	1		1	2	1	1	1	2	4			14			2	1	3	158
Ministry of Education	T.		8		1		1	1	1	1	3	3	2	2	12	5	2		1	6	7	17	15	11	6	15	13	9	133	1	56	57	1			1	1	2	1		3	2		9	1	2	24	1		2	1	4	227
	M.		4		1		1		1			1	1		4					3	3	8	5	4	3	4	2	1	41	1	40	41				1			2	1			5	1	2	14	1				1	102
	F.		4					1		1	3	2	1	2	8	5	2		1	3	4	9	10	7	3	11	11	8	92		16	16	1			1			1	1			4			10			2	1	3	125
U.N.R.W.A.	T.			1							3				2	1				2		3	4	3	3	5	4	2	32					1		1				2	1		6		1			1	40
	M.			1							1				1					1		3	2	1	3	3	2	2	19					1						2	1		4		1			1	25
	F.										2				1	1				1			2	2		2	2		13				1				1						2						15
Private Institutes	T.	1				2					1		2	3	7			2		3	3	5	10	1	8	11	9	8	73		6	6					2	1	1	2	2	3	2	13						95
	M.	1				2					1		2	3	6			1		3	1	5	8	1	6	9	5	6	57		6	6					2	1	1		2	3	2	11						77
	F.	--				--									1			1			2		2		2	2	4	2	16											2				2						18

Source: Ministry of Education, The Statistical Educational Yearbook 1979-1980, pp. 232-233.

TABLE X

PRINCIPALS BY QUALIFICATION, SEX AND CONTROLLING AUTHORITY, 1979-1980 JORDAN'S TEACHERS TRAINING INSTITUTES

Controlling Authority	Sex	1st Univ. Degree					1st Deg. + Dip.			M.A.	Ph.D.	
		Science	Agriculture	Sociology	Arabic	Total	Science	Administration	Education	Education	History	Education
Grand Total	T.	1	1	1	3	16	1	1	4	1	1	2
	M.	1	1		2	11	1	1	1	1	1	2
	F.			1	1	5			3			
Ministry of Education	T.		1	1	2	8	1	1	1			1
	M.		1		1	5	1	1				1
	F.			1	1	3			1			
U.N.R.W.A.	T.	1				2			1			
	M.	1				1						
	F.					1			1			
Private Institutes	T.					6			2	1	1	1
	M.				1	5			1	1	1	1
	F.					1			1			

Source: Ministry of Education, The Statistical Educational Yearbook 1979-1980, p. 237.

As can be seen in Table IX, there were 362 full-time teachers at Teachers' Training Institutes in the academic year 1979-1980 - 204 (56%) males and 158 (44%) females. Of these, 227 (62.7%) were Ministry of Education teachers, 40 (11%) were UNRWA teachers, and 95 (26.3%) were private institution teachers. One teacher had a secondary school diploma; 12 (3.3%) had associate degrees; 238 (65.7%) had baccalaureate degrees; 63 (17.4%) had baccalaureate degrees and education diplomas; 43 (11.9%) had masters degrees; and 5 (1.7%) had doctoral degrees.

In Table X, which shows qualifications of principals (presidents) of Teachers' Training Institutes for the year 1979-1980, there were 16 principals: 11 males (68.8%), and 5 females (31.2%). Eight principals were Ministry of Education employees (50%); 2 principals were employed by UNRWA (12.5%); and 6 principals were employed by private institutes (37.5%). Of these 16 principals, 6 (37.5%) had baccalaureate degrees; another 6 (37.5%) had baccalaureate and education diplomas; 1 (6%) had a masters degree; and 3 (19%) had doctoral degrees.

For Technical Institutes run by various ministries and agencies in Jordan, Table XI shows the distribution of full-time teachers by qualification, sex, and controlling authority. There were 222 teachers: 162 (73%) males, and 60 (27%) females. Eight (3.6%) had secondary school diplomas; 66 (29.7%) had associate degrees; 117 (52.7%) had baccalaureate degrees; 5 (2.3%) had baccalaureate and

education diplomas; 22 (10%) had masters degrees; and 4 (1.8%) had doctoral degrees.

Table XII shows principals (presidents) of Jordan's Technical Institutes by qualification, sex, and controlling authority. Of the 13 principals, there were 10 (77%) males, and 3 (23%) females. Three (23%) had associate degrees; two (15%) had baccalaureate degrees; one (8%) had baccalaureate and education diplomas; five (39%) had masters degrees; and two (15%) had doctoral degrees.

Part-Time Instructors in Community Colleges in the United States

Community colleges have always employed numerous part-time instructors, although over the years the rationale for doing so has changed (Cohen & Brawer, 1984, p. 69). Eells (1931) noted that it was better to have secondary school instructors of biology, chemistry, and physics offer individual courses in their disciplines in the community college than to have a single instructor present all the college courses in the sciences. When community colleges grew larger, the argument favoring the part-timers continued to be that the institutions could offer specialized courses in areas that could not support full-time instructors. Nationwide the ratio of part-timers showed a steady increase throughout the 1970s. Table XIII shows the percentages of full-time and part-time instructors in community colleges.

TABLE XI

DISTRIBUTION OF TEACHERS BY QUALIFICATION, SEX, FIELD OF EDUCATION AND CONTROLLING AUTHORITY, 1979-1980, JORDAN'S TECHNICAL INSTITUTES

Controlling Authority	Type of Education	Sex	Secondary Cert.	Matric or G.E.S.C.	T.T. Diploma	Under Graduate	Under Grad. Voc.	1st University Degree: Nursing	Engineering	Laboratories	Science	Biology	Chemistry	Physics	Mathematics	Sociology	Libraries	Home Economics	Physical Ed.	Commerce	English	Arabic	Shari'a	Total	1st Deg. + Dip.: Computer	Education	Total	M.A.: Phys. Therapy	Engineering	Sciences	Biology	Chemistry	Physics	Mathematics	Home Economics	Education	English	Arabic	Shari'a	Total	Ph.D.: Engineering	Physics	Arabic	Shari'a	Total	Grand Total
	Grand Total	T. M. F.	2 2	6 4 2	16 14 2	1 1 1	49 23 26	2 2	38 34 4	1 1	1 1	3 2 1	1 1	2 2	5 5	6 1 5	2 2	3 3	3 3	35 29 6	9 7 2	1 1	5 5	117 92 25	1 1	4 3 1	5 4 1	1 1	6 6	3 3	1 1	2 2	1 1	2 1 1	1 1	1	1	1 1	22 19 3	1 1	1 1	1 1	1 1	4 4	222 162 60
Min. of Education	Commercial	M.																		4				4		2	2																	6
	Secretary	F.																		2						1	1							1				1						4
	Nutrition	F.																3						3																				3
	Libraries	F.														2								2																				2
	Engineering Trades	M. F.	1	4	13 1				19 3		1	1	1	1	2				2		2		1	30 3				4	5		2	1		1				11						59 4
Min. of Defense	Nursing	F.		1				1				1	—											2																				9
Min. of Health	Nursing	M. F.					2 10	1																1																				2 11
	Midwifery	F.					7																																					7
	Med. Professions	M. F.					5 1																					1											1					6 1
Min. of Soc. Devel.	Social Service	M. F.														1 5								1 5																				1 5
Min. of Waqf	Shari'a	M.																					3	3															1	1		1	1	2	6
Min. of Industry and Commerce	Statistics	F.																															1						1						1
R.S.S.	Computer	M.																							1		1																		1
U.N.R.W.A.	Commercial	M. F.	1	1	1	1	3													4 1	2 1			6 2											1				1						10 6
	Engineering Trades	M.					5		2						1	—					1			4					1										1						10
	Med. Profess.	M.									1	—												1																					1
Private Institutes	Commercial	M. F.			1		3 2							1					1	21 3	2 1	1	1	27 4										1				1	2		1		1	34 6
	Engineering Trades	M. F.					4		13 1															13 1		1	1		1										1	1			1	23 1
	Med. Profess.	M.										1	--		2	—								3							1							1						4
	Computer	M.					1																									—	1					1						2

Source: Ministry of Education, The Statistical Educational Yearbook 1979-1980, p. 249.

TABLE XII

PRINCIPALS BY QUALIFICATIONS, FIELD OF STUDY, TYPE OF EDUCATION, SEX AND CONTROLLING AUTHORITY, 1979-1980, JORDAN'S TECHNICAL INSTITUTES

Controlling Authority	Type of Education	Sex	Under Graduates Voc.	Under Graduates	1st Univ. Deg.		1st Deg. +Dip.	M.A.					Ph.D.	Total
					Law	Account.	Education	Math.	Planning	Education	Arabic	Shari'a	Eng.	
	Grand Total	T. M. F.	2 -- 2	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	2 2	13 10 3
Min. of Education	Commercial	M.				1								1
	Engi. Trades	M.											1	1
Min. of Defense	Nursing	F.	1											1
Min. of Health	Nursing	F.	1											1
	Med. Profess.	M.			1									1
Min. of Soc. Devel.	Social Service	F.							1					1
Min. of Waqf	Shari'a	M.										1		1
Min. of Ind. and Commerce	Statistics	F.						1						1
R.S.S.	Computer	M.					—						1	1
U.N.R.W.A.	Eng. Trades	M.					1							1
Private Institutes	Commercial	M.		1							1			2
	Computer	M								1				1

Source: Ministry of Education, The Statistical Yearbook 1979-1980, p. 253.

Cohen and Brawer (1977) reported studies showing that the part-timers were less experienced. They had spent fewer years in their current institutions, they read fewer scholarly and professional journals, and they were less concerned with the broader aspects of curriculum and instruction and of the disciplines they represent.

TABLE XIII

PERCENTAGES OF FULL-TIME AND PART-TIME COMMUNITY COLLEGE INSTRUCTORS, 1953-1985

Year	Full-Time Percentage	Part-Time Percentage
1953	52	48
1963	57	43
1973	59	41
1975	47	53
1977	43	57
1980	44	56
1985	43.5	56.5

Source: American Association of Community and Junior Colleges (AACJC), (1955-1986).

However, part-timers were working in the field--they might be more directly connected to the practical aspects of their work, and they might have a greater fund of knowledge than many full-time instructors. As for the routine aspects of the job, part-timers certainly seemed to present few problems; they were just as likely to turn in their grade sheets on time, and their students rated them as highly as they did the full-timers. A California study found that numerous colleges had no evaluation policy for part-timers. Three-fourths of the colleges failed to provide part-timers with office space (Sewell et al., 1976). Marsh and Lamb (1975) found that part-timers rarely participated in campus activities and had little contact with students out of class and practically no contact with their peers.

Part-Time Instructors in Jordan's Teacher Training and Technical Institutes

Table XIV shows the distribution of part-time teachers by qualification, sex, and controlling authority for the academic year 1979-1980. Of the 17 part-time teachers, there were 8 (47%) males and 9 (53%) females. Two (12%) had associate degrees, 8 (47%) had baccalaureate degrees, and 7 (41%) had baccalaureate and education diplomas.

TABLE XIV

1979-1980 PART-TIME TEACHERS OF JORDAN'S - TEACHERS INSTITUTE - BY QUALIFICATION, SEX, AND CONTROLLING AUTHORITY

Controlling Authority	Sex	T.T. Diploma	1st Univ. Deg.			1st. Deg. + Dip.	Total
			Arts	Physics	English	Education	
	T.	2	3	1	4	7	17
	M.		3	1	2	2	8
	F.	2			2	5	9
Ministry of Education	T.					2	2
	M.					2	2
	F.					--	--
Private Institutes	T.	2	3	1	4	5	15
	M.		3	1	2		6
	F.	2			2	5	9

Source: Ministry of Education, The Statistical Educational Yearbook 1979-1980, p. 238.

As can be seen in Table XV, there were 64 part-time teachers at Technical Institutes for the academic year 1979-1980. Of these 64, there were 61 (95%) male teachers and 3 (5%) female teachers. Two teachers (3%) had secondary school diplomas; four (6%) had associate degrees; 30 (47%) had baccalaureate degrees; 11 (17%) had masters degrees; and 17 (27%) had doctoral degrees.

Table XVI is a summation of faculty qualifications at Teachers' Training and Technical Institutes for the academic year 1979-1980.

From Table XVI, it is clear that the majority of faculty at Teachers' Training and Technical Institutes for the academic year 1979-1980--the year which preceded the adoption of the community college concept in Jordan--had baccalaureate degrees (57.8%), followed by those who held associate degrees (12.5%). The faculty members who had master degrees constituted 11.8%, while those who had doctoral degrees were only 4.5%.

Obeidat, Alia, et al., (1983) revealed that there were 318 teachers at public community colleges in Jordan in the academic year 1981-1982. Their qualifications were distributed as follows: 58% had baccalaureate degrees (unqualified to teach at community colleges by the 1964 Law of Education No. 16); 27.5% had baccalaureate and education diplomas (also unqualified to teach at community

TABLE XV

DISTRIBUTION OF PART-TIME TEACHERS BY QUALIFICATION, SEX, TYPE OF EDUCATION AND CONTROLLING AUTHORITY JORDAN'S - TECHNICAL INSTITUTES, 1979-1980

Controlling Authority	Type of Education	Sex	Secondary Cert.	T.T. Institutes	Under Graduate	1st Univ. Degree													M.A.										Ph.D.									Grand Total
						Computer	Engineering	Physical Ed.	Education	Statistics	Business Adm.	Physics	Economics	Accounting	Commerce	English	Arabic	Total	Computer	Law	Administration	Statistics	Economics	Accounting	Sociology	English	Shari'a	Total	Computer	Law	Public Adm.	Economics	Accounting	Statistics	Mathematics	English	Total	
	Grand Total	T.	2	3	-	5	2	1	1	2	1	1	2	7	3	4	1	30	1	1	1	3	1	1	1	1	1	11	1	3	1	4		2	3	1	17	64
		M.	1	2	1	5	2	1	1	2	1	1	2	7	3	4	1	30	1	1	1	3	1	1	1	1	1	11	1	3	1	4	2	2	3		16	61
		F.	1	1																								--								1	1	3
Min. of Ind. and Commerce	Statistics	M.	1							1			1					2				2	1		1	1		5						1			1	9
		F.	1	1																																		2
R.S.S.	Computer	M.			1	5	1											5	1									1	1		1	1	1		3		7	14
		F.				—																																
Private Institutes	Commercial	M.		2				1	1	1	1	1	1	7	3	3	1	20		1	1	1		1			1	5		3		3	1	1		1	8	35
		F.																																	1	1	1
	Engineering Trades	M.					2											2																				2
	Computer	M.														1		1																				1

Source: Ministry of Education, The Statistical Educational Yearbook, 1979-1980, p. 250.

TABLE XVI

FACULTY QUALIFICATIONS AT JORDAN'S TEACHERS' TRAINING AND TECHNICAL INSTITUTES, 1979-1980

Total Faculty: 694 Male: 456 Percentage (65.7%)
Female: 238 Percentage (34.3%)

	Number	Percentage
Faculty with Secondary School Diploma:	11	1.6
Faculty with Associate Degree:	87	12.5
Faculty with Baccalaureate Degree:	401	57.8
Faculty with Baccalaureate Degree and Education Diploma:	82	11.8
Faculty with Masters Degree:	82	11.8
Faculty with Doctoral Degree:	31	4.5

colleges); 11.5% had master degrees (qualified to teach at community colleges); and 3% had doctoral degrees (also qualified to teach at community colleges). Obeidat et al. concluded that only 14.5% of those who taught at public community colleges were really qualified by the 1964 Law of Education No. 16 (p. 224).

The Roles of Instructors in Community Colleges

The importance of good teaching has been emphasized since the earliest days of the community college. College planners never envisioned those institutions as the homes of research scholars. Furthermore, the community college

could not reasonably expect to influence total student development because few of them built resident halls, and commuter institutions had minimal environmental impact on students.

Observers of the community college had reported unanimously that teaching was its raison d'etre. Eells called the junior college "a teaching institution par excellence" (1931, p. 389). Thornton proclaimed instruction the prime function, saying that it had to be better in the two-year college than in the university because the students covered a broader range of abilities, and their prior academic records tended to be undistinguished:

> It is fair to say that most community college students are able to learn but are relatively unpracticed. Under good instruction they can succeed admirably, whereas pedestrian teaching is more likely to discourage and defeat them than it would the more highly motivated freshmen and sophomores in the universities (1972, p. 42).

Nevertheless, Slutsky (1978) reported the concern felt by instructors who believed that the decline in student ability was encouraged by institutional policies over which the instructors themselves had no control (p. 9). London (1978) discussed the effects of one community college on its instructors, noting that faculty members did not have a voice in determining the policy of admitting marginal students; they questioned the open-door policies, and the teaching of poorly prepared students adversely affected

their morale. He identified three groups of instructors: the first felt that students were solely responsible for their fates, rising or falling on their own merit independent of teacher intervention; the second believed that students were products of their society and needed special care to help them rise above their deprived background; and the third group also put the blame on society and in addition wanted to politicize the students so they could compensate for what society had done to them.

More detailed information was reported from the Center for the Study of Community Colleges (CSCC) in the mid 1970s, when some distinct shifts in faculty members' perception of their role and working conditions seemed to have occurred. Instructors seemed generally satisfied with their jobs, seeing community college teaching as a worthy career in its own right. Few of them aspired to teach in senior institutions. Bushnell had reported that 80% of the faculty expected to be teaching in a community college five years from the date of his report (1973), and 78% of the CSCC's respondents said that "doing what I'm doing now" in five years would be quite attractive. In fact, that statement was the most popular of nine choices, including "faculty position at a four-year college of university."

However, most of the instructors interviewed by Garrison (1967) cited lack of time to perform their jobs effectively as their overriding professional concern.

Concern over lack of time available for instructors to perform their teaching and other assigned duties properly while keeping informed in their academic field was also identified by Kurth and Mills (1968).

On the whole, instructors may well expand their role beyond that of classroom teachers to become presenters of information through colloquia, seminars, lectures, recitals, and exhibitions offered for both students and the lay public. Most faculty members in the academic areas feel there are too few such presentations at their own colleges and want to devote more time to them.

Furthermore, the most positive note is that the community college has become a well-known, visible workplace not only among its own staff but also among agency officials who make decisions affecting its direction. Community college instruction has become a career in its own right. Its flowering but awaits a more fully developed professional consciousness on the part of its practitioners.

Role of Community Colleges

Community Education in the United States

Community education, the broadest of all community college functions, usually embraces adult education, adult basic education, community-based education, community services, and continuing education. Community education

covers a wide range of options. It may take the form of classes for credit or no credit, varying in duration from one hour to a weekend, several days, or an entire school term. Community education may be sponsored by the college, by some other agency using college facilities, or jointly by the college and some outside group. It may center on education or recreation, on programs for personal interest or for the good of the entire community.

Edmund J. Gleazer, Jr., President of the AACJC from 1958 until 1981, wrote extensively in favor of education for direct community development, the expansion of the colleges beyond their role in postsecondary education, and continuing education as the main purpose of the community college. Gleazer emphasized the "community," rather than the "college," in the institution's title. To him, the institution was a resource to be used by individuals throughout their lifetime and by the general public as an agency assisting with community issues (1980, p. 10).

Moreover, Gleazer's (1980) prime contention was that:

> the community college is uniquely qualified to become the nexus of a community learning system, relating organization with educational functions into a complex sufficient to respond to the population's learning needs (p. 10).

Harlacher and Gollattscheck (1978) saw a community college offering the kinds of education community members want, not the kind that pedagogues think is good for them, at locations where the learners are, not where the college

says they should be. They recommended that community colleges should cooperate with all sorts of social, governmental, professional, educational, and neighborhood agencies in mutually supportive advisory relationships and in joint ventures (p. 7).

On the whole, community colleges are on safer ground when they attack what is called educational components of solutions than when they try to deal with educational solutions of community problems. Any community problem has an educational component, but education itself does not solve the problem. That takes political action and other forms of social engagement.

Community Education in Jordan

Harlacher (1969) defined community education as those

> action programs of the community college, undertaken independently or in cooperation with other community groups and agencies, which direct the educational resources of the colleges toward serving individual, group and community needs (p. 4).

Myran (1969) said that community education included: credit courses in evenings and off-campus, non-credit courses, workshops and conferences, advisory groups, and use of college facilities by community organizations and groups.

Unfortunately, community colleges in Jordan have not yet played a vital role in community services. Although there were very limited projects such as helping local

people on their farms, building walls, painting sidewalks and offering a few night classes and workshops, there is still much to do in this area.

Johnson (1985) proposed a community education development model for Jordan through the process of "people-helping-people-help-themselves." He pointed out that the community colleges, schools and universities should serve as the nucleus on which community education is developed. Implementation of the community education process needed: (1) awareness of the concept of community education and how it works; (2) involvement of citizens in leadership selection and development; and (3) knowledge and participation of the citizens in the implementation process as it is designed by the specific institution.

Collegiate Function of the Community Colleges in the United States

The collegiate function incorporates that portion of the curriculum which is centered on higher learning. It is the part of the college that seeks to make people reflective and responsible; to relate art, music, and literature to their lives; to increase their understanding of the past, present, and future of the society of which they are members; to bring them into the culture. Its roots are in the Greek ideal of liberal education, of educating people for participation in the polity.

> The collegiate function was adopted in toto by the community colleges. In their drive for acceptance as full partners in the higher learning, with their faculty trained in university departments, they arranged their curricula in the university image (Cohen & Brawer, 1984, p. 285).

However, the 1970s saw an extreme narrowing of the collegiate curriculum. Except for political science, history, and literature, many two-year associate-degree-granting institutions abandoned the humanities entirely. Cultural geography, religious studies, and ethnic studies were found in less than one-third of the colleges. Art history and appreciation, cultural anthropology, interdisciplinary humanities, philosophy, and theatre history were offered in one- to two-thirds of the colleges. The trend has been decidedly toward introductory courses for transfer students.

Cohen and Brawer (1987) reiterated that collegiate curriculum is

> dominated by university transfer and graduation requirements, occupational programs, and, to a much lesser extent, by the student's own personal interest. This recapitulation of the academic disciplinary core of the collegiate curriculum has served to illustrate both changes and consistencies over time (Community College Review, 14 3, Winter 1986-1987, pp. 13-20).

Palmer (1987) concluded that the 1980s had witnessed numerous efforts to restore the primacy of transfer education. Part of the movement to improve transfer rates involves the reestablishment of ties between community colleges and high schools. Swift (1986) reported a study

conducted by Karen Walton in the state of Florida. Of 1,000 accredited two- and four-year institutions stratified to represent the population of over 3,500 colleges and universities, Walton collected data from 835. Of the 474 four-year institutions in her study, 20.7% had articulation agreements and 20.1% had transfer lists of acceptable courses from two-year colleges. Of the four-year institutions, 68.1% said they would not accept Associate of Arts or Associate of Applied Science degrees without a course-by-course evaluation. Of the 361 two-year colleges returning the survey, 12.4% have course transfer lists and 22.1% had articulation agreements with four-year colleges and universities (Community/Junior College Quarterly, 10, 1986, pp. 307-316).

Collegiate Function of Community Colleges in Jordan

The concept of the community college, as envisioned by the Ministry of Education, was to provide students with the opportunity for advanced and practical education that would otherwise have been unavailable to them. The graduates of these programs would, therefore, fill the vacuum within the middle strata of the labor market, linking "the manpower produced by the secondary schools with the manpower produced by the universities" (Amid East, 1986, p. 8). For this reason, none of the community college graduates are

eligible to continue their studies at any of Jordan's universities. Instead, their education prepares them to enter directly into the labor market. The majority of those graduates of the community colleges who elect to pursue university education must, therefore, study outside Jordan. Few private community colleges have signed articulation agreements with American universities. An example would be the agreement between the University of Toledo in Ohio and the Intermediate College in Amman.

However, in an interview conducted by the investigator in August 1986 with Acting Director of Community Colleges then Mr. Younes Al-Souqi, the latter revealed that

> a committee has been formed from representatives of the Ministry of Higher Education and Jordan universities to study the possibilities of accepting a few of the best graduates of community colleges in the universities.

The Ministry of Higher Education would accredit certain programs in certain colleges to meet the standards of the universities before the graduates of such programs would be eligible to be admitted as juniors in the universites. Al-Souqi also reiterated that the criteria of accreditation would include: the curricula, teachers' qualifications, laboratories, classrooms, and workshops. He called these "Special Accreditation Criteria."

Johnson (1985), on the other hand, cited two reasons for the refusal of Jordan universities to transfer credits of community college graduates. These were: (1) the

courses do not match those of the university, and (2) the quality of the instructors is questioned (p. 6).

Socioeconomic Role of Community Colleges

A. In the United States. Although reliable data are not readily available on the degrees of success achieved by students in career programs, some studies have been reported. A study in Texas found that 71% of graduates from occupational programs in 54 community colleges were full-time employees in their field of training or in a related field (Texas Education Agency, 1977). A study of Oregon community college students showed that 90% of health occupation graduates were working in related fields, but only 38% of graduates of technical programs were in jobs related to their training (Oregon State Department of Education, 1977).

Nearly 75% of the respondents to a survey of both graduates and nongraduates of occupational programs in Virginia community colleges between 1966 and 1969 were working in full-time jobs related to their training (Carter, 1976). Around 70% of the graduates of Hawaii community colleges from 1976 through 1978 were working full-time (University of Hawaii, 1977, 1978, 1979). Approximately 83% of the graduates of occupational programs in Illinois community colleges in the mid 1970s had obtained jobs (Illinois Colleges Board, 1979a).

Even allowing for the vagaries of the data, it seems that few students enrolled in all types of community college programs complete two years at those institutions and transfer to a university (Cohen & Brawer, 1984, p. 349). As a University of California report noted, "The decline in the number of community college transfers has been so dramatic that we are now sending more students to the community colleges than they send to us" (Kissler, 1980a, p. 8). The report went on to point out that there has been a severe decline in the academic performance of students who transfer: "Compared to our freshmen who eventually become juniors, community college transfers get lower grades, are more likely to be on probation, and are less likely to graduate" (p. 9). Menke (1980) reviewed around 100 studies and found that most of them corroborated the drop in grades suffered by transfers and the increase in time taken to complete a degree.

B. In Jordan. Community college programs have been designed to assist students in choosing a field of study they enjoy, as well as redirecting those students in fields of study unrelated to current labor needs. In the late seventies, responding to King Hussein's directive to "reorient our educational objectives to meet the individual needs of our citizens and those of the community," (Jaradat & Abdul-Hamid, 1980) the Ministry of Education began looking into the community college concept as a way

to accommodate both the public demand for higher education and the national need for more skilled technical manpower. Sullivan (1986) concluded that "the idea was to provide more vocationally-oriented studies beyond the secondary school level" (p. 4).

A study conducted by the Ministry of Education in 1980 demonstrated, among other things, that there was an overabundance of female teachers, male engineers and paramedics, and a shortage of male teachers. As a result, the Ministry of Education sought to establish career guidance programs to address these specific labor discrepancies (Amid East, 1986, p. 8).

According to a needs assessment study conducted by The Royal Association for Education and Culture in 1982, there was still need for male teacher graduates of community colleges as well as for female nurses (p. 405). Shuraideh et al. (1986) listed the fields of study the Jordanian labor market would need from 1986 to 2000. They listed the fields which are the most and least needed (pp. 5-6).

Since it seems impossible to predict with much accuracy the types of jobs that will be available by the time an entering student leaves the community college, the problem can be accommodated in two ways: make the educational system open enough so that people may return successively for retraining throughout life; and make the initial training sufficiently broad so that the skills

learned are applicable to a variety of situations. Such a position has been advocated by Cohen and Brawer (1977), who recommended that the humanities be integrated into occupational programs--for example, instruction in ethics for auto mechanics and for students enrolled in the medical technologies.

On the whole, and on the employment front, Jordan's community college graduates seem to be meeting with success. Many go to work in family-owned enterprises; others find jobs in industry, business or in government offices by virtue of their acquired skills (Sullivan, 1986, p. 5).

Type of Research

Historical Research

In defining historical research, Kerlinger (1973) stated that:

> Historical research is the critical investigation of events, developments, and experiences of the past, the careful weighing of evidence of validity of sources of information on the past, and the interpretation of the weighed evidence. The historical investigator, like other investigators, then, collects data, evaluates the data for validity, and interprets the data (p. 701).

Gay (1981) defined historical research as

> the systematic collection and objective evaluation of data related to past occurrences in order to test hypotheses concerning causes, effects, or trends of those events that may

> help to explain present events and anticipate future events (p. 145).

In describing the purpose of historical research, Isaac and Michael (1981) indicated that

> the purpose of historical research is to reconstruct the past systematically and objectively by collecting, evaluating, verifying, and synthesizing evidence to establish facts and reach defensible hypotheses (p. 45).

Gay (1981) stated that

> the purpose of historical research is to arrive at conclusions concerning causes, effects, or trends of past occurrences that may help to explain present events and anticipate future events (p. 11).

Gay concluded that

> the purpose of historical research study should be to discover new knowledge or to clarify, correct, or expand existing knowledge. The historical researcher's task is to objectively evaluate and weigh all evidence in arriving at the most tenable conclusion (p. 147).

Regarding the importance of historical research, Kerlinger (1973) stated that

> historical research per se has great value, because it is necessary to know and understand educational accomplishments and trends of the past in order to gain perspective on present and future directions (p. 702).

Descriptive Research

According to Gay (1981), descriptive research involves collecting data in order to test hypotheses or answer questions concerning the current status of the subject of

the study. A descriptive study determines and reports the way things are. Van Dalen (1966) stated that

> descriptive studies portray the facts--they describe what exists but do not account for why the present state of affairs has occurred. They may describe likeness and differences between variables and establish rudimentary groupings of phenomena. Investigators may classify, order, and correlate data and describe relationships that appear to exist among variables, but they do not fully analyze and explain why these relationships exist (p. 235).

Concerning the purpose of descriptive research, Isaac and Michael (1981) indicated that

> the purpose of descriptive research is to describe systematically the facts and characteristics of a given population or area of interest, factually and accurately. It is used in the literal sense of describing situations or events. It is the accumulation of a data base that is solely descriptive--it does not necessarily seek or explain relationships, test hypotheses, make predictions, or get at meaning and implications (p. 46).

However, descriptive studies that yield accurate facts about existing conditions or detect significant relationships among current phenomena and interpret the meaning of the data provide educators with practical and immediately useful information. According to Van Dalen (1966),

> factual information about existing status enables members of the profession to make more intelligent plans about future courses or action and helps them interpret educational problems more effectively to the public (p. 236).

Since educational conditions, processes, practices, and programs are changing constantly, up-to-date descriptions of what is taking place are needed.

Historical and descriptive research selected for use in this study was considered to be appropriate for identifying the current academic programs offered at Jordan's public and private community colleges as well as determining faculty qualifications. This type of research is practical for identifying trends, current conditions, and potential needs, as well as providing information on which administrative decisions can be based (Hillway, 1964).

Summary

Reviewed in this chapter was the literature related to academic programs offered at community colleges and major characteristics of faculty qualifications through available studies in this field. The review was focused on community colleges in the United States and teacher training and technical institutes in Jordan.

The literature review included three main areas: (1) academic programs, which were divided into general education and occupational and career programs; (2) faculty qualifications, which were divided into: preparation, part-time instructors, and instruction; and (3) the role of

community colleges in the areas of socio-economic, community education, and collegiate function. Type of research used in this study was finally reviewed.

The review of literature provided the following information:

1. Academic Programs

A. General education. Courses in community colleges in the United States had been centered on contemporary problems, liberal arts, social sciences and general science electives, whereas general education courses in Jordan's Teacher Training Institutes included Arabic and English languages, Islamic studies, critical issues in education, and general math and science.

B. Occupational and career education. Occupational and career programs had become the major functions in most community colleges in the United States, and enrollment in such programs hovered around 50% of the total credit-course enrollment in the 1980s. In Jordan, however, occupational and career programs flourished after converting the teacher training and technical institutes into community colleges in 1980, where total enrollment figures exceeded approximately 60% in various programs.

2. Faculty Qualifications

A. Preparation. The literature review revealed that the majority of faculty at community colleges in the United States had masters degrees (74%), while the majority of faculty in Jordan's Teachers Training and Technical Institutes had baccalaureate degrees (57.8%).

B. Part-time instructors. Both community colleges in the United States and Teacher Training Institutes in Jordan employed part-time instructors, and the ratio showed a steady increase throughout the 1970s and 1980s.

C. Instruction. Observers of the community college had reported unanimously that teaching was its raison d'etre, and instructors rarely conduct research or scholarly inquiry.

3. Role of Community Colleges

A. Community education. In the United States, recommendations have been directed towards cooperation of community colleges with all sorts of social and educational agencies in order that the colleges become centers for lifelong learning. In Jordan, however, the community education concept is not very clear, and attempts to serve the neighboring community are carried out on an individual college basis.

B. Collegiate function: The literature indicated that there were differences in ratios of community college graduates who transferred into universities in the United States. Some authors reported 5% only; others up to 25%. In Jordan, however, there is no transfer to the university and all programs are terminal.

C. Socio-economic role. The majority of graduates of community colleges in both the United States and Jordan were able to find a job related to their training. Career guidance programs are still needed to address specific labor discrepancies.

4. Type of Research

Historical and descriptive research selected for use in this study was considered to be appropriate for identifying the current academic programs offered at Jordan's public and private community colleges as well as surveying faculty qualifications.

Conclusions

As a more comprehensive mission of community colleges developed in the 1980s, it has apparently become necessary to identify the current academic programs offered in Jordan's public and private community colleges. It is also necessary to determine the level of duplication of such programs. In addition, it is important to determine the

level of faculty qualifications at these colleges, and anticipate which programs will satisfy Jordan's labor market needs.

CHAPTER III

METHODOLOGY

The primary purpose of this historical and descriptive study, as stated in Chapter I, was to identify the current professional programs offered at both public and private community colleges and to summarize the faculty qualifications at the 52 colleges in the East Bank of Jordan. The secondary purpose of this study was to identify some programs which would satisfy Jordan labor market needs in the near future.

The review of literature revealed little information about either the level of duplication of the professional programs offered at Jordan's public and private community colleges or the level of faculty qualifications at these colleges. This level of duplication and characteristics of faculty qualifications are thought to be important for educational planning and for developing a student career and guidance system. Reported in this chapter is the research procedure employed to accomplish the purposes of the study and includes the following sections: (1) the population and sample, (2) collection of data, and (3) data analysis.

The Population and Sample

The population of this study was delineated to include all the 52 licensed community colleges in the East Bank of Jordan administered by over 30 different agencies, all operating under the regulatory authority of the Ministry of Higher Education, which runs 12 colleges. Another 16 are administered by other government ministries and departments. Two are operated by the United Nations Relief and Work Agency (UNRWA), and 22 other community colleges are administered by private groups.

Sources and Collection of Data

The investigator collected the data during August of 1986 and January of 1987. He contacted and interviewed several top officials at Jordan's Ministries of Education, Higher Education, and Planning, as well as the Royal Scientific Society in Amman. Information about the current academic programs offered at Jordan's public and private community colleges as well as faculty qualifications was sought and gathered from all available sources. These sources were broadly categorized as: (1) primary sources and (2) secondary sources.

Isaac and Michael (1981) stated that

> historical research depends upon two kinds of data: primary sources where the author was a direct observer of the recorded event, and secondary sources where the author is reporting the observations of others and is

> one or more times removed from the original event (p. 45).

According to Kerlinger (1973), a primary source is the original repositing of an historical datum, like an original record kept of an important occasion, an eyewitness description of an event, a photograph, minutes of organization meetings, and so on. A secondary source is an account or record of an historical event or circumstance one or more steps removed from an original repository.

Gay (1981) indicated that

> historical research studies do not gather data by administering instruments to individuals. They must seek out data that are already available. Sources of data are referred to as primary or secondary. Primary sources constitute firsthand knowledge, such as eyewitness reports and original documents. Secondary sources constitute secondhand information, such as a description of an event by other than an eyewitness (p. 11).

Primary Sources

Primary sources consisted of government documents--decisions of the Ministry of Higher Education, Ministry of Education, government orders and official records, government publications, statistical educational yearbooks, and interviews conducted by the investigator with top administrative officials of the Ministries of Education, Higher Education, Planning, and the Royal Scientific Society in Amman.

Secondary Source

Secondary sources primarily consisted of books, articles on education in Jordan that appeared in newspapers, periodicals, pamphlets, journals, etc., especially on the community college.

Data Analysis

All the available facts were utilized and presented in this study. Descriptive statistics were used to describe the various academic programs offered at each public and private community college in the East Bank of Jordan. Faculty qualifications were analyzed. Means, percentages, tables, figures, histograms, and graphs were used mainly for data analysis of this historical and descriptive study.

However, the present attempt is not a formal historical treatise, but only an overall view of the current academic programs and faculty qualifications at Jordan's community colleges, so that this branch of education in that Kingdom can be improved for the good of the people and the country.

CHAPTER IV

DESCRIPTION AND ANALYSIS OF DATA AND RESULTS

Introduction

The purpose of this study was to identify the current professional programs offered at both public and private community colleges in Jordan and to summarize the faculty qualifications at the 52 colleges in the East Bank. The secondary purpose was to identify selected programs which would satisfy Jordan labor market needs in the near future.

In order to accomplish the above mentioned purposes, the following four objectives were formulated.

Objective 1. To identify all academic programs offered at both public and private community colleges in Jordan and to determine the level of duplication in such programs.

Objective 2. To survey the qualifications of faculty teaching at and administering these colleges and to determine their level of training.

Objective 3. To determine which programs are most needed and which programs are least needed by comparing enrollment figures and labor market needs.

Objective 4. To determine whether certain types of programs should be transferable to universities in Jordan and abroad.

Results of the analysis of this historical study relative to the objectives are presented in this chapter. Data were collected by means of primary sources and secondary sources.

Objective 1

Objective 1 of this study was to identify various academic programs offered at both public and private community colleges in Jordan and to determine the level of duplication in such programs.

Current Academic Programs

Currently, Jordan has 52 licensed community colleges administered by different agencies, but all operate under the regulatory authority of the Ministry of Higher Education. The community colleges, as a whole, offer more than 80 different specializations or fields of study in eleven major professional categories: education, commerce, computer, para-medics, engineering, agriculture, family, hotel management, social, communications and transport, and commercial aviation. Each profession has several fields of study ranging from one (family profession) to about 36 (engineering profession).

According to Jordan Education Law No. 18 of 1981, issued by Jordan Ministry of Higher Education, community college programs follow credit hour and semester systems. Each academic year is divided into two semesters and a summer session. A student's semester load should not exceed 20 hours and 10 hours during the summer session. The plan of study for all academic programs should include the following:

1. College Requirement. The college requirement is designed to assist students in formulating general knowledge in order to attain indepth learning and to achieve the concept of lifelong education. College requirements consist of various courses that should not exceed 16 credit hours.

2. Program Requirement. The program requirement is designed to assist students in formulating a similar vocational culture in that program. Credit hours here should not exceed 25% of the total hours required in that program.

3. Specialization (Major) Requirement. The specialization (major) requirement aims at imparting the necessary skills, attitudes, and knowledge in the field of study in which the student majors. Credit hours should not be less than 50% of all hours required in that field of study.

The Ministry of Higher Education's Community Colleges Academic Programs

Table XVII presents the academic programs currently offered (1986-1987) at the Ministry of Higher Education's (MOHE) 12 colleges and sections that actually were open in 1985-1986 as well as the colleges and sections licensed to be opened in 1986-1987. Out of eleven professions, nine were available to students at the MOHE community colleges. Among the fields of study in the education profession, English language, Arabic language, mathematics, Islamic religion, natural sciences, and elementary education received the highest priority while nursery and kindergarten, library science, and school lab technology, fine arts and music had the lowest priority. In the commercial professions, accounting, business administration, secretarial and office management received highest priority. Computer and para-medical professions seemed to have little significant priority. Data presented in this table indicated that the engineering profession had the largest number of fields of study with a section or two for each major field. This was due to the fact that there are two polytechnic institutions in the country, one in Amman and the other in Al-Husn. The remaining professions--agriculture, family, hotel and social--received lower priority, and each was restricted from one to three community colleges.

TABLE XVII

COMMUNITY COLLEGE ACADEMIC PROGRAMS OFFERED AT JORDAN MINISTRY OF HIGHER EDUCATION CONTROLLED COLLEGES, SECTIONS OPENED: 1985-1986, AND SECTIONS TO OPEN: 1986-1987

Academic Programs	1985-1986 (opened)		1986-1987 (to open)	
	No. Colleges	No. Sections	No. Colleges	No. Sections
1. Educational Professions:				
Islamic Religion	8	11	9	11
Arabic Language	9	11	9	12
Mathematics	8	9	9	12
English Language	8	11	9	13
Social Studies	5	5	5	5
Natural Sciences	8	9	8	9
Elementary Education	7	9	8	9
Nursery and Kindergarten	1	1	1	1
Vocational Education	2	2	2	2
Physical Education	4	4	5	5
Fine Arts	2	2	2	2
Library Science	-	-	2	2
Typing and Secretary	2	2	3	3
Fine Arts and Music	1	1	1	1
School Labs	-	-	2	2
Total Sections		77		89
2. Commercial Professions:				
Accounting	7	10	9	13
Business Administration	5	7	6	10
Banking and Finance	4	4	3	3
Secretary and Other Management	3	3	7	7
Supplies and Store Management	2	2	2	2
Total Sections		26		35
3. Computer Professions:				
Programming and Systems Analysis	2	2	3	3
4. Para-Medical Professions:				
Medical Lab Tech.	1	1	3	3
Para-pharmaceutics	-	-	1	1

TABLE XVII (Continued)

Academic Programs	1985-1986 (opened) No. Colleges	1985-1986 (opened) No. Sections	1986-1987 (to open) No. Colleges	1986-1987 (to open) No. Sections
5. Engineering Professions:				
Surveying	1	1	1	1
Building and Construction	2	3	3	4
Roads	2	2	3	3
Architectural Drawing	2	2	3	3
Interior Design and Decoration	2	2	2	2
Food Processing	1	2	3	3
Chemical Industries	2	2	2	2
Petroleum Industries	2	2	2	2
Industrial Labs	2	2	2	2
Weaving Technology	1	3	1	3
Cars and Internal Combustion	1	2	1	3
Refrigeration and Air Conditioning	1	2	2	4
Generating Stations/Mechanics	1	1	1	1
Fine Precision Instruments	1	1	1	2
Industrial Automation	1	1	1	2
Generating Stations/Electricity	1	1	1	1
Electrical Installation	1	2	1	2
Electrical Trans. and Distribution	2	2	2	2
Mining and Metallurgy	1	1	1	1
Radio/Television Tech.	1	1	1	1
Well Drilling	-	-	1	1
Water Systems/Drainage	3	3	3	3
Quantity Estimation	1	1	1	1
Computer and Digital Systems	1	1	1	1
Total Sections		40		50
6. Agricultural Professions:				
Animal Products	-	-	1	1
Plant Production	1	1	2	2
7. Family Professions:				
Nutrition and Institutional Management	2	2	3	3
8. Hotel Professions:				
Food and Beverage	1	1	1	1
Accommodation Management	1	1	1	1
9. Social Professions:				
Tourist Guides	1	1	-	-
Journalism and Media	-	-	1	1

Academic Programs Currently Offered by Other Jordanian Ministries and Government Departments

Table XVIII presents the current academic programs offered at the other ministries and government departments. There are 16 colleges by profession, fields of study, number of colleges and sections opened in the year 1985-1986 and the colleges and sections licensed to open in the year 1986-1987. Data presented in this table indicated that para-medics, engineering, and social professions received the highest priority and had the largest number of sections. That was due to the fact that there were four nursing colleges run by the Ministry of Health, two colleges administered by the Ministry of Labor and Social Welfare, and the Jordan Geographic Center, which was administered by the Armed Forces General Headquarters. The most noticeable point here was that there was no educational profession fields of study in these colleges. The data indicated there were specialized colleges in one area, and they had a limited and small number of enrollments.

TABLE XVIII

COMMUNITY COLLEGE ACADEMIC PROGRAMS OFFERED AT JORDAN NON-MOHE MINISTRIES AND GOVERNMENT DEPARTMENTS, SECTIONS OPENED: 1985-1986, SECTIONS LICENSED TO OPEN: 1986-1987

Academic Programs	1985-1986 (opened) No. Colleges	1985-1986 (opened) No. Sections	1986-1987 (to open) No. Colleges	1986-1987 (to open) No. Sections
1. Computer Professions:				
Statistics	2	2	2	2
2. Engineering Professions:				
Topographic Surveying	1	1	1	1
Generating Stations/ Electricity	1	1	1	1
Cartography	1	1	1	1
Map Photography and Printing	1	1	1	1
Automatic Map Drawing	1	1	1	1
Analogue Electric Switching	1	1	1	2
Electronic Telephone Operation	1	1	1	1
Transmission-Multiplix	1	2	1	3
General Transmission	2	2	2	3
Total Sections		11		14
3. Social Professions:				
Special Education/ Deaf and Retarded	1	1	1	2
Social Work	1	1	1	2
Cooperative Services	1	1	1	1
Quran Recitation and Studies	1	1	1	1
Preaching and Prayer Leadership	1	1	1	1
Total Sections		5		7
4. Commercial Professions:				
Banking/Monetary Studies	1	3	1	3
Islamic Banking and Monetary Studies	1	1	1	1

TABLE XVIII (Continued)

Academic Programs	1985-1986 (opened) No. Colleges	1985-1986 (opened) No. Sections	1986-1987 (to open) No. Colleges	1986-1987 (to open) No. Sections
5. Civil Aviation Professions:				
Civil Aviation	1	2	1	3
6. Communications and Transport Professions:				
Aeronautic Communication Operations	1	1	1	1
Air Traffic Control	1	2	1	2
Air Traffic Information	1	2	1	2
7. Para-Medical Professions:				
Public Health Inspection	2	2	2	2
Para-pharmaceutics	2	2	2	2
Medical Lab. Tech.	2	2	2	2
Statistical Medical Records	1	1	1	1
X-Ray Tech.	2	2	2	2
Dental Tech.	1	1	1	1
Physio-therapy	1	1	1	1
Anesthesiology	2	2	2	2
Nursing	4	9	4	9
Mid-wifery	3	3	3	3
Total Sections		25		25

Current Academic Programs at the UNRWA's Two Community Colleges

Table XIX presents the current academic programs offered at the United Nations Relief and Work Agency's (UNRWA) two community colleges by profession, fields of study, number of colleges and sections opened in the year 1985-1986 and those licensed to be opened in the year 1986-1987. Data presented in this table indicated five professions were taught at these two colleges. Educational and engineering professions had the highest priority followed by commercial and paramedical professions while social professions received the least priority.

Current Academic Programs at the 22 Private Colleges

Table XX presents the current academic programs offered at the 22 private colleges in Jordan by profession, fields of study, number of colleges and sections opened in the academic year 1985-1986 and those licensed to open in 1986-1987. Data presented in this table indicated that:

--124 sections were opened in the year 1985-1986 and 260 were licensed to open in the year 1986-1987 in the various fields of study of the educational profession.

TABLE XIX

COMMUNITY COLLEGE ACADEMIC PROGRAMS OFFERED AT JORDAN UNRWA COLLEGES, SECTIONS OPENED: 1985-1986, AND SECTIONS LICENSED TO OPEN: 1986-1987

Academic Programs	1985-1986 (opened)		1986-1987 (to open)	
	No. Colleges	No. Sections	No. Colleges	No. Sections
1. Educational Professions:				
Arabic Language	1	1	1	2
English Language	1	1	1	2
Mathematics	-	-	1	1
Natural Sciences	1	1	1	2
Nursery and Kindergarten	1	1	1	2
Elementary Education	1	1	1	2
Total Sections		5		11
2. Commercial Professions:				
Commerce and Office Management	1	2	1	4
Secretarial Training and Office Management	1	2	1	4
Total Sections		4		8
3. Para-Medical Professions:				
Statistical and Medical Records	1	1	1	2
Dental Tech.	1	1	1	2
Medical Lab. Tech.	1	1	1	1
Para-pharmaceutics	-	-	1	1
Total Sections		3		6
4. Social Professions:				
Special Education/Deaf and Retarded	1	1	1	2
5. Engineering Professions:				
Building and Construction	1	1	1	1
Surveying	1	1	1	1
Architectural Drawing	1	1	1	1
Quantity Estimation	1	1	1	1
Mechanical Drawing	1	1	1	1
Total Sections		5		5

TABLE XX

COMMUNITY COLLEGE ACADEMIC PROGRAMS OFFERED AT JORDAN PRIVATE COLLEGES, SECTIONS OPENED: 1985-1986, AND SECTIONS LICENSED TO OPEN: 1986-1987

Academic Programs	1985-1986 (opened) No. Colleges	1985-1986 (opened) No. Sections	1986-1987 (to open) No. Colleges	1986-1987 (to open) No. Sections
1. Educational Professions:				
Islamic Religion	13	21	20	37
Arabic Language	17	21	21	39
English Language	15	21	19	37
Mathematics	14	17	17	27
Elementary Education	13	17	20	44
Nursery and Kindergarten	4	6	12	19
Social Studies	5	7	9	16
Natural Sciences	7	7	14	21
Physical Education	1	1	3	4
Vocational Education	1	1	2	2
Fine Arts	-	-	2	2
Library Science	3	3	5	7
Typing and Secretary	1	2	2	3
School Labs	-	-	1	2
Total Sections		124		260
2. Commercial Professions:				
Accounting	17	55	18	97
Business Administration	20	58	21	84
Banking and Finance	17	35	18	54
Islamic Banking and Finance	5	6	12	17
Secretary and Office Management	3	3	10	13
Supplies and Warehouse Management	-	-	1	1
Marketing	1	8	3	14
Insurance	-	-	1	2
Total Sections		165		282
3. Computer Professions:				
Programming and Systems Analysis	16	53	17	73
Statistics	-	-	1	1

TABLE XX (Continued)

Academic Programs	1985-1986 (opened) No. Colleges	No. Sections	1986-1987 (to open) No. Colleges	No. Sections
4. Para-medical Professions:				
Medical Lab. Tech.	11	18	12	28
Para-pharmaceutics	11	20	15	29
Statistics and Medical Records	1	1	3	4
Public Health Inspection	-	-	2	3
Dental Tech.	1	1	1	2
Total Sections		40		66
5. Engineering Professions:				
Surveying	3	5	5	11
Building and Construction	8	14	9	21
Generating Stations/Electricity	1	2	1	2
General Transmission	2	3	2	3
Refrigeration and Air Conditioning	4	9	5	14
Quantity Estimation	-	-	1	1
Architectural Drawing	4	7	7	15
Interior Design and Decoration	6	11	6	13
Electrical Installation	1	2	1	3
Cars and Internal Combustion Engines	4	5	4	7
Computer and Digital Systems	-	-	1	2
Production Machines	1	1	1	1
Total Sections		59		93
6. Social Professions:				
Libraries and Documentation	5	6	8	13
Preaching and Prayer Leadership	-	-	1	1
Law	1	1	4	6
Social Work	1	1	-	-
Journalism and Media	2	2	3	5
Total Sections		10		25
7. Communications and Transport Professions:				
Broadcasting and Television	3	4	3	5
8. Commercial Aviation Professions:				
Sales and Reservations	1	2	1	3

Elementary education, Arabic language, Islamic religion and mathematics received the highest priority, while school labs, fine arts, and physical and vocational education had the least number of sections.

--165 sections were opened in the academic year 1985-1986 and 282 sections were licensed to open in 1986-1987 in the commercial profession. Accounting, business and administration, and banking and finance received the highest priority, while supplies and warehouse management and insurance had the lowest priority.

--Programming and systems analysis of the computer profession had a high priority with 53 sections opened in the academic year 1985-1986 and 73 sections licensed to open in 1986-1987.

--59 sections were opened in the academic year 1985-1986 and 93 sections were licensed to open in 1986-87 in the engineering profession. Building and construction, interior design and decoration, refrigeration and air-conditioning, and architectural drawing received the highest priority, while quantity estimation and computer and digital systems had the lowest priority.

--Libraries and documentation in the social professions had the highest number of sections opened in the academic year 1985-1986 and 1986-1987.

--Commercial/transport and aviation professions were offered at three and one community colleges respectively.

Results

Table XXI and Figure 2 present a summary of the current academic programs offered at Jordan's public and private community colleges by controlling authority, number of sections opened in the academic year 1985-1986 and licensed to open in 1986-1987. Data presented in this table and histogram indicated that educational, commercial, engineering, computer and para-medical professions had the highest number of sections, while social, communications and transport, civil aviation, hotel, family and agricultural professions had the least number of sections.

--Private colleges had the largest number of sections in the educational, commercial, computer, para-medical, engineering, and social professions.

--The 16 community colleges run by other ministries and government departments did not offer educational profession fields of study.

--Agricultural, family, hotel professions were restricted to MOHE community colleges.

TABLE XXI

ACADEMIC PROGRAMS OFFERED AT ALL JORDAN COMMUNITY COLLEGES, SECTIONS OPENED: 1985-1986, AND SECTIONS LICENSED TO OPEN: 1986-1987

Profession	Controlling Authority									
	MOHE		Other Min. and Govt. Dept. Colleges		UNRWA Colleges		Private Colleges		Total	
	No. Sections 1985/86	No. Sections 1986/87	No. Sections 1985/86	No. Sections 1986/87	No. Sections 1985/86	No. Sections 1986/87	No. Sections 1985/86	No. Sections 1986/87	No. Sections Opened 1985/86	No. Sections Licensed To Open 1986/87
Educational	77	89	-	-	5	11	124	260	206	360
Commercial	26	35	4	4	4	8	165	282	199	329
Computer	2	3	2	2	-	-	53	74	57	79
Para-medical	1	3	25	25	3	6	40	66	69	100
Engineering	40	50	11	14	5	5	59	93	115	162
Agricultural	1	3	-	-	-	-	-	-	1	3
Family	2	3	-	-	-	-	-	-	2	3
Hotel	2	2	-	-	-	-	-	-	2	2
Social	1	1	5	7	1	2	10	25	17	35
Communications and Transport	-	-	5	5	-	-	-	-	5	5
Civil-Aviation	-	-	2	3	-	-	2	3	2	3

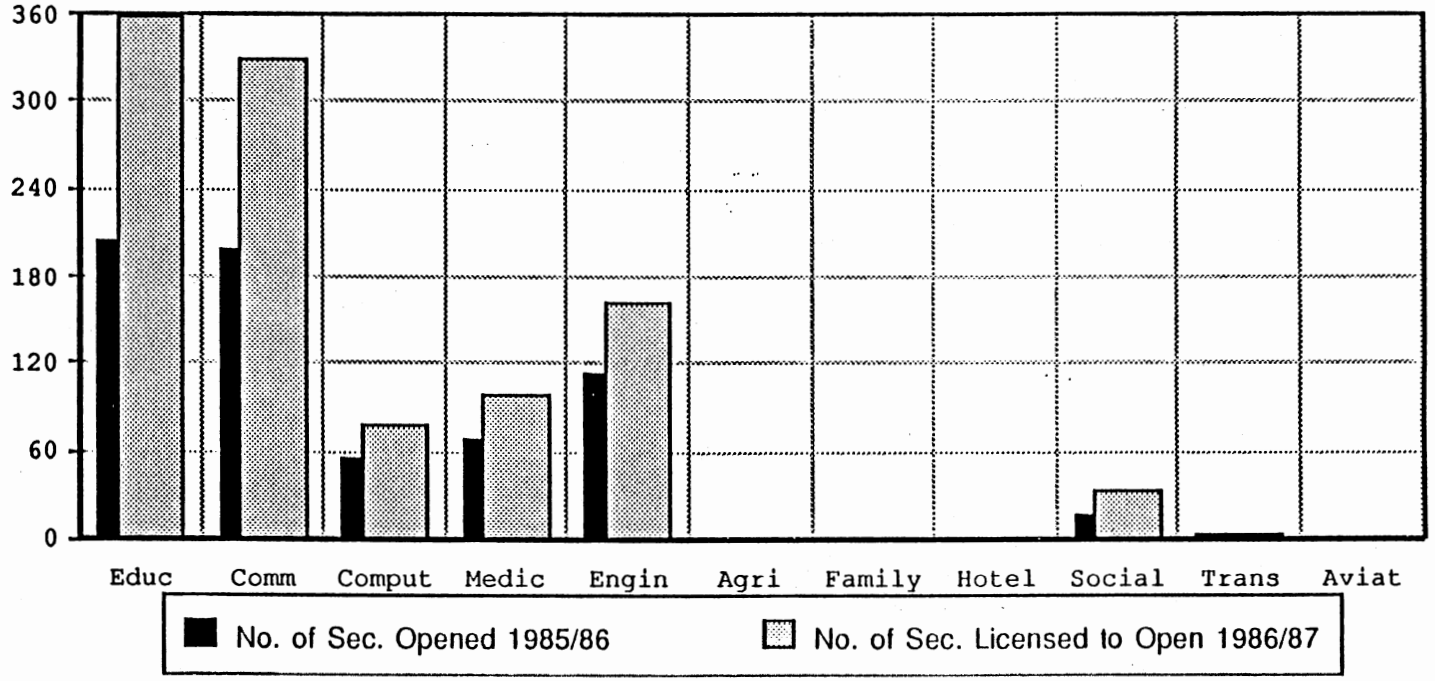


Figure 2. Academic Programs Offered at all Jordan Community Colleges, Sections Opened: 1985-1986, and Sections Licensed to Open: 1986-1987

--Taking the number of sections opened in the academic year 1985-1986, duplication of academic programs was at a significant level in the educational profession, particularly in the (1) Islamic religion--MOHE colleges had 8 sections, and private colleges had 13 sections; (2) Arabic language--MOHE colleges had 9 sections, and private colleges had 17 sections; (3) English language--MOHE colleges had 8 sections and private colleges 15 sections; (4) mathematics--MOHE colleges had 8 sections and private colleges had 14 sections; and (5) elementary education--MOHE colleges had 7 sections and private colleges had 13 sections. Duplication in the commercial professions was found particularly in (1) accounting where MOHE colleges had 7 sections and private colleges 17 sections; and (2) business administration--MOHE colleges had 5 sections and private colleges had 20 sections. Duplication in the para-medical profession was found particularly in medical lab technology where the Ministry of Health had 2 sections, and private colleges had 11 sections. Duplication in the engineering profession was found particularly in (1) building and construction where MOHE colleges had two sections, and private colleges 8 sections; and (2) interior design and decoration--MOHE colleges had 2 sections and private colleges had 6 sections.

Objective 2

Objective 2 of this study was to survey the qualifications of faculty teaching at and administering these colleges and to determine their level of training.

Community colleges in Jordan employed full-time teachers, part-time teachers, administrators, technicians, and other employees. The last group includes the clerical staff and custodians, who--for the purpose of this study--were excluded. Faculty qualifications ranged from a doctoral degree to less than a high school diploma. To give a clearer picture, the researcher compiled the available data from the last three academic years: 1983-1984, 1984-1985, and 1985-1986.

Table XXII and Figure 3 present 1983-1984 data on numbers and percentages of all employees in the community colleges by type of work, sex and qualification. Data presented in this table and graph indicated there were 2,956 employees, 2,201 (74.5%) males and 755 (25.5%) females; 103 (3.5%) had doctoral degrees, 276 (9.3%) had masters degrees, 285 (9.6%) had baccalaureate degrees and education diplomas, 1,023 (34.6%) had baccalaureate degrees, 399 (13.6%) had associate degrees, 196 (6.6%) had high school diplomas, and 674 (22.8%) had less than a high school diploma. Full-time teachers constituted the largest number (930) and percentage (31.8%).

TABLE XXII

DISTRIBUTION OF ALL EMPLOYEES IN JORDAN COMMUNITY COLLEGES BY DEGREE, EMPLOYMENT STATUS, AND SEX: 1983-1984

Employment Status	Sex	Doctorate		Master		Bacc. + Ed. Dip.		Bacc.		A.A.		High School		Less than High School		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Total	T.	103	3.5	276	9.3	285	9.6	1023	34.6	399	13.6	196	6.6	674	22.8	2956	100
	M.	97	94.2	242	87.7	220	79.2	791	77.3	255	64	116	59.2	480	71.2	2201	74.5
	F.	6	5.8	34	12.3	65	22.8	232	22.7	144	36	80	40.8	194	28.8	755	25.5
Full-time Teachers	T.	27	2.9	121	12.9	153	16.3	554	59	81	8.6	3	.3	-0-	-0-	939	31.8
	M.	24	88.9	98	81	105	68.6	415	75	66	81.5	2	66.7	-0-	-0-	710	75.6
	F.	3	11.1	23	19	48	31.4	139	25	15	18.5	1	33.3	-0-	-0-	229	24.4
Part-time Teachers	T.	61	10	137	22.6	73	12	304	50	31	5	1	.2	1	.2	608	20.6
	M.	59	96.8	131	95.6	68	93.2	261	86	27	87.1	1	100	1	100	548	91.1
	F.	2	3.2	6	4.4	5	6.8	43	14	4	12.9	-0-	-0-	-0-	-0-	60	9.9
Administrative Staff	T.	15	2.5	16	2.6	56	9.2	107	25.7	181	29.8	141	23	44	7.2	610	20.5
	M.	14	93.3	12	75	44	78.6	60	56	78	43	72	51	35	79.5	365	60
	F.	1	6.7	4	25	12	21.4	47	44	103	57	69	49	9	20.5	245	40
Technicians	T.	-0-	-0-	2	1.4	3	2	8	5.5	99	69	24	16.6	8	5.5	144	4.9
	M.	-0-	-0-	1	50	3	100	5	62.5	79	86.1	20	83.3	8	100	116	81.6
	F.	-0-	-0-	1	50	-0-	-0-	3	37.5	20	13.9	4	16.7	-0-	-0-	28	19.4
Other Employees	T.	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	7	1	27	4	621	95	655	22.2
	M.	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	5	71.4	21	77.8	436	70.2	462	70.5
	F.	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	2	28.6	6	22.2	185	29.8	193	29.5

Source: Council of Higher Education. "The Annual Statistical Report on Higher Education in Jordan: 1983/84." Council News, 8th Issue, 1984, p. 81.

Note: Percentages were calculated by the researcher.

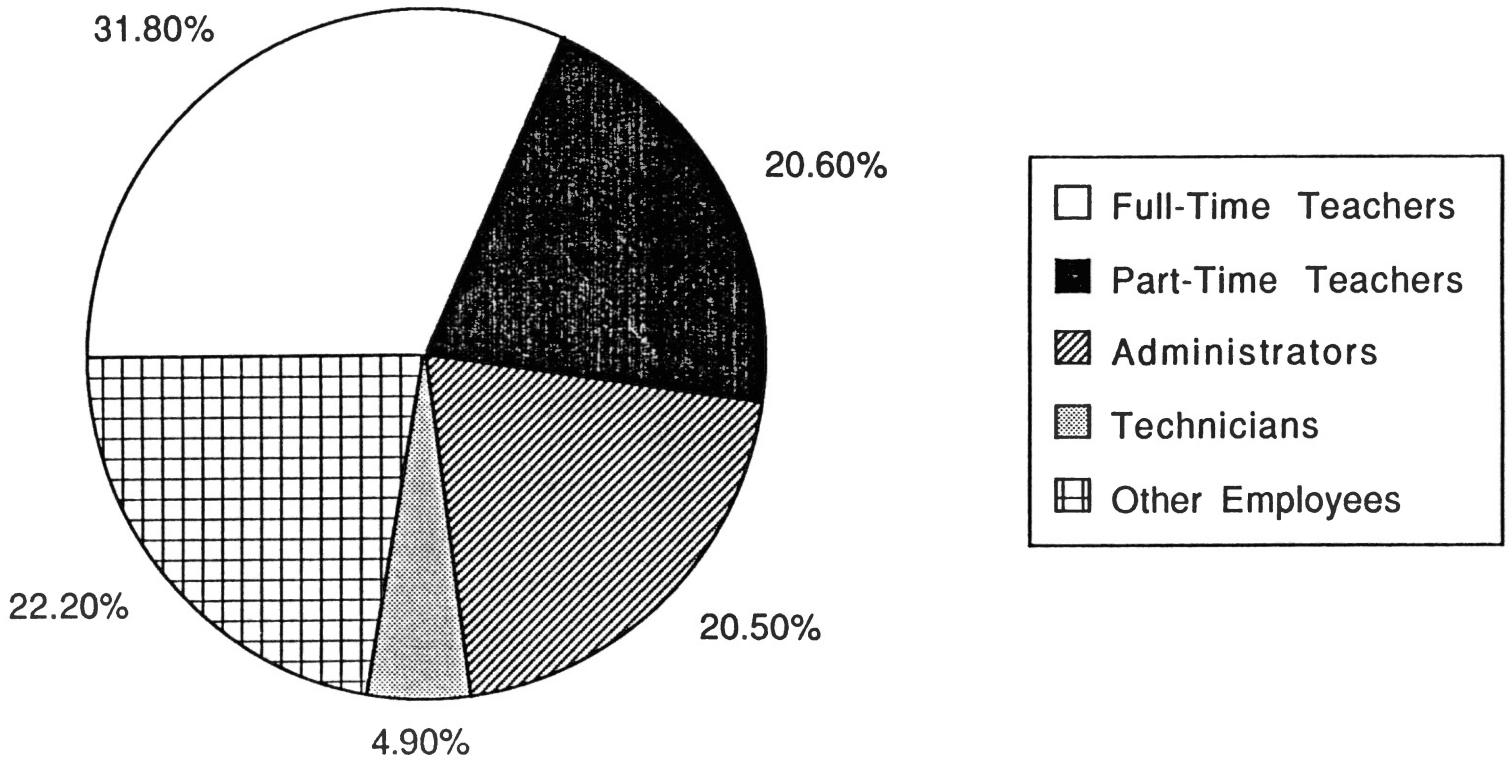


Figure 3. Distribution of all Employees in Jordan Community Colleges by Employment Status: 1983-1984

Table XXIII and Figure 4 present 1984-1985 data on numbers and percentages of employees in Jordan public and private community colleges by employment status, sex and qualifications. Data presented in this table and graph indicated there were 3,176 employees, 2,364 (74%) males and 812 (26%) females; 112 (3.5%) had doctoral degrees, 287 (9%) had masters degrees, 283 (9%) had baccalaureate and education diplomas, 1,094 (34.5%) had baccalaureate degrees, 490 (15.4%) had associate degrees, 223 (7%) had high school diplomas, and 687 (21.6%) had less than high school diplomas. Full-time teachers represented the majority at 1,021 (32%).

Table XXIV and Figure 5 present 1985-1986 data on the numbers and percentages of Jordan community college professional employees with various qualifications according to employment status and sex. Data presented in this table and graph indicated there were 3,033 employees, 2,248 (74%) males and 785 (26%) females; 104 (3.4%) had doctoral degrees, 283 (9.3%) had master degrees, 272 (9%) had baccalaureate degrees and education diplomas, 997 (32.9%) had baccalaureate degrees, 521 (17.2%) had associate degrees, 200 (6.6%) had high school diplomas, and 656 (21.6%) had less than a high school diploma. Full-time teachers had the greatest number and percentage with 937 (31%).

TABLE XXIII

DISTRIBUTION OF ALL EMPLOYEES IN JORDAN COMMUNITY COLLEGES BY DEGREE, EMPLOYMENT STATUS, AND SEX: 1984-1985

Employment Status	Sex	Doctorate		Master		Bacc. + Ed. Dip.		Bacc.		A.A.		High School		Less than High School		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Total	T.	112	3.5	287	9	283	9	1094	34.5	490	15.4	223	7	687	21.6	3176	100
	M.	107	96	249	87	216	76	846	77	332	81	134	60	480	70	2364	74
	F.	5	4	38	13	67	24	248	23	158	19	89	40	207	30	812	26
Full-time Teachers	T.	34	3.3	143	14	147	14.4	596	58.4	95	9.3	6	.6	-0-	-0-	1021	32
	M.	31	91	118	83	98	67	441	74	73	77	3	50	-0-	-0-	764	75
	F.	3	9	25	17	49	33	155	26	22	23	3	50	-0-	-0-	257	25
Part-time Teachers	T.	64	10	121	19	81	12.7	329	51.5	40	6.3	3	.5	-0-	-0-	638	20
	M.	63	98	115	95	74	91	289	88	34	85	3	100	-0-	-0-	578	91
	F.	1	2	6	5	7	9	40	12	6	15	-0-	-0-	-0-	-0-	60	9
Administrative Staff	T.	14	2	21	3.2	44	6.7	153	23.5	206	31.4	155	23.6	63	9.6	656	20.7
	M.	13	93	14	67	33	75	105	69	95	46	75	48	49	78	384	58
	F.	1	7	7	33	11	25	48	31	111	54	80	52	14	22	272	42
Technicians	T.	-0-	-0-	2	1	11	5.9	16	8.8	117	63.4	28	15	11	5.9	185	5.8
	M.	-0-	-0-	2	100	11	100	11	69	98	84	25	89	8	73	155	84
	F.	-0-	-0-	-0-	-0-	-0-	-0-	5	31	19	16	3	11	3	27	30	16
Other Employees	T.	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	32	4.7	31	4.6	613	90.7	676	21.5
	M.	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	32	100	28	90	423	69	483	71
	F.	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	3	10	190	31	193	29

Source: Ministry of Higher Education. The Annual Statistical Report on Higher Education in Jordan: 1984/85. Information Statistical Section, August 1985, p. 71.

Note: Percentages were calculated by the researcher.

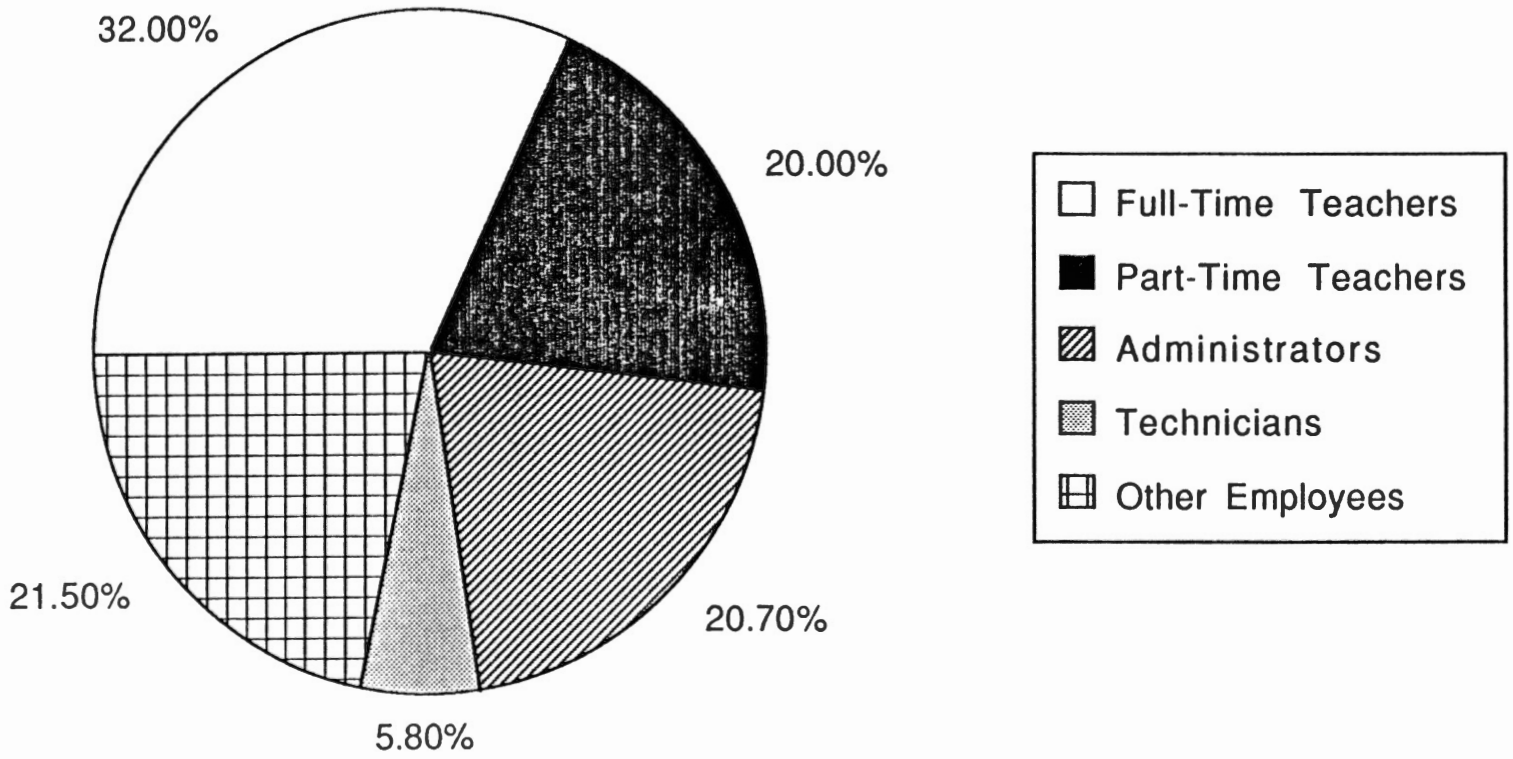


Figure 4. Distribution of all Employees in Jordan Community Colleges by Employment Status: 1984-1985

TABLE XXIV

DISTRIBUTION OF ALL EMPLOYEES IN JORDAN COMMUNITY COLLEGES BY DEGREE, EMPLOYMENT STATUS, AND SEX: 1985-1986

Employment Status	Sex	Doctorate		Bacc. + Master		Ed. Dip.		Bacc.		A.A.		High School		Less than High School		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Grand Total	T.	104	3.4	283	9.3	272	9	997	32.9	521	17.2	200	6.6	656	21.6	3033	100
	M.	96	92	247	87	206	75	760	76	361	69	126	63	452	69	2248	74
	F.	8	8	36	13	66	25	237	24	160	31	74	37	204	31	785	26
Full-time Teachers	T.	41	4.4	132	14	168	18	506	54	84	9	6	0.6	-0-	-0-	937	31
	M.	36	88	110	83	120	71	363	72	68	81	4	67	-0-	-0-	701	75
	F.	5	12	22	17	48	29	143	28	16	19	2	33	-0-	-0-	236	25
Part-time Teachers	T.	50	8.5	124	21	55	9.3	314	53.2	39	6.6	8	1.4	-0-	-0-	590	19.5
	M.	48	96	117	94	50	91	277	88	35	90	8	100	-0-	-0-	535	91
	F.	2	4	7	6	5	9	37	12	4	10	-0-	-0-	-0-	-0-	55	9
Administrators	T.	13	1.9	24	3.6	48	7.2	152	22.8	246	36.7	141	21	46	6.8	670	22
	M.	12	92	17	71	36	75	104	68	121	49	70	50	33	82	277	41
	F.	1	8	7	29	12	25	48	32	125	51	71	50	13	28	393	59
Technicians	T.	-0-	-0-	3	1.5	1	0.5	25	12.3	149	73.4	19	9.3	6	3	203	6.7
	M.	-0-	-0-	3	100	-0-	-0-	16	64	134	90	19	100	5	83	177	87
	F.	-0-	-0-	-0-	-0-	1	100	9	36	15	10	-0-	-0-	1	17	26	13
Other Employees	T.	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	3	0.5	26	4	604	95.5	633	20.8
	M.	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	3	100	25	96	414	69	442	70
	F.	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	1	4	190	31	191	30

Source: Rough data was provided by The Information by Statistical Section of the Ministry of Higher Education.

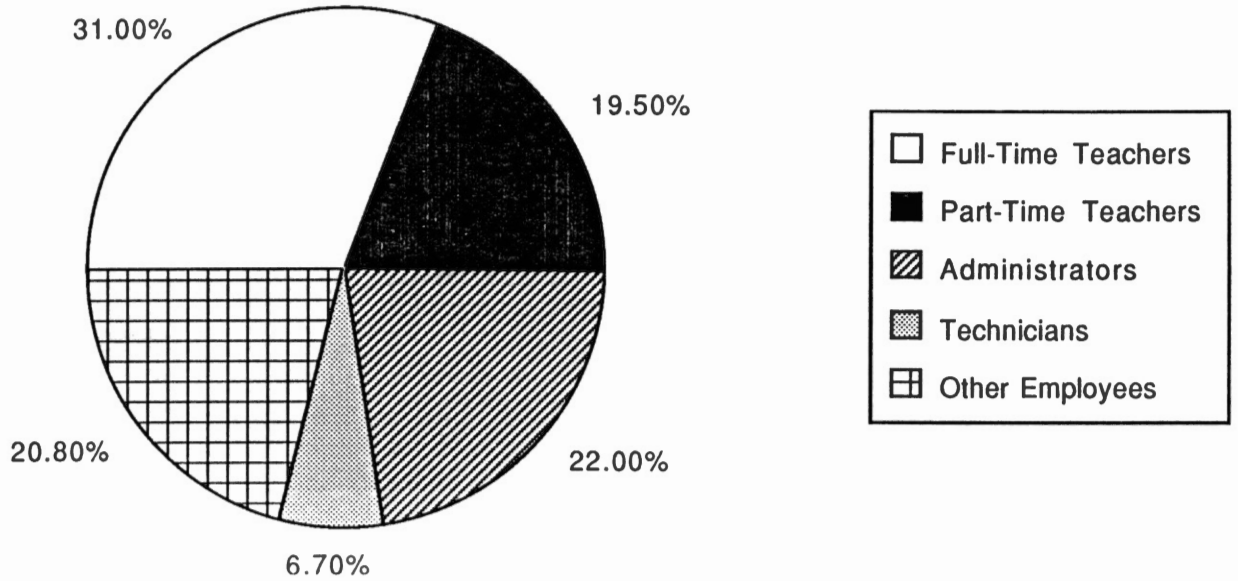


Figure 5. Distribution of all Employees in Jordan Community Colleges by Employment Status: 1984-1985

Table XXV and Figure 6 present, on the other hand, the numbers and percentages of all employees in the community colleges under the various controlling authorities, according to sex, and employment status in the academic year 1985-1986. Data presented in this table and histogram indicated Ministry of Higher Education colleges had 1,089 employees, 732 (67%) males and 357 (33%) females; other ministries and government departments' employees were numbered at 533, 460 (83%) males and 93 (17%) females; UNRWA's two colleges employed 210 people, 169 (80%) males and 41 (20%) females; and private colleges had 1,181 people, 887 (75%) males and 294 (25%) females. Full-time teachers constituted the largest numbers in MOHE colleges, whereas part-time teachers constituted the largest number in other ministries and government departments. UNRWA colleges had no part-time teachers, and full-time and part-time teachers in private colleges numbered almost the same --366 and 322 respectively.

The qualifications of faculty under the various controlling authorities are presented in Table XXVI and Figure 7. The distribution of numbers and percentages in Jordan's community colleges are shown for the academic year 1985-1986. Data presented in this table and histogram indicated there were 2,400 faculty members in the 52 community colleges, after excluding "other employees," 1,806 (75%) males and 594 (25%) females; 104 (4.3%) had

TABLE XXV

DISTRIBUTION OF PROFESSIONAL EMPLOYEES IN JORDAN COMMUNITY COLLEGES BY EMPLOYMENT STATUS, CONTROLLING AUTHORITY, AND SEX: 1985-1986

Controlling Authority	Sex	Employment Status: Fulltime Teachers No.	Fulltime Teachers %	Part-time Teachers No.	Part-time Teachers %	Administrators No.	Administrators %	Technicians No.	Technicians %	Other Employees No.	Other Employees %	Total No.	Total %
Ministry of Higher Education	T.	424	45.3	29	4.9	228	34	106	52.2	302	47.7	1089	35.9
	M.	295	70	26	90	120	53	94	89	197	65	732	67
	F.	129	30	3	10	108	47	12	11	105	35	357	33
Other Ministeries and Govt. Dept.	T.	82	8.8	229	38.8	114	17	46	22.7	82	13	553	18.2
	M.	74	90	218	95	70	61	41	89	57	70	460	83
	F.	8	10	11	5	44	39	5	11	25	30	93	17
UNRWA	T.	65	6.9	-0-	-0-	55	8.2	3	1.5	87	13.7	210	6.9
	M.	52	80	-0-	-0-	42	76	2	67	73	84	169	80
	F.	13	20	-0-	-0-	13	24	1	33	14	16	41	20
Private Colleges	T.	366	39	332	56.3	273	40.8	48	23.6	162	25.6	1181	39
	M.	280	77	291	88	161	59	40	83	115	71	887	75
	F.	86	23	41	12	112	41	8	17	47	29	294	25
Grand Total	T.	937	31	590	19.5	670	22	203	6.7	633	20.8	3033	100
	M.	701	75	535	91	277	41	177	87	442	70	2248	74
	F.	236	25	55	9	393	59	26	13	191	30	785	26

Source: Rough Data was provided by The Information Statistical Section, Ministry of Higher Education.

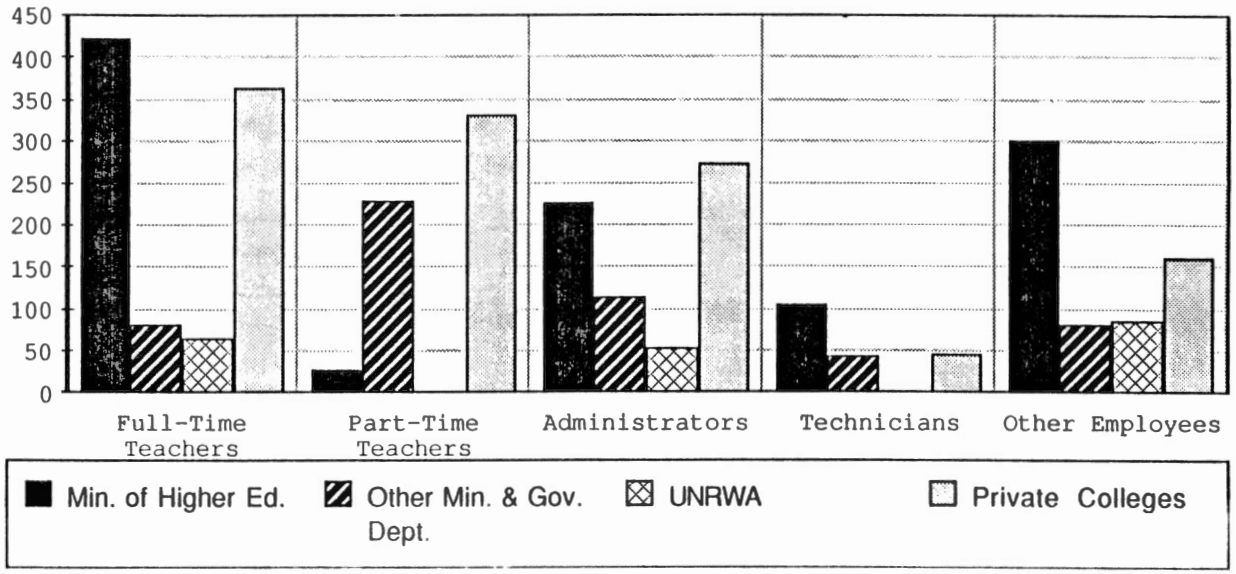


Figure 6. Distribution of Professional Employees in Jordan Community Colleges by Employment Status and Controlling Authority: 1985-1986

TABLE XXVI

DISTRIBUTION OF FACULTY IN JORDAN COMMUNITY COLLEGES BY DEGREE, SEX, AND CONTROLLING AUTHORITY: 1985-1986

Controlling Authority	Sex	Doctorate		Master		Bacc. + Ed. Dip.		Bacc.		A.A.		High School		Less than High School		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Ministry of Higher Education	T.	29	27.9	88	31	128	47	283	28.4	220	42.5	34	19.5	5	9.6	787	32.8
	M.	24	83	71	81	82	44	184	65	156	59	17	50	1	20	535	68
	F.	5	17	17	19	46	56	99	35	64	41	17	50	4	80	252	32
Other Ministeries and Govt. Dept.	T.	40	38.5	51	18	24	8.8	185	18.6	91	17.5	69	39.7	11	21	471	19.6
	M.	39	97	46	90	21	87	171	92	81	89	38	55	7	64	403	83
	F.	1	3	5	10	3	13	14	8	10	11	31	45	4	36	68	17
UNRWA	T.	3	2.9	10	3.5	6	2.2	42	4.2	39	7.5	9	5.2	14	27	123	5.1
	M.	3	100	6	60	5	83	32	76	31	79	7	78	12	86	96	78
	F.	-0-	-0-	4	40	1	17	10	24	8	21	2	22	2	14	27	22
Private Colleges	T.	32	30.7	134	47.5	114	42	487	48.8	168	32.5	62	35.6	22	42.4	1019	42.5
	M.	30	94	124	93	98	84	373	77	90	54	39	63	18	82	772	76
	F.	2	6	10	7	16	14	114	23	78	46	23	37	4	18	247	24
Grand Total	T.	104	4.3	283	11.8	272	11.3	997	41.5	518	21.6	174	7.2	52	2.3	2400	100
	M.	96	92	247	87	206	76	760	76	358	69	101	58	38	73	1806	75
	F.	8	8	36	13	66	24	237	24	160	31	73	42	14	27	594	25

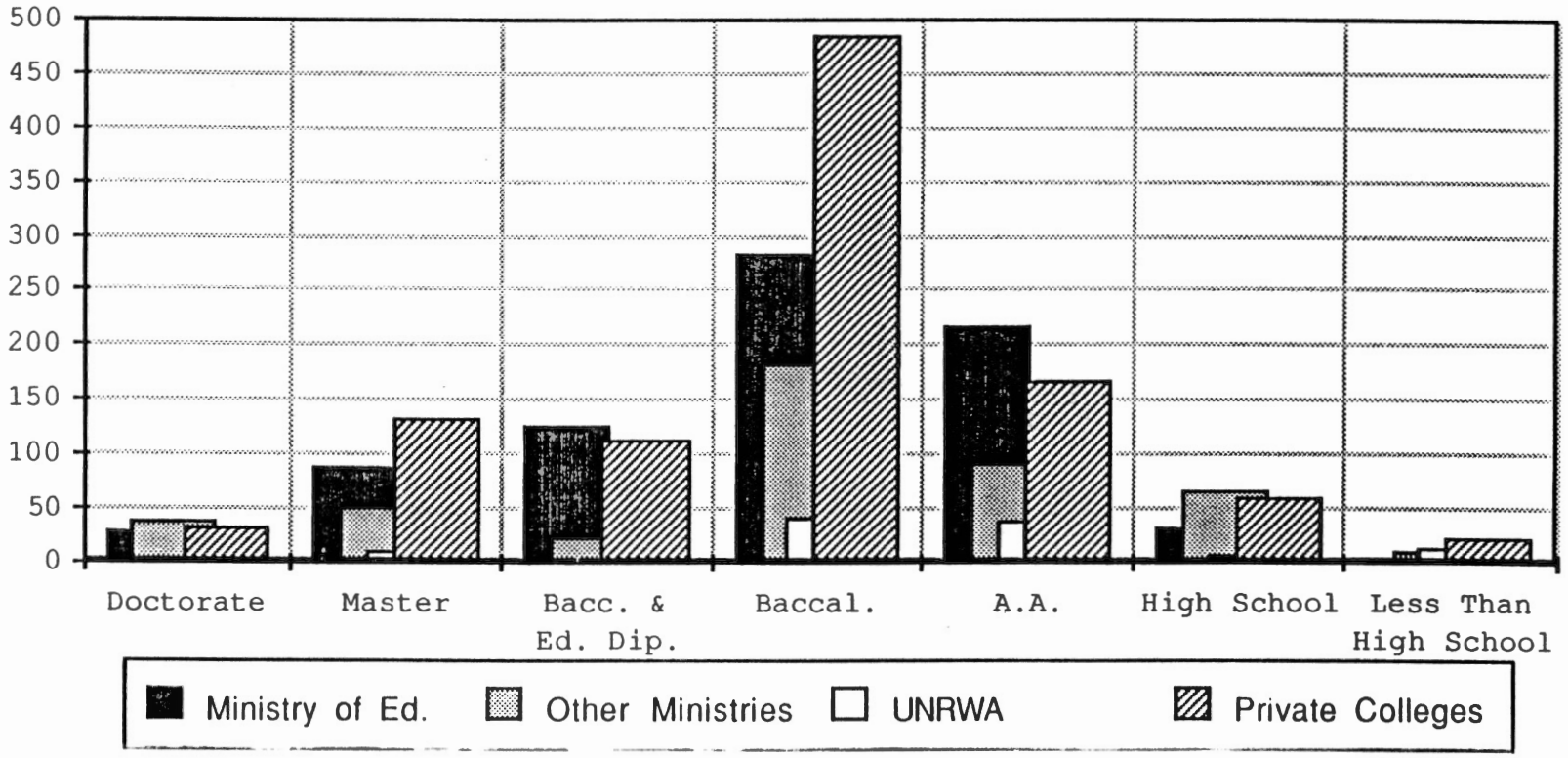


Figure 7. Distribution of Faculty in Jordan Community Colleges by Degree and Controlling Authority: 1985-1986

doctoral degrees, 283 (11.8%) had masters degrees, 272 (11.3%) had baccalaureate degrees and education diplomas, 997 (41.5%) had baccalaureate degrees, 518 (21.6%) had associate degrees, 174 (7.2%) had high school diplomas, and 52 (2.3%) had less than a high school diploma. The data also indicated that community colleges of other ministries and government departments had the highest percentage of Ph.D. holders (38.5%) and high school diploma holders (39.7%); private colleges had the highest percentage of the master degrees holders (45.5%), as well as the highest percentage of the baccalaureate degree holders (48.8%). Colleges of the MOHE had the highest percentages of baccalaureate degree and education diploma holders (47%), as well as holders of associate degrees (42.5%). Private colleges had the highest percentage of those with less than a high school diploma (42.4%).

Taking a broader and more comprehensive view, Table XXVII presents data for academic years 1983-1984, 1984-1985, and 1985-1986 on faculty qualifications in Jordan's community colleges. Data presented in this table indicated percentages of doctoral degrees holders had not changed in the last three years: 4.5%, 4.5%, and 4.3%. The same was true for master degree holders: 12%, 11.5%, and 11.8%. Baccalaureate and education diploma holders dropped from 12.3% in 1983-1984 to 11.3% in the years 1984-1985 and 1985-1986. That was also true for the number of

TABLE XXVII

DISTRIBUTION OF FACULTY QUALIFICATIONS IN JORDAN COMMUNITY COLLEGES BY DEGREE, AND SEX: 1983-1984, 1984-1985, AND 1985-1986

Academic Year	Sex	Doctorate		Master		Bacc. + Ed. Dip.		Bacc.		A.A.		High School		Less than High School		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1983/1984	T.	103	4.5	276	12	285	12.3	1023	44.5	392	17	169	7.4	53	2.3	2301	100
	M.	97	94	242	88	220	77	791	77	250	64	95	56	44	83	1739	75.6
	F.	6	6	34	12	65	23	232	23	142	36	74	44	9	17	562	24.4
1984/1985	T.	112	4.5	287	11.5	283	11.3	1094	43.8	458	18.3	192	7.7	74	2.9	2500	100
	M.	107	95	249	87	216	76	846	77	300	65	106	55	57	77	1881	75
	F.	5	5	38	13	67	24	248	23	158	35	86	45	17	23	619	25
1985/1986	T.	104	4.3	283	11.8	272	11.3	997	41.5	518	21.6	174	7.2	52	2.3	2400	100
	M.	96	92	247	87	206	76	760	76	358	69	101	58	38	73	1806	75
	F.	8	8	36	13	66	24	237	24	160	31	73	42	14	27	594	25

baccalaureate degree holders, which dropped from 44.5% in 1983-84 to 43.8% in 1984-1985 and to 41.5% in 1985-1986.

However, as indicated, associate degree percentages increased from 17% in 1983-1984 to 18.3% in 1984-1985 and 21.6% in 1985-1986. Percentages of high school diploma holders and less than high school diploma holders remained approximately the same, and ranged from 7% to 2% respectively.

Results

In summary, Table XXVIII and Figure 8 present the percentages of faculty with various qualifications employed by the four Jordan community college controlling authorities during the academic year 1985-1986. Data presented in this table and graph indicated the average percentage of doctoral degree holders was 4.3%, with the highest percentage in colleges of other ministries and government departments (8.5%) and the lowest in UNRWA colleges (2.4%). The average percentage of masters degree holders was 11.8%, with private colleges having the highest percentage (13.2%) and UNRWA the lowest percentage (8.2%). The average percentage of baccalaureate and education diploma degree holders was 11.3% with colleges of the MOHE having the highest percentage (16.3%) and UNRWA colleges the lowest (5%). The average percentage of baccalaureate degree holders was 41.5% with private

TABLE XXVIII

DISTRIBUTION BY PERCENTAGE OF FACULTY QUALIFICATIONS IN JORDAN COMMUNITY COLLEGES BY DEGREE AND CONTROLLING AUTHORITY: 1985-1986

Controlling Authority	Doctorate	Master	Bacc. + Ed. Dip.	Bacc.	A.A.	High School	Less than High School	Total %
Ministry of Higher Education	3.7	11.2	16.3	36	28	4.2	0.6	100
Other Ministeries and Govt. Dept.	8.5	10.8	5.1	39.3	19.3	14.6	2.4	100
UNRWA	2.4	8.2	5	34	31.7	7.3	11.4	100
Private Colleges	3.1	13.2	11.2	47.8	16.5	6	2.2	100
Average All Colleges	4.3	11.8	11.3	41.5	21.6	7.2	2.3	100

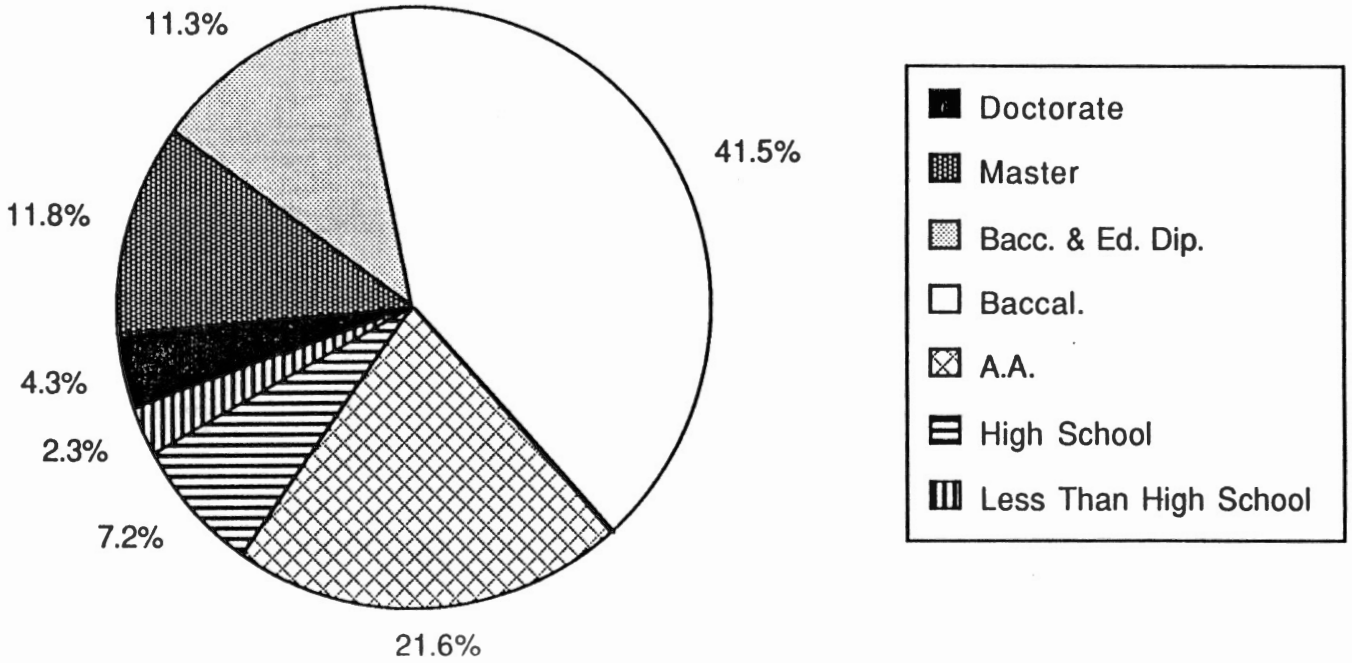


Figure 8. Distribution by Percentage of Faculty Qualifications in Jordan Community Colleges by Degree: 1985-1986

colleges having the highest percentage (47.8%) and UNRWA colleges the lowest percentage (34%). The average percentage of associate degree holders was 21.6%, with the highest percentage being at UNRWA colleges (31.7%) and the lowest percentage at private colleges (16.5%). The average percentage of high school diploma holders was 7.2%, with other ministries and government departments' colleges having the highest percentage (14.6%) and MOHE colleges the lowest percentage (4.2%). The average percentage of those who had less than a high school diploma was 2.3%, with UNRWA colleges having the highest percentage (11.4%), and MOHE colleges the lowest (0.6%).

Objective 3

Objective 3 was to determine which programs are most needed and which programs are least needed by comparing enrollment figures and labor market needs.

Jordan Council of Higher Education decided to lower the admission standards to Jordanian community colleges beginning with the academic year 1985-1986 by admitting each student who passed the General Secondary Education Certificate Examination (Tawjihi) with an average of 50% instead of 55% as in 1984-1985. This move may have been due to the fact that enrollment in community colleges decreased by 15.4% in 1984-1985 compared to 1983-1984

enrollment. The total number of students was 32,174 in 1983-1984 while it dropped to 27,205 in 1984-1985.

Table XXIX presents the number of students in the community colleges by profession, sex, and authority for the year 1984-1985. Data presented in this table indicated females in the MOHE and UNRWA community colleges outnumbered males in the total enrollment. The data indicated that educational professions had the greatest number of students followed by commercial, engineering, and para-medical professions respectively, while family and civil aviation professions had the smallest enrollment.

Table XXX presents the distribution of percentages of students in community colleges by profession and controlling authority for the academic year 1984-1985. Data presented in this table indicated that the largest percentage of student enrollment was at private colleges (57.4%) followed by MOHE colleges with 33.5%, and other ministries and government department colleges (5.5%) and UNRWA colleges (3.6%). The highest percentages of enrollment were in educational and commercial professions (35.7% and 32.8%) respectively. Engineering professions were 15% followed by computer and para-medical professions (6.5% each). The smallest enrollment was in family and civil aviation professions (0.1%) each (see also Figures 9, 10, and 11).

TABLE XXIX

NUMBER OF STUDENTS IN JORDAN COMMUNITY COLLEGES BY PROFESSION, CONTROLLING AUTHORITY AND SEX: 1984-1985

Professions	Ministry of Higher Education			Other Ministries and Govt. Dept.			UNRWA			Private Colleges			Grand Total		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Grand Total	9122	3895	5227	1504	1167	337	979	476	503	15600	8544	7056	27205	14082	13123
Educational	5156	1369	3787	----	----	----	472	170	302	4085	184	3901	9713	1723	7990
Commercial	1573	671	902	143	121	22	195	87	108	6872	4907	1965	8783	5786	2997
Computer	103	23	80	39	19	20	----	----	----	1749	1355	394	1891	1397	494
Engineering	1769	1552	217	369	323	46	228	186	42	1717	1497	220	4083	3558	525
Para-medical	195	37	158	717	546	171	84	33	51	768	384	384	1764	1000	1764
Agriculture	60	60	----	----	----	----	----	----	----	----	----	----	60	60	----
Family	32	----	32	----	----	----	----	----	----	----	----	----	32	----	32
Civil Aviation	----	----	----	32	32	----	----	----	----	----	----	----	32	32	----
Hotel	134	129	5	----	----	----	----	----	----	102	102	----	236	231	5
Communications and Transport	----	----	----	66	42	24	----	----	----	26	25	1	92	67	25
Social	100	54	46	138	84	54	----	----	----	281	90	191	519	228	291

Source: Council of Higher Education. "Summary Data of Higher Education in Jordan: 1984-1985," Council News, June 10, 1985, p. 11.

Note: Male numbers were calculated by the researcher.

TABLE XXX

DISTRIBUTION BY PERCENT OF STUDENTS
IN JORDAN COMMUNITY COLLEGES:
1984-1985

	Controlling Authority				
Profession	Ministry of Higher Education	Other Ministries and Govt. Dept.	UNRWA	Private Colleges	Aggregate Portion/ Profes-sion
Educational	53	0	5	42	35.7
Commercial	18	2	2	78	33.8
Computer	5	2	0	93	6.5
Engineering	43	9	6	42	15
Para-medical	11	41	5	43	6.5
Agricultural	100	0	0	0	.2
Family	100	0	0	0	.1
Civil Aviation	0	100	0	0	.1
Hotel	57	0	0	43	.9
Communication and Transport	0	72	0	28	.3
Social	19	27	0	54	1.9
Aggregate Portion/Controlling Authority	33.5	5.5	3.6	57.4	100

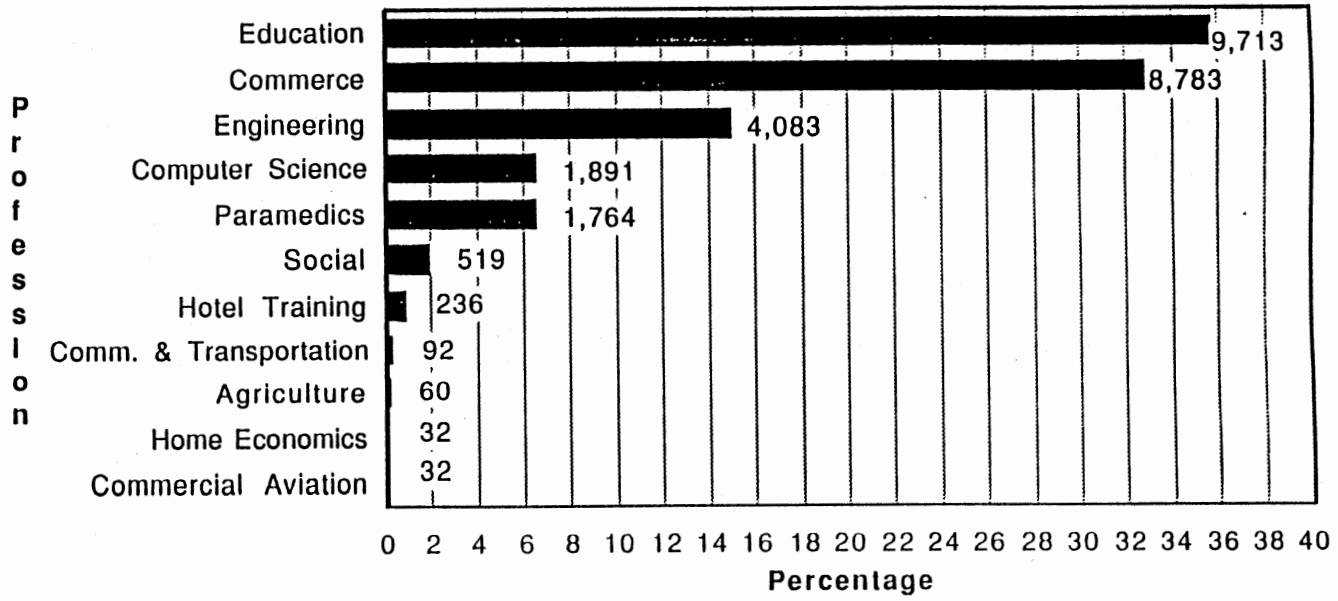


Figure 9. Distribution of Students in Jordan Community Colleges by Academic Programs (Professions): 1984-1985

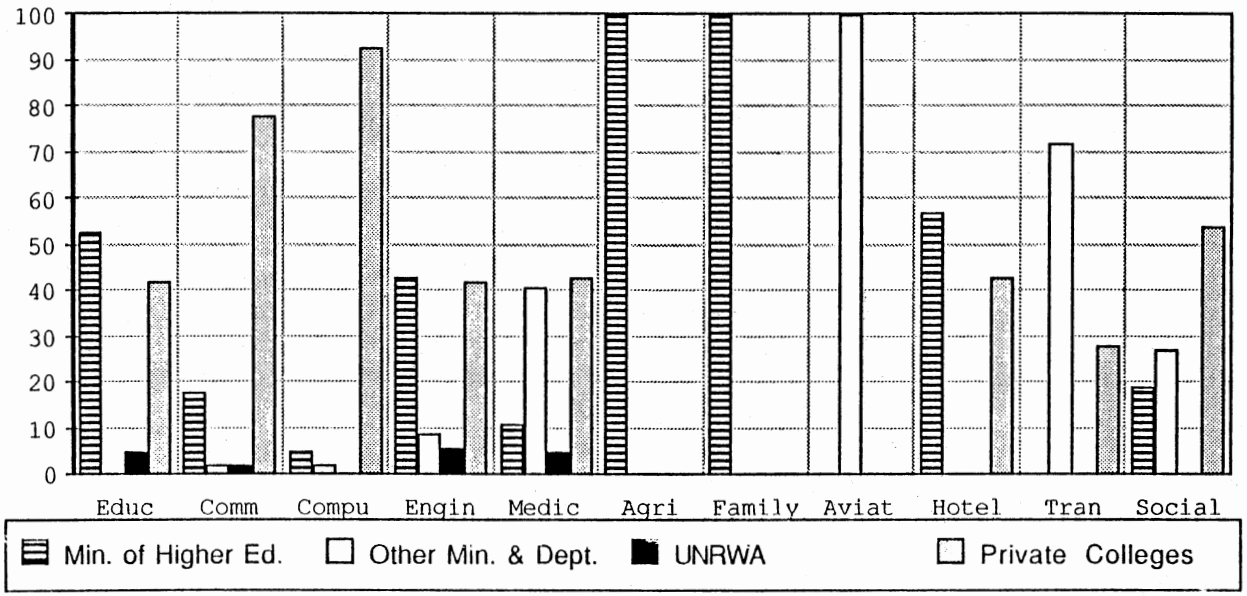


Figure 10. Distribution by Percentage of Students in Jordan Community Colleges by Academic Professions and Controlling Authority: 1984-1985

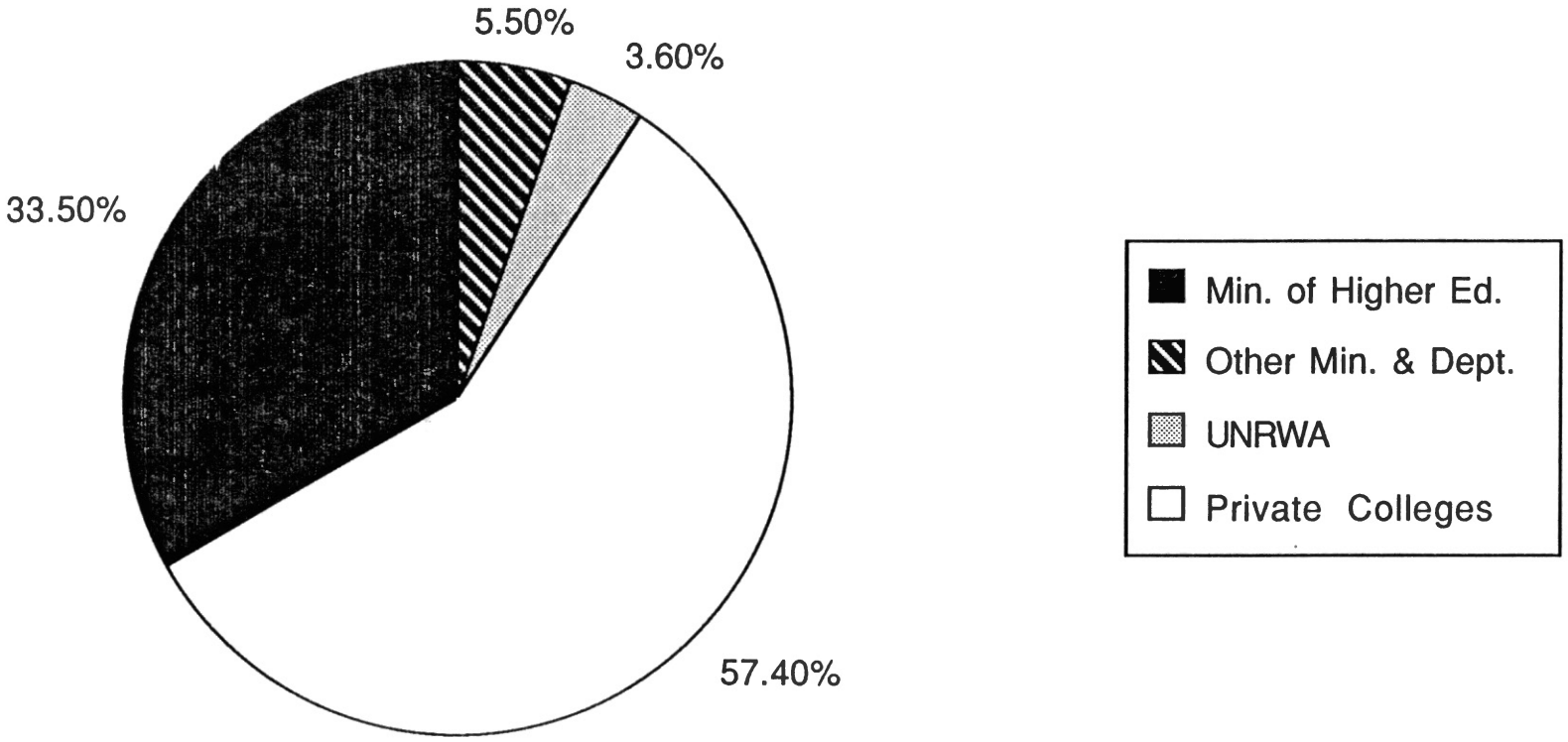


Figure 11: Distribution of Percentages of Students in Jordan Community Colleges by Controlling Authority: 1984-1985

Generally speaking, Jordan depended upon community college graduates to meet labor market needs for semi-professional technicians, particularly graduates in engineering, commerce and para-medical professions. Neighboring Arab oil-producing countries depended also on such graduates to satisfy their labor markets. However, it seems clear now there were shortages of some graduates from certain fields of study as well as surplus from others. The 1984 study conducted by the former head of the Council of Higher Education, Dr. Mohammad Nouri Shafiq, indicated that Jordan's labor market needs for community college graduates were as follows: 1983-11,575 graduates, 1984-8,620, 1985-5,189 and 1986-5,163 (Al-Rai' Daily Newspaper, 1984, p. 7). The results of the comprehensive community college exam of 1986 showed that 8,173 students (52.63% of those who took the exam) passed in various fields of study (Ad-Dostour Daily Newspaper, 1986, p. 4). Moreover, the issue of balancing supply and demand of labor forces received special attention from planners and officials. The Five Year Plan for Economic and Social Development of 1986-1990 projected there would be a surplus in the labor force of Jordanian community college graduates and associate degree holders as follows: 1986-9,091, 1987-8,644, 1988-8,716, 1989-9,022 and 1990-9,082 (p. 166). Ibrahim (1986) included in his study of Unemployment and Education Policies in Jordan, a table of unemployed associate degree holders in 1985, which was calculated from applications submitted to the Civil Service Bureau in Amman.

TABLE XXXI

UNEMPLOYED JORDANIAN ASSOCIATE DEGREE HOLDERS: 1985

Field of Study	Number	Percentage
1. Liberal Arts and Humanities Fields of Study:	10,460	76.7
Elementary Education	1,249	9.15
Accounting	1,080	7.92
Arabic Language	875	6.41
Banking and Business Administration	777	6.41
Islamic Religion and Social Studies	681	4.99
English Language	586	4.30
Secretary and Office Management	538	3.94
Nursery and Kindergarten Education	452	3.31
Library Science	223	1.63
Vocational Education	3,798	27.88
2. Scientific Fields of Study:	3,184	23.3
Engineering Professions	1,284	9.41
Mathematics	507	3.72
Natural Sciences	460	3.37
Medical Lab. Technology	329	2.41
Para-pharmaceutics	276	2.02
Agriculture and Nutrition	208	1.52
Computer	120	0.85
Total	13,644	100

Source: Ibrahim (1986), Unemployment and Education Policies in Jordan, p. 14.

Finally, the Ministry of Higher Education recently published a study conducted by Shuraideh et al. (1986) regarding the fields of study needed in the Jordanian labor market in the years 1986-1990. The fields of study were classified as "needed with high degree" where demand would exceed supply by more than 500 people; "needed with moderate degree" where demand would exceed supply by 150-500 people; and "needed with a lesser degree" where demand would not exceed supply by 150 people (p. 4).

The study identified 16 fields of study "needed with high degree." These included elementary education (males only), school labs, physiotherapy technology, medical and statistical records, X-ray technology, anesthesiology, health inspection, library science and documentation, hotel management (accommodation), machine production, generating electric station mechanics, electrical transmission technology, chemical industry, air-craft mechanics, maintenance technology, and oxygen-welding.

Four fields of study were identified as "needed with moderate degree." These included: surveying, refrigeration and air conditioning, instrumentation, and postal science.

Nineteen fields of study were identified as "needed with lesser degree." These included: social studies, natural science, home economics, banking science, commerce and office management, para-pharmaceutics, medical lab. technology, social service, roads, water-supply and drainage, architectural drawing, quantity estimation, cars and interior combustion, mechanical drawing, petroleum industry, technical and automatic drawing, nursing, soil lab analysis technology, and film-processing (pp. 5-6).

Objective 4

Objective 4 of this study was to determine whether graduates of selected types of academic programs should be transferable to universities in Jordan and abroad.

Instructions of the Ministry of Higher Education which is the sole agency responsible for community colleges in Jordan included:

--Each community college should have all the equipment, technical tools, labs, workshops, and raw material necessary for each field of study it offers.

--Classrooms, labs, workshops and libraries should be adequate in terms of size, number of the fields, and studies offered in the college.

--Faculty should be qualified.

--Number of students in each section of humanities and liberal arts fields of study should not exceed 45 students.

In engineering, para-medics, agriculture, hotel and computer professions, the number of students in each section should not exceed 30.

The interviews conducted by the investigator in August of 1986 and January of 1987 as well as the data collected revealed that "accreditation" of certain programs had started in the academic year 1986-1987. Definite conditions and criteria were set and addressed to the community colleges. On the other hand, regulations and criteria of admission of community college graduates to the four Jordanian universities were under study, and no decision has been made yet. The universities' argument is based on the following:

--Students admitted to community colleges were less qualified because their scores in the "Tawjihi" Exam were lower. (Usually, no student whose score is less than 70% is admitted to a Jordanian university, while community colleges admit students whose scores are as low as 50%.)

--The facilities, classrooms, and equipment used in community colleges do not match those in the university.

--Faculty qualifications in the universities are higher than those in the community colleges.

--The universities do not have enough resources to admit community college students.

It seemed that very few students from certain community colleges would be admitted as juniors into the Jordanian universities in the near future. The data and information

collected in this study and the investigator's professional judgement indicated that students of certain fields of study may successfully transfer to universities. These included subjects such as mathematics, natural sciences, social sciences, Islamic religion of the educational profession; secretary and office management and marketing of the commercial profession; statistics of the computer profession; public health inspection of the para-medical profession, computer and digital systems, interior design and decoration, refrigeration and air conditioning, and quantity estimation of the engineering profession; journalism and media of the social profession; nutrition of the family profession; hotel management of the hotel profession; and aeronautic communication operations of the communication and transport profession.

Some criteria used for recommendation of such fields of study as transferable to Jordanian universities and abroad were:

1. fields of study in which larger numbers of graduates would be desirable; or

2. programs characterized by adequate facilities and classroom equipment; or

3. fields of study in which there was a high demand from the job market for better qualified graduates; or

4. some of those programs were classified as general and liberal education.

However, the graduates of those fields of study should have also met the requirement of admission to the universities, i.e., their average in the Tawjihi exam was more than 70% when they enrolled at the community colleges.

This chapter has presented all of the data obtained for the current academic programs offered at 52 public and private community colleges in the East Bank of Jordan as well as faculty qualification analysis in these colleges. The chapter which follows presents a summary of the study together with conclusions and recommendations.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

This study sought to identify the current professional programs offered at both public and private community colleges and to summarize the faculty qualifications at the 52 colleges in the East Bank of Jordan.

The intent of this research was to fulfill the following four objectives:

1. To identify various academic programs offered at public and private community colleges in Jordan and to determine the level of duplication in such programs.

2. To survey the qualifications of people teaching and administering community college to determine their level of training.

3. To determine which programs are most needed and which programs are least needed by comparing enrollment figures and labor market needs.

4. To determine whether graduates of selected types of programs should be able to transfer to universities in Jordan and abroad.

The investigator collected the data during August 1986 and January 1987. Being a Ministry of Education official for the last 19 years, the researcher had easy access to data and information needed for this study. He interviewed and held several informal meetings with top officials at Jordan's Ministries of Education, Higher Education, and Planning as well as with the Royal Scientific Society in Amman. Thus, factual information about the current academic programs and faculty qualifications at Jordan's community colleges was sought and gathered from all available sources, broadly categorized as primary sources and secondary sources.

Data analysis pertaining to the current academic programs revealed that duplication was at a significant level in certain fields of study in the educational, commercial, engineering, and para-medical professions. Data related to faculty qualifications indicated that only 16.1% (doctoral and master degrees holders) were eligible to teach and administer Jordan's community colleges according to the Law of Education No. 16 of 1964.

In regard to the programs most needed and least needed for Jordan's labor market, data analysis identified several fields of study such as elementary education (males only), anesthesiology, air-craft mechanics, and maintenance technology as most needed, while social studies, banking sciences, para-pharmaceutics and petroleum industries

fields of study were identified as least needed. The review of literature, on the other hand, indicated that Jordan's labor market needs are not stable; they change rapidly due to the economic and political factors of the neighboring Arab countries. Graduates of community colleges usually seek employment outside the country, particularly in the oil producing Gulf nations.

Concerning transferability of programs to universities, data indicated that special accreditation programs of a limited number of fields of study had recently started. Community colleges which could meet definite criteria of the "special accreditation" in terms of class size, equipment and facilities, and faculty qualifications would be granted accreditation that enables a few students to transfer to universities in Jordan.

Conclusions

The data summarized in the first section of this chapter and reported in detail in Chapter IV are used as the basis from which the following conclusions are drawn.

According to the survey:

1. The current academic programs offered at Jordan's community colleges provide an education opportunity beyond the secondary school level for all qualified students who can benefit from the experience. However, community colleges in Jordan lack comprehensiveness. Functions such

as preparation for advanced study (transfer), community services and remedial programs are not offered yet.

2. Curriculum content is important in orienting the colleges and students to modern ideas. While earlier curricula were based on traditional modes, modern new ones have been introduced. Before 1980, most community colleges emphasized teacher preparation for elementary and preparatory schools, but more vocational-technical fields of study are offered nowadays.

3. The 22 private community colleges are more flexible and offer varied fields of study. They also follow an open-door policy by admitting students who have passed the General Secondary Certificate Exam (Tawjihi) and their scores are as low as 50%. Other community colleges (MOHE-other Ministries and government departments and UNRWA colleges) set restrictions for admission such as the score in the "Tawjihi" Exam.

4. It is obvious that there is a need to upgrade faculty qualifications in Jordan's community colleges since that will in all probability enhance the quality of education on the one hand and improve students' achievement in the "General Community College Exam" which is administered by the Ministry of Higher Education annually on the other. Data analysis revealed that a high percentage (41.5%) of faculty had only baccalaureate degrees and

52.63% of community college students passed the exam in 1986.

5. There is a clear need to recruit more qualified teaching staff. Financial and morale incentives appear to be helpful. Analysis of data indicated that only 16.1% are qualified to teach in Jordan's community colleges. Moreover, data revealed that more than half of the teachers in private colleges (56.3%) were part-timers. The literature review indicated that part-timers rarely participated in campus activities and had little contact with students out of class and practically no contact with their peers.

6. It was clear that there was inadequate planning and coordination between the Directorate of Community Colleges of the MOHE on one hand, and the community colleges on the other. That was manifested in the number of sections in various fields of study licensed to open in 1986-1987 which exceeded largely those actually opened in 1985-1986. This is in addition to the fact that the instructions issued by the MOHE on July 3, 1986 and addressed to all community colleges stated that "no college will be allowed to open any new section for the first year students in 1986-1987 that exceeds that opened in 1985-1986." Following such a policy may restrict enrollment in certain fields of study, and eventually decrease the level of duplication in academic programs offered.

7. There appears to be an overabundance of graduates who have been educated in a purely academic nature. This will often lead to employment in totally unrelated fields while the demand for technically trained workers goes unfulfilled. Data analysis revealed, among other things, that the percentages of individuals unemployed in the fields of study of Arabic and English languages, and in the fields of study of natural sciences were 6.41%, 4.30% and 3.37% respectively. However, the study identified some fields of study which were highly needed, such as school labs, physiotherapy technology, hotel management and aircraft mechanics.

8. The majority of faculty are not meeting the requirement of Law of Education No. 16 of 1964 which stipulates that faculty at community colleges should not have less than a masters or doctorate degree. This has a negative effect on students' performance and achievement on one hand, and makes it difficult for universities in Jordan and abroad to accredit the community colleges courses and admit their graduates as juniors on the other.

Recommendations

Based upon the findings and conclusions of this study, the following recommendations are offered to policy makers, administrators, instructors, and teachers for the purpose of strengthening academic programs and faculty qualifi-

cations at Jordan's public and private community colleges and of providing better support services to their students.

1. The Ministry of Higher Education in general and the Directorate of Community Colleges in particular should coordinate their plans with the deans/presidents of the community colleges in Jordan in terms of academic programs offered and sections to be opened. For example, the number of sections opened in the educational profession in 1985-1986 was 206, while 360 sections were licensed to open in 1986-1987. That was also true in the other professions, except in the family, hotel, communications and transport, and civil-aviation professions. Thus, the MOHE, as a regulatory agency, should take the initiative and form committees for coordination, cooperation, and strategic planning.

2. Needs assessment studies for Jordan labor market should be conducted. This study revealed among other things that more than 9% of unemployed associate degree holders were elementary education and various engineering profession majors. Controlled enrollment in such fields of study is recommended.

3. The data indicated that the current academic programs at Jordan's community colleges do not offer some important and new fields of study which are assumed, by this researcher, to be highly needed in the near future. Since we are living in the information processing and

intelligence era, and because Jordan plays a critical role in terms of its geographic location, some new fields of study should be offered at the community colleges to meet the needs of the businesses and world organizations which recently moved to Jordan due to continuing conflicts in Lebanon and the Iran-Iraq war. Among the new programs recommended to be offered are: electronics, robotics, advertising, media, marketing, instrumentation, computer maintenance, optics, air-traffic control, and air-craft cabin attendant training. Such programs are already offered at the United States community colleges.

4. Reconsideration of "no transfer policies" is clearly needed to assess the progress community colleges make in helping students along to the baccalaureate. It is, therefore, recommended that the community colleges should have a more comprehensive mission by giving equal priority to academic, vocational-technical, and community services programs. Most current academic programs, as data revealed, emphasized general and career education.

5. More incentives should be offered to recruit highly qualified faculty. The analysis of data indicated that a large percentage of Jordan's community college faculty hold baccalaureate degrees only. It is recommended that universities in Jordan should offer programs and courses for "Teacher Certification" and retraining for the

faculty at the community colleges in order to upgrade their qualifications.

6. A major effort is necessary to develop a guidance and counseling system via mass media to help students in career and vocational decision making. The analysis of data indicated that high percentages of students are enrolled in educational and commercial professions (35.7% and 32.8%) respectively, whereas unemployed percentages of associate degree holders in accounting and Arabic language, for instance, accounted for 7.92% and 6.41%. It is also recommended that community colleges in Jordan should offer this service to meet the needs of the broad range of students and educational interests represented.

Recommendations for Further Research

1. Follow-up studies are needed for graduates of community colleges to at least determine the following information:

   a. If graduates are working in the fields they trained for; and
   b. The adequacy of their training for the work they are performing from the perspective of both the worker and the employer.

2. The issue of transfer of community college graduates to universities in Jordan and abroad should be studied along with ways to retain and recruit qualified

personnel (faculty and staff), whose views and goals are the same as those of the community colleges to oversee the process.

3. A study is needed to identify causes of student satisfaction and/or dissatisfaction with selected academic programs at public and private colleges in Jordan.

4. Ways in which community colleges can interact with members of the community, evaluate their needs and cooperate with them should be considered. Thus feasibility studies need to be conducted regarding:

   a. Establishing a community college in Aqaba which offers vocational-technical programs in fishing, tourist guidance, and navigation studies.
   b. Building a community college in the Jordan Valley which should offer vocational-technical programs such as plant protection, farm machinery operation, vegetable and fruit processing, diary industries, agricultural marketing, irrigation technology, floriculture, and forestry.
   c. Establishing a community college in Ma'an which should offer varied programs in order to meet the local needs of the community and discourage migration from the rural to urban areas.

Modifications of the existing procedures in keeping with the recommendations of this study should lead to improved student/administrator decision making and hopefully more efficient and effective use of Jordan's human and natural resources. Moreover, continued research as recommended above can further the effectiveness of the overall community college education programs in Jordan.

A SELECTED BIBLIOGRAPHY

Abdul-Hamid, Rashid. Minutes of Board of Education Meetings. Amman, Jordan: Ministry of Education, 1972.

Abdul-Hamid, Rashid and Salem Jaradat. Educational Process in a Developing Jordanian Society. Amman, Jordan: National Press, 1980.

Abu Zeineh, Farid and Derar Jaradat. Analysis of Educational Research Capacity in Jordan. Irbid, Jordan: Yarmauk University, 1981.

AD-DOSTOUR: A Daily Political Newspaper. Results of Community College General Exam. Amman, Jordan, Tuesday, December 16, 1986, p. 4.

Al-Bukhari, Najati. Education in Jordan. Amman, Jordan: Ministry of Culture and Information, Jordan Press Foundation, 1973.

American Association of Community and Junior Colleges. Community, Technical, and Junior Colleges: A Statistical Analysis. Washington, D.C.: American Association of Community and Junior Colleges, 1986.

Amid East Member News. The Community Colleges of Jordan. Washington, D.C.: AMIDEAST Publication No. 2, May 1986.

Brawer, F. B. and J. Friedlander. Science and Social Science in the Two-Year College. Los Angeles: ERIC Clearinghouse for Junior Colleges, Topical Paper No. 69, 1979.

Boyer, E. L. and M. Kaplan. Educating for Survival. New Rochelle, New York: Change Magazine Press, 1977.

Bushnell, D. S. Organizing For Change: New Priorities for Community Colleges. New York: McGraw-Hill, 1973.

Carter, Edith H. "A Follow-up Study of Former Occupational-Technical Students at Virginia Community Colleges." (Unpublished paper, 1976.) Virginia: Office of Institutional Research, New River Community College.

California State Department of Education. "Summary of Source and Education Background of New Teachers in California Junior Colleges, 1963-64." (Unpublished report, 1963-64.) Sacramento: California State Department of Education, 1963-64.

Center for the Study of Community Colleges. "Report of Instructor Surveys, 1977-78." (Unpublished report, 1978.) Los Angeles: Center for the Study of Community Colleges, 1978.

Cohen, Arthur M. Focus on Learning: Preparing Teachers for the Two-Year College. Los Angeles: UCLA Junior College Leadership Program, Occasional Report No. 11, 1968.

Cohen, Arthur M. and Florence B. Brawer. The Two-Year College Instructor Today. New York: Praeger, 1977.

Cohen, Arthur M. and Florence B. Brawer. The American Community College. San Francisco: Jossey-Bass, 1984.

Cohen, Arthur M. and Florence B. Brawer. "The Collegiate Curriculum." Community College Review, 14, 3 (Winter, 1986-1987), pp. 13-20.

Council of Higher Education. Council News. Irregular periodical No. 1. Amman, Jordan: Al-Safadi Printing Press, 1983.

Council of Higher Education. Council News. Irregular periodical No. 7. Amman, Jordan: Al-Safadi Printing Press, 1984a.

Council of Higher Education. Higher Education: Current and Future Prospectives. Amman, Jordan: Al-Safadi Printing Press, 1984b.

Council of Higher Education. "Summary Data of Higher Education in Jordan: 1984/85." Council News. Irregular periodical No. 10. Amman, Jordan: Al-Safadi Printing Press, 1985, p. 11.

Eells, W. C. The Junior College. Boston: Houghton-Mifflin, 1931.

Eells, W. C. Present Status of Junior College Terminal Education. Washington, D.C.: American Association of Junior Colleges, 1941.

Gay, L. R. Educational Research: Competencies for Analysis and Application. 2nd Ed. Columbus, Ohio: Charles E. Merrill Publishing Company, 1981.

Gleazer, E. J., Jr. The Community College: Values, Vision, and Vitality. Washington, D.C.: American Association of Community and Junior Colleges, 1980.

Greenfield, Richard K. "General Education in Community College Vocational Programs." Paper presented at the National Workshop on General Education and Mission of the Community College meeting, Princeton, New Jersey, March 29, 1984.

Harlacher, E. L. and J. F. Gollattscheck. "Editors' Notes." In New Directions for Community Colleges: Implementing Community-based Education, No. 21. Eds. E. L. Harlacher and J. F. Gollattscheck. San Francisco: Jossey-Bass, 1978.

Hillway, T. Introduction to Research. Boston: Houghton-Mifflin Company, 1964.

Ibrahim, Issa. Unemployment and Education Policies in Jordan. (Unpublished paper, 1986.) Amman, Jordan: Ministry of Planning, 1986.

Illinois Community College Board. Illinois Public Community Colleges Statewide Occupational Student Follow-up Study: Final Report of a Three-Year Longitudinal Study of Fall 1974 New Students Enrolled in Occupational Programs. Springfield, Illinois: Illinois Community College Board, 1979.

Issac, Stephen and William B. Michael. Handbook in Research and Education. 2nd Edition. San Diego, California: Edits Publishers, 1981.

Johnson, B. L. General Education in Action. Washington, D.C.: American Council on Education, 1952.

Johnson, Deke. (OSU/UNDP Post 4, Technical Advisor, Jordan Fourth Education Project.) Community Education Development Model for Jordan. Amman, Jordan: Ministry of Education, 1985.

Jordan Geographic Center. Distribution of Population in Jordan - A Map. Amman, Jordan: Jordan Geographic Center, 1987.

Jordan Times: A Daily Political English Language Newspaper. Amman, Jordan: Al-Rai Foundation, 1981.

Kerlinger, Fred N. Foundations of Behavioral Research. 2nd Ed. New York: Holt, Rinehart and Winston, Inc., 1973.

Kissler, G. R. "Report on the Task Group on Retention and Transfer." (Unpublished report, 1980.) Berkeley, California: University of California at Berkeley, 1980.

Kurth, E. L. and Mills, E. R. Analysis of Degree of Faculty Satisfaction in Florida Community Colleges. Gainesville, Florida: Institute of Higher Education, University of Florida, Final Report, 1968.

Lombardi, J. Resurgence of Occupational Education. Los Angeles: ERIC Clearinghouse for Junior Colleges, Topical Paper No. 65, 1978.

London, H. B. The Culture of a Community College. New York: Praeger, 1978.

Lukenbill, J. D. and R. H. McCabe. General Education in a Changing Society. Miami, Florida: Office of Institutional Research, Miami-Dade Community College, 1978.

Marsh, J. P. and T. Lamb (Eds.) "An Introduction to the Part-time Teaching Situation with Particular Emphasis on its Impact at Napa Community College." (Unpublished paper, 1975.) Napa, California: Napa Community College, 1975.

Maryland State Board for Community Colleges. Statewide Master Plan for Community Colleges in Maryland, Fiscal Years 1978-1987. Annapolis, Maryland: Maryland State Board for Community Colleges, 1977.

Mayhew, L. B. (Ed.) General Education: An Account and Appraisal. New York: Harper and Row, 1960.

Medsker, L. L. The Junior College: Progress and Prospect. New York: McGraw-Hill, 1960.

Menke, D. H. "A Comparison of Transfer and Native Bachelors' Degree Recipients at UCLA, 1976-1978." (Unpub. Ph.D. dissertation, Graduate School of Education, University of California at Los Angeles, 1980.)

Ministry of Education. Education Law No. 16 of 1964: Amendments of December 31, 1982. Amman, Jordan: National Press, 1982.

Ministry of Education. The Statistical Educational Yearbook: 1979-1980. Amman, Jordan: Directorate of Planning and Research, Educational Statistical Section, 1980.

Ministry of Education. The Statistical Educational Yearbook: 1980-1981. Amman, Jordan: Directorate of Planning and Research, Educational Statistical Section, 1981.

Ministry of Education. The Statistical Educational Yearbook: 1981-1982. Amman, Jordan: Directorate of Planning and Research, Educational Statistical Section, 1982.

Ministry of Education. The Statistical Educational Yearbook: 1982-1983. Amman, Jordan: Directorate of Planning and Research, Educational Statistical Section, 1983.

Ministry of Education. The Statistical Educational Yearbook: 1983-1984. Amman, Jordan: Directorate of Planning and Research, Educational Statistical Section, 1984.

Ministry of Higher Education. Higher Education in Jordan in Numbers: 1984-1985. Amman, Jordan: Information Statistical Section, 1985a.

Ministry of Higher Education. Higher Education in King Hussein's Time. Amman, Jordan: Cooperative Workers' Press, 1985b.

Ministry of Higher Education. The Annual Statistical Report on Higher Education in Jordan: 1984-1985. Amman, Jordan: Information Statistical Section, 1985c.

Ministry of Higher Education. Academic Programs Offered in Public and Private Community Colleges: 1986-1987. Amman, Jordan: Directorate of Community Colleges, 1986a.

Ministry of Higher Education. Community Colleges Guide. Amman, Jordan: Ministry of Higher Education, 1986b.

Ministry of Higher Education. Teachers' Qualifications at Public and Private Community Colleges. Amman, Jordan: Registration Division, 1986c.

Ministry of Planning. Five Year Plan for Economic and Social Development: 1986-1990. Amman, Jordan: National Press, 1986.

Monroe, C. R. Profile of the Community College: A Handbook. San Francisco: Jossey-Bass, 1972.

Myran, G. A. Community Services in the Community College. Washington, D. C.: American Association of Junior Colleges, 1969.

Obeidat, T., Mohammed Alia, Kayid Abdul-Haq, and Ahmad Tawil. "Academic Programs at Jordan's Community Colleges." Teacher's Message, 24, 4 (December, 1983), pp. 219-226.

O'Banion, T. New Directions in Community College Student Personnel Programs. Washington, D.C.: American College Personnel Association, Student Personnel Series, No. 15, 1971.

Oregon State Department of Education. 1976 Community College Follow-up Survey Summary of Findings. Salem, Oregon: Career and Vocational Education Section, Oregon State Department of Education, 1977.

Palmer, Jim. "Bolstering the Community College Transfer Function: An ERIC Review." Community College Review, 14, 3 (Winter, 1986), 1987, pp. 53-62.

Philips, Donald S. "Personal and Social Background Characteristics of Entering Technician Education Students at Four Post-High School Institutions." (Unpub. Ed.D. dissertation, Oklahoma State University, 1968.)

Royal Association for Education and Culture. Needs Assessment Study of Jordan's Labor Power: 1982-1986. Amman, Jordan: Royal Association for Education and Culture, 1982.

Sewell, Donald H., Charles W. Brydon, and William D. Plosser. Report on a Statewide Survey about Part-time Faculty in California Community Colleges. Sacramento: California Community and Junior College Association, 1976.

Shafiq, Mohammad Nouri. "Higher Education Learning: Current Status and What is Needed." Amman, Jordan: Al-Rai Daily Newspaper, March 1984, pp. 9-17.

Shuraideh, Khaled, Issa Ibrahim, Mansour Otum, and Ahmad Hammoudeh. Jordan Labor Market Needs of Fields of Study until the Year 2000. (Unpublished paper, 1986.) Amman, Jordan: Ministry of Higher Education, 1986.

Slutsky, B. "What is a College for?" New Directions for Community Colleges: Responding to New Missions, No. 24. Ed. M. A. Marty. San Francisco: Jossey-Bass, 1978.

Solmon, L. C. "The Problem of Incentives." New Directions for Community Colleges: Easing the Transition from Schooling to Work, No. 16. Eds. H. F. Silberman and M. B. Ginsburg. San Francisco: Jossey-Bass, 1976.

Sullivan, Katherine. "Community Colleges: Serving Jordan's Socioeconomic Needs." Jordan, 11, 1 (Spring/Summer 1986), 2-6.

Swift, John S. "The Community College Transfer and 'Plus Two' Programs: Access to a Baccalaureate Degree in Four Years?" Community/Junior College Quarterly, 10 (1986), 307-316.

Texas Education Agency. State Follow-up Reporting, Paper Summary - Fall 1976 Occupational/Technical Graduates. Monograph No. 4. Austin, Texas: Department of Occupational Education and Technology, Texas Education Agency, 1977.

Thornton, Jr., J. W. The Community Junior College. 3rd Ed. New York: Wiley, 1972.

UNESCO. The Hashemite Kingdom of Jordan: Education and Training for Manpower Development. Paris: UNESCO, July 1982.

University of Hawaii. Survey of 1976-77 Graduates, Community Colleges. Honolulu: Community College System, University of Hawaii, Student Flow Project Report No. 35, 1978.

U. S. Department of Health, Education, and Welfare. Condition of Education. Annual Report. Washington, D.C.: National Center for Education Statistics, U. S. Department of Health, Education and Welfare, 1970-1980.

Van Dalen, Deobold B. Understanding Education Research. New York: McGraw-Hill, Inc., 1966.

World Bank. Education Special Study. (Unpublished paper, 1984). Amman, Jordan: Royal Association for Education and Culture, 1984.

APPENDIXES

APPENDIX A

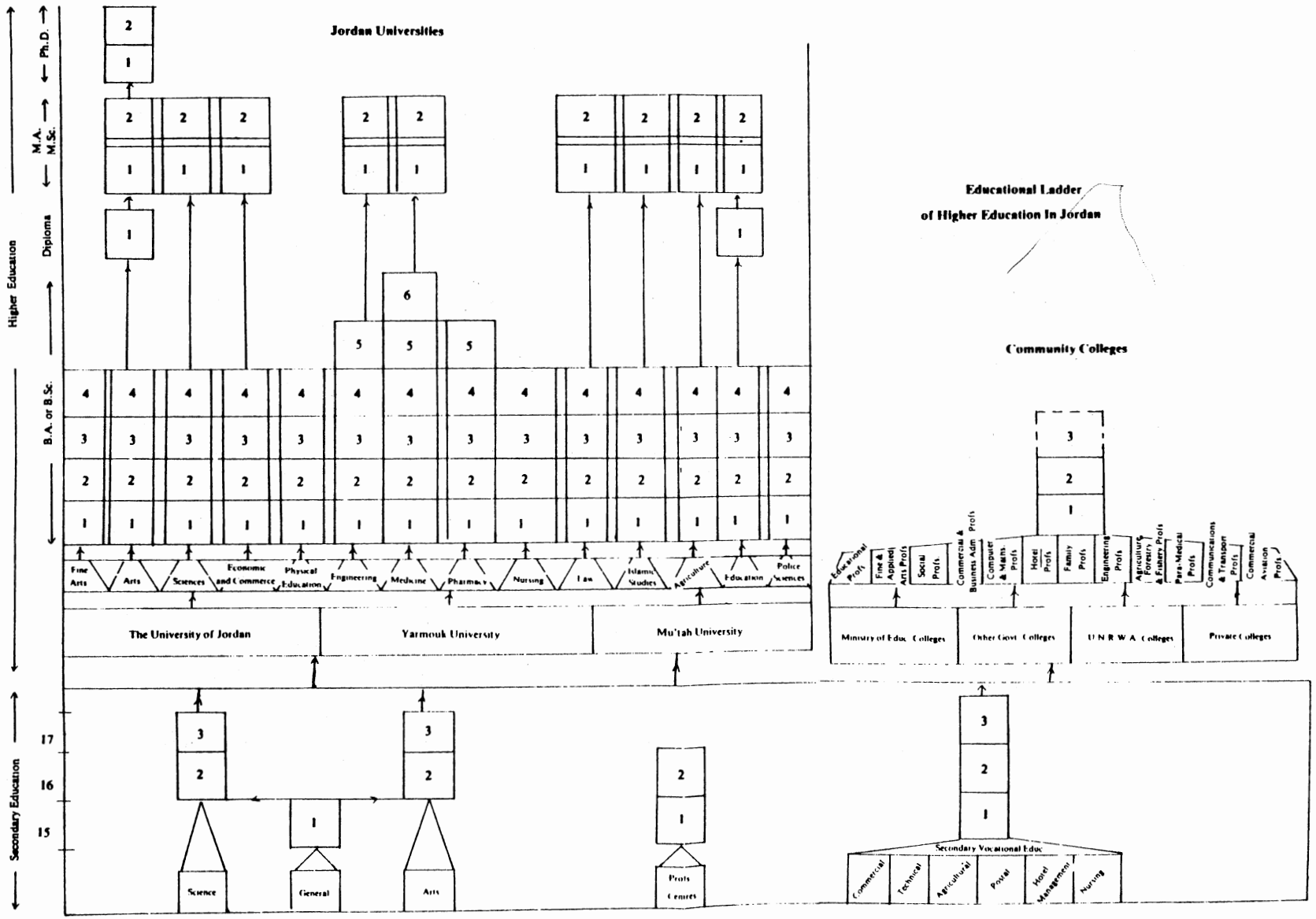
COMMUNITY COLLEGES IN THE EAST BANK OF JORDAN BY CONTROLLING AUTHORITY, YEAR ESTABLISHED, AND LOCATION

COMMUNITY COLLEGES IN THE EAST BANK OF JORDAN BY CONTROLLING AUTHORITY, YEAR ESTABLISHED AND LOCATION

	Name of Community College	Controlling Authority	Year Established	Location
1.	Amman College	Ministry of Higher Education	1952	Amman
2.	Howwara College	Ministry of Higher Education	1956	Howwara
3.	Ajloun College	Ministry of Higher Education	1964	Ajloun
4.	Princess Alia College	Ministry of Higher Education	1972	Amman
5.	Amman Polytechnic	Ministry of Higher Education	1972	Amman
6.	Shoubak College	Ministry of Higher Education	1974	Shoubak
7.	Salt College	Ministry of Higher Education	1975	Salt
8.	Irbid College	Ministry of Higher Education	1978	Irbid
9.	Karak College	Ministry of Higher Education	1979	Karak
10.	Zarqa College	Ministry of Higher Education	1980	Zarqa
11.	Hotel College	Ministry of Higher Education	1981	Amman
12.	Husn Polytechnic	Ministry of Higher Education	1981	Husn
13.	Nursing College	Ministry of Health	1953	Amman
14.	Princess Muna Nursing College	Armed Forces Head Quarter	1961	Amman
15.	Cooperative Institute	Cooperative Organization	1963	Amman
16.	Royal Flying Academy	Civil-Aviation Agency	1963	Amman
17.	Statistics Training Center	Department of Statistics	1963	Amman
18.	Social-Welfare College	Ministry of Social Development	1964	Amman
19.	Banking Studies Institute	Central Bank	1970	Amman
20.	Islamic Studies College	Ministry of Islamic Affairs	1972	Amman
21.	Queen Nour Flying College	Civil-Aviation Authority	1972	Amman
22.	Paramedical Programs Institute	Ministry of Health	1973	Amman
23.	Paramedical Programs Institute	Ministry of Health	1979	Irbid
24.	Jordan Geographic Center	Jordan Geographic Center	1975	Amman
25.	Telecommunication College	Telecommunications Authority	1982	Amman
26.	Nursing College	Ministry of Health	1984	Irbid
27.	Nursing College	Ministry of Health	1984	Zarqa
28.	Technology College	Yarmouk University	1984	Irbid
29.	Wadi-Seer College	UNRWA	1960	Wadi-Seer
30.	Amman Training College	UNRWA	1971	Amman
		Board of Regents Chairperson of Private Colleges		
31.	Qadessieh College	Abdalla Abu-Moghli	1967	Amman
32.	Arabieh College	Mohammed Armouti	1975	Amman
33.	Princess Sumayieh College	Dr. Albert Butros	1977	Amman
34.	Khawarizmi College	Ziad Sabri	1978	Amman
35.	Intermediate College	Ali Odeh	1979	Amman
36.	Andalus College	Abdul-Rahman Bushnaq	1979	Amman
37.	Queen Alia's College	Dr. Samih Abu-Moghli	1979	Amman
38.	Hittin College	Bahjat Talhouni	1979	Amman
39.	Zarqa National College	Ali Hindawi	1979	Zarqa
40.	Islamic Community College	Dr. Ishaq Farhan	1979	Zarqa
41.	Ibn-Khandoun College	Khalil Sayyed	1979	Irbid
42.	Razi College	Khalil Sayyed	1979	Irbid
43.	Princess Sarwat College	Princess Sarwat	1980	Amman
44.	Arab Community College	Hikmat Saket	1980	Amman
45.	National College	Basheer Sabbagh	1980	Amman
46.	Jerusalem College	Dr. Abdul-Aziz Khayat	1980	Amman
47.	Petra College	Anwar Abu-Moghli	1980	Zarqa
48.	Jerash College	Dr. Ahmad Rabi'	1980	Jerash
49.	Jordan Community College	Abdul-Ra'ouf Rawabdeh	1981	Amman
50.	Qurdova College	Abdul-Rahman Bushnaq	1981	Zarqa
51.	Gharnata College	Abdul-Rahman Bushnaq	1981	Irbid
52.	Mafraq College	Dr. Ibrahim Abu-Ain	1985	Mafraq

APPENDIX B

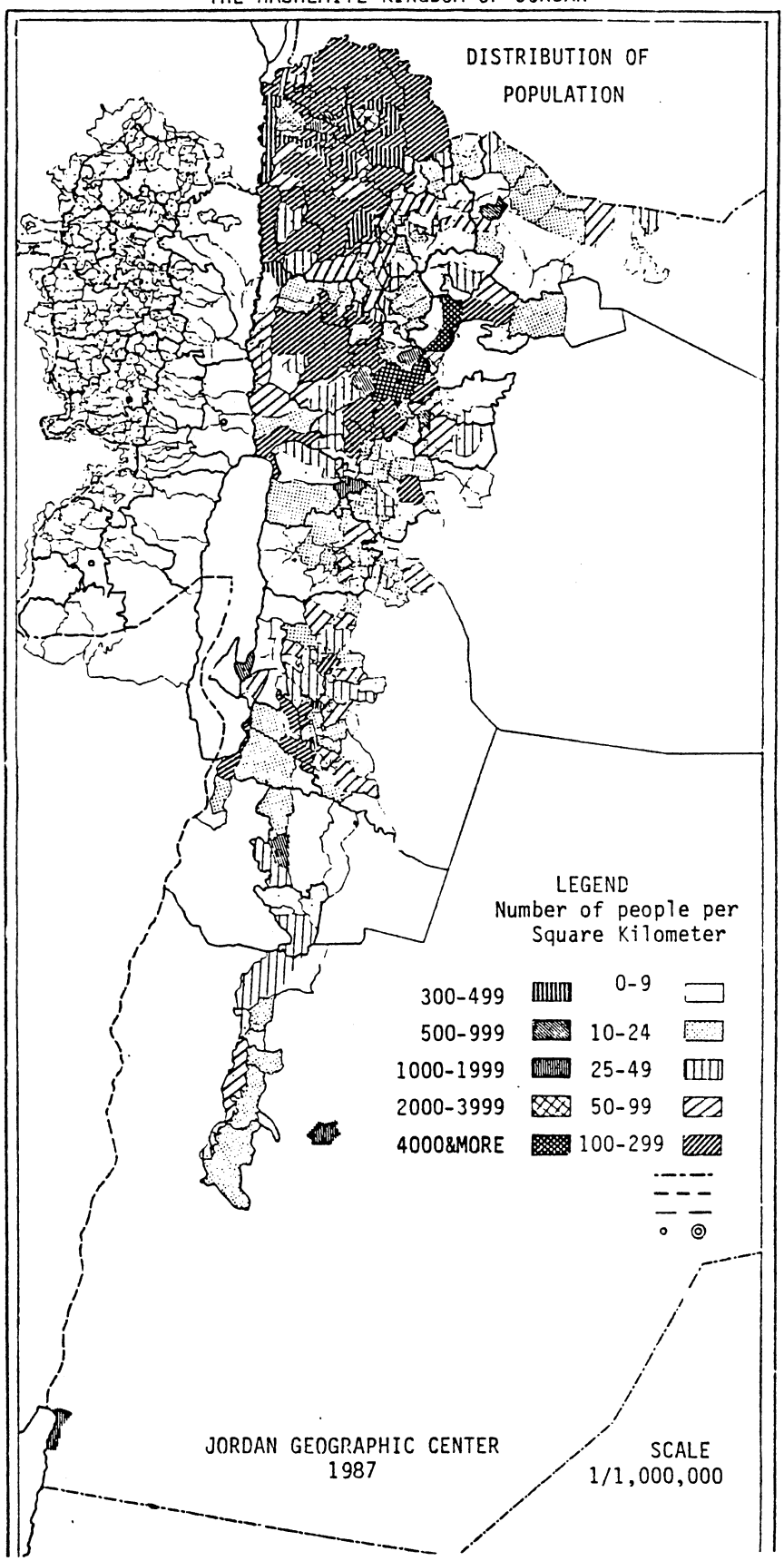
HIGHER EDUCATION LADDER IN JORDAN


Educational Ladder
of Higher Education In Jordan
Jordan Universities
Community Colleges
Higher Education
Secondary Education
Ph.D.
M.A.
M.Sc.
Diploma
B.A. or B.Sc.
17
16
15
Fine Arts
Arts
Sciences
Economic and Commerce
Physical Education
Engineering
Medicine
Pharmacy
Nursing
Law
Islamic Studies
Agriculture
Education
Police Sciences
The University of Jordan
Yarmouk University
Mu'tah University
Science
General
Arts
Profs Centres
Secondary Vocational Educ
Commercial
Technical
Agricultural
Postal
Hotel Management
Nursing
Educational Profs
Fine & Applied Arts Profs
Social Profs
Commercial & Business Adm Profs
Computer & Mathm. Profs
Hotel Profs
Family Profs
Engineering Profs
Agriculture Forestry & Fishery Profs
Para-Medical Profs
Communications & Transport Profs
Commercial Aviation Profs
Ministry of Educ. Colleges
Other Govt. Colleges
U N R W A Colleges
Private Colleges

APPENDIX C

DISTRIBUTION OF POPULATION IN JORDAN, A MAP

THE HASHEMITE KINGDOM OF JORDAN



APPENDIX D

JORDAN EAST BANK POPULATION, A GRAPH

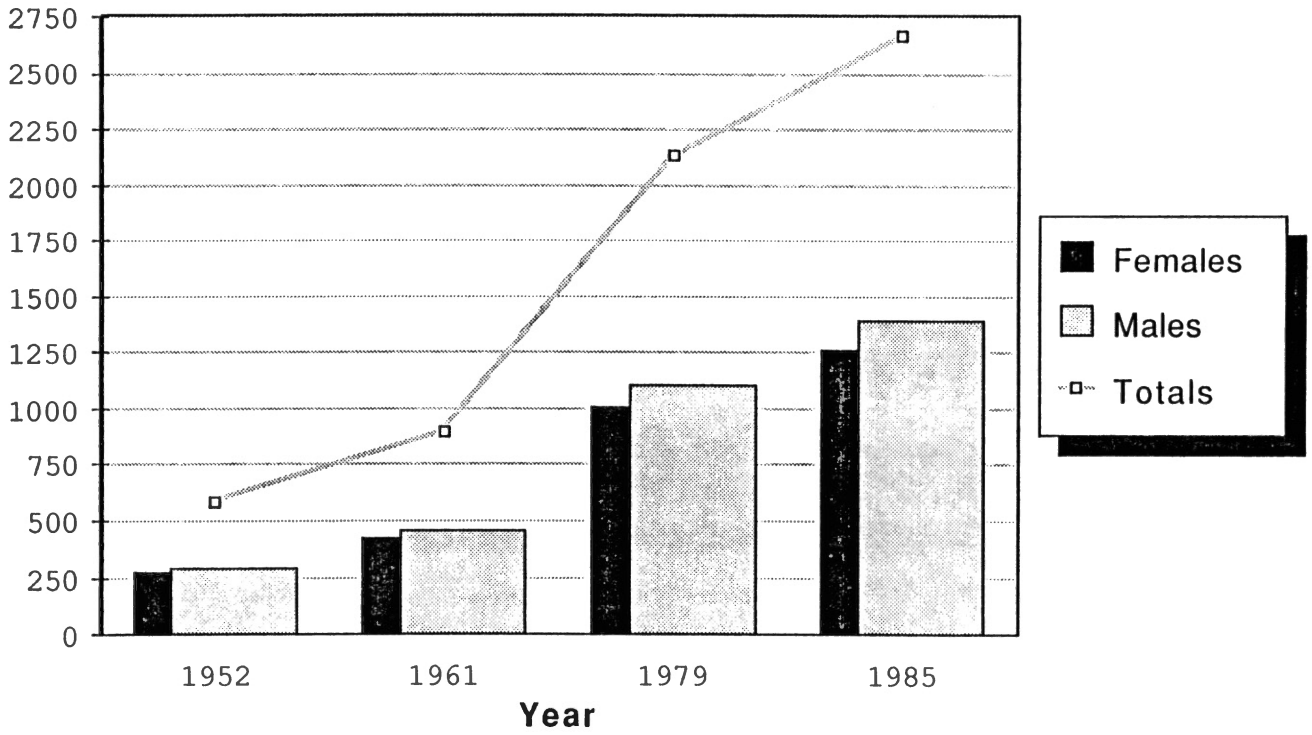


Figure 12. East Bank of Jordan Population According to Sex (In Thousands)

VITA

Kamal Kamel Abusamaha

Candidate for the Degree of

Doctor of Education

Thesis: A PROFILE OF CURRENT ACADEMIC PROGRAMS AND FACULTY QUALIFICATIONS IN JORDAN'S PUBLIC AND PRIVATE COMMUNITY COLLEGES

Major Field: Higher Education

Biographical:

Personal Data: Born in Tulkarm, West Bank of Jordan, December 27, 1945, the son of Mr. and Mrs. K.N. Abusamaha.

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Professional Experience: Teaching English language, Hussein College, Amman, September, 1968 to August 1971; Teaching, Commercial Secondary School, Amman, September, 1971 to August 1976; Teaching, Abdalla Ibn Yassin Secondary School, Inezgane, Morocco, September, 1976 to August 1981; Teaching, Commercial Secondary School, Amman, September, 1981 to August 1982; Translating (part-time job), Ad-Dostour Daily Newspaper, Amman, June, 1982 to August, 1985; Teaching, Ahmad Touqan Secondary School, Amman, September, 1982 to December, 1982; Study Leave at OSU, January, 1983 to July, 1983; member of the Research Division, and Evaluation and Follow-up Division, Ministry of Education, Amman, August, 1983 to August, 1985; Graduate Research Assistant, Jordan Fourth Education Project, Office of Education Research and Projects, OSU, August, 1985 to July, 1987; Study Leave at OSU, August, 1985 to present.