

GRADUATE STUDIES AT THE UNIVERSITY OF
JORDAN: GROWTH CONSIDERATIONS
AND FUTURE ROLE

BY

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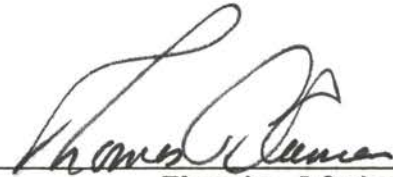
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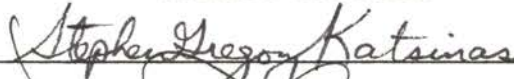
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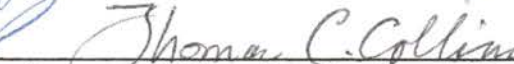


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IN THE NAME OF ALLAH, MOST GRACIOUS, MOST
MERCIFUL, PRAISE BE TO ALLAH, THE
CHERISHER AND SUSTAINER OF
THE WORLD

CHAPTER I

INTRODUCTION

Structured education is an important issue for every nation, as it holds the key to the overall progress of a country. Education advances science, technology, and humanities when applied to all aspects of life of a people of any country and can transform and advance that society to a better position among other nations.

There is no doubt that education for a developing country can never be over prioritized. With the right type of education, including the postsecondary level, a developing country can strive to achieve self-sufficiency and advance the level of its prosperity. Today, no one can visualize a single aspect of the life of a nation that does not depend upon education to achieve a higher level of excellence and progress. Developed countries have achieved their leading role and developmental growth and successes through well emphasized educational programs at all levels, particularly through institutions of higher education.

The Hashemite Kingdom of Jordan is one of twenty-two Arab states which are still considered among the less developed nations. In 1916, Sharif Hussein of Mecca, King Hussein's great grandfather, led the Arab national movement in its revolt against Ottoman domination. In 1923, the

independent Emirate of Transjordan was established under the British aegis, with Emir Abdullah, son of Sherif Hussein, as its leader. On May 25, 1946, when the Hashemite Kingdom of Jordan achieved full independence as a sovereign state, Emir Abdullah became King. Upon King Abdullah's assassination in 1951, his elder son Prince Talal assumed the throne, but a year later he relinquished it due to ill health. In 1952, Prince Hussein was proclaimed King, and the following year, at the age of 17, he made his formal ascension to the throne and transformed the Hashemite Kingdom of Jordan into the what it is today.

Jordan is located at the crossroads of the Middle East which forms the junction of Europe, Asia, and Africa. Jordan is situated in the heart of the Arab World, bounded by Syria to the north, Iraq to the east, Saudi Arabia to the east and to the south, the Gulf of Aqaba and the Red Sea to the south, and the occupied West Bank to the west. Jordan has a population of four million people who live on about 38,000 square miles, roughly the land mass of Georgia, with a population growth rate of 3.8 percent annually (Sullivan, 1986, pp. 2-6).

Under the direction of King Hussein Ben Talal the country has been one of the most stable Arab states. It has moved further than most of its Arab neighbors toward a pluralistic, democratic-based society, with basic freedoms of the press and assembly guaranteed (Lunt, 1989, p. 222). The considerable progress which Jordan achieved during the

past 25 years can be traced to its economic growth which includes significant improvement in the field of public welfare and health care, a rise in the standard of living, the spread of mass communications, the national infrastructure, education, and greater work opportunities for the people. The general democratization of the political life has increased the base of participation through voting, planning, and decision-making; public participation produced decentralization of governmental authority. All this has led to an expanded demand for educational programs throughout the country.

One hypothesis of this study is that the Jordanian higher education system reflects the growth which took place in Jordan since its independence in 1945. The country has moved, in a few years, from a highly underdeveloped country to one of the more developed countries of the Middle East. This rapid expansion has presented a growing demand for better educated citizens and particularly persons with graduate degrees in all disciplines. The majority of the following four pages document aspects of the development of Jordan in population expansion, health services, education, agriculture, industry, expansion of females in the work force, and the resulting need for educated persons which this developmental process has generated.

The population of Jordan increased from 1,330,021 million in 1952 to 3,904,300 million in 1992 (Ad-Dustour Newspaper May 2, 1993). This represents a population growth

of 3.8 percent annual increase in 40 years. During the past few decades Jordan has witnessed similar growth in the field of education. The number of students rose from 101,763 in 1952 to 240,003 in 1955 to 863,009 in 1985 to 1,214,064 in 1992. The number of public and private schools rose from 487 in 1952 to 3,780 in 1992, and the number of classroom teachers increased from 2,378 in 1952 to 51,948 in 1992. The number of community colleges increased from two in 1952 to 51 in 1992, and their graduates increased from 53 to 15,091 during the same period. The first university was established in 1962, and the number of universities in Jordan increased to eleven by 1992. The number of students enrolled at those universities increased from 167 students in 1962 to 44,027 students in 1992 (Ad-Dustour Newspaper May 2, 1993).

The Ministry of Education increased its expenditures from 14.8 million Jordanian Dinars (JD) in 1975 to 39.6 million JD in 1980. This number increased to an expenditure of 65.5 million JD in 1984. Education is one of the most important service sectors in Jordan as evidenced by the extensive growth in governmental expenditure of funds in that area. The number of persons employed in the education sector rose from 33,000 in 1980 to 40,005 in 1985 (Ministry of Planning Five Year Plan 1986-1990).

The Ministry of Health increased its budget from one million JD in 1961 to twenty million JD in 1984. During the period of 1950 to 1992 there has been significant progress

in the health services at all levels, as indicated by the following: (1) The number of hospitals increased from 10 to 63; (2) The number of dentists increased from 37 to 1,327; (3) The number of physicians rose from 52 to 7,003; (4) The number of pharmacists increased from 81 to 2,468; (5) The number of health clinics rose from 46 to 900; and (6) The number of nursing schools increased from one to five (Ad-Dustour Newspaper May 2, 1993).

The field of agriculture is considered to be an important sector in the development of Jordan since it is the main source of income for about 20 percent of the population. Agriculture provides employment for 12 percent of the labor force, contributes to improving the balance of trade, and is important in achieving food requirements for the country. National income accounts show that net income from agriculture increased in real terms from 69.4 million JD in 1980 to 97.5 million JD in 1985 (Ministry of Planning Five Year Plan 1986-1990).

The industrial sector shows growth also. This sector's income improved from 167.1 million JD in 1980 to 211.8 JD million in 1985. This represents a total increase of about 26.8 percent in only five years. Production by the Phosphate Mines Company rose from 3.9 million tons in 1980 to 6.1 million tons in 1985. The Jordan Cement Company increased its production from 913,000 tons in 1980 to 200,067 tons in 1985. Production by the Petroleum Refinery rose from 1.760 million tons in 1980 to 2.424 million tons

in 1985. The growth in industrial production had a positive impact on the export performance of the industrial sector. Industrial and mining exports, in current prices, rose from 96.6 million JD in 1980 to 213.7 million JD in 1985. This is an annual average rate of 17.2 percent. Investments in phosphate and potash projects produced an increase in mining exports from 27.2 million JD in 1980 to 98.5 million JD in 1985, at annual average growth rate of 15.9 percent (Ministry of Planning Five Year Plan 1986-1990, pp. 554-556).

As another indicator of the progress and growth in the Jordanian government and society an increasing number of women are now participating in the labor force. Female enrollment in educational institutions has risen, particularly in higher education (see Table IX, p. 64, and Table XI, p. 87). The rate of participation by women in the labor force showed a modest rise during the period 1970 to 1985 from 7.7 percent to 12.5 percent (Ministry of Planning Five Year Plan 1986-1990, p. 197).

Other areas of expenditure from government coffers that indicate an increase in the expansion and development of Jordanian during the period of 1970 to 1987 are as follows:

- (1) The government increased economic development expenditures from 15.6 percent of the national budget to 17.2 percent;
- (2) Transportation service expenditures were increased from 3.12 percent to 3.19 percent;
- (3) Expenditures on the social services increased from

10.216 million JD to 115.671 million JD (Ministry of Planning Five Year Plan 1986-1990). The University of Jordan has worked in cooperation with the Jordanian government to meet the specialized needs generated by the demographic and social changes, and the agricultural, industrial, and general economic expansion. The University provided necessary consulting and planning services as well as the training of men and women to fill the various needs of the resulting expansion of the job market. One of the most important of those expanding job markets is that of agriculture.

It can be said that Jordan's economy is based primarily on agriculture, services, and industry. Large-scale industries, which include the mining of mineral resources and the manufacturing of cement, fertilizers and refined petroleum products, account for 17.2 percent of the GNP. The services sector, which consists mainly of government, tourism, transportation, communication and financial services, contributes 61 percent to the economy and absorbs approximately two-thirds of the country's labor force. Agricultural production, boosted by expansion of irrigation and technological advances in farming methods, especially in the cultivation of fruits and vegetables, is the basic source of income for approximately 20 percent of the population (Ministry of Planning, 1986-1990). These advances have been achieved despite the lack of natural resources such as oil or minerals except phosphate which the

neighboring Arab states enjoy, as well as being situated in a region which in recent history has witnessed one crisis following another.

To meet this growth for services, the government and people of Jordan have recognized that higher education is of great importance to the development of the country. The establishment of the Ministry of Higher Education in 1985 is an indication that the Jordanian government is giving considerable attention to institutions of higher learning. This ministry's duties are to define the objectives of higher education, plan and accredit institutions, and establish admission policies.

The establishment of the first university in Jordan in 1962 was a reflection of the need for educated citizens to provide the ever expanding services of a developing economy and to form a national point of view to compete in the field of higher education with some of Jordan's neighbors. By 1988 higher education was being provided by four universities and fifty-two community colleges, all of which started after the establishment of the University of Jordan. The University of Jordan was followed by Yarmouk University in 1978, Mu'tah University in 1981, and the University of Science and Technology in 1988. Each of these four universities is an independent institution but they cooperate with each other through the universities coordination office, and they are all linked to the Ministry of Higher Education (The Ministry of Higher Education,

1988). In 1993, one additional public university and four private universities were added (Al-Ra'i Daily Newspaper, May 22, 1993).

Instruction at the University of Jordan began on December 15, 1962, with one faculty, the faculty of arts. There were eight faculty members with 167 enrolled students. Today, the University of Jordan comprises fourteen faculties, including more than 55 academic departments offering about 3,500 courses a year, with 797 teaching staff of different academic ranks. The total number of students is 21,042. The attractive 50-building campus features the traditional Islamic style of architecture and is situated close to Amman, the capital city.

The University of Jordan awards the following degrees: B.A./B.Sc., M.A, M.Sc., and Ph.D., as well as a Diploma of Higher Studies. In addition to 14 faculties (the actual degree granting faculties), there are two specialized deanships: The Deanship for Scientific Research and the Deanship of Student Affairs. In keeping with its mission, the university has established specialized scientific centers to provide better services to the Jordanian community and to respond to its ever changing needs.

To ensure a greater measure of interaction between the university and the community and to serve national needs, graduate studies programs were introduced. Jordan also introduced graduate studies programs to provide an alternative to students who otherwise would normally pursue

their higher education abroad, thus limiting the financial outflow of Jordanian assets.

Before the establishment of the University of Jordan, Jordanians wishing to pursue higher education degrees had to do so in the universities of neighboring Arab countries, Europe, or the United States. With the establishment of the University of Jordan in 1962. Some students were given an affordable opportunity to pursue higher education goals in their native country.

The University of Jordan is considered to be the leading university in the country. The mission of the University of Jordan is to develop students' knowledge, personal growth and to provide them with the intellectual and the professional skills needed to enrich their understanding of and enable them to participate effectively in the society. The University has expanded its higher education programs to meet the more advanced and specialized economic and social needs of the Jordanian citizens, and by its example it has led other public universities into providing the educational services required to meet the needs and the challenges of the Jordanian people. The university has also provided a place for Jordan in educational development, especially among the Arab states.

To understand the impact of the expansion in graduate programs at The University of Jordan on both students and society, the researcher considered it important to study the programs offered by the University in the major fields of

study.

The programs were studied from four various aspects: (1) the concept of the graduate studies at the university, which includes growth and development; (2) Jordan's needs and the demand for programs made by the Jordanians; (3) the economic and social factors which have encouraged the university to establish the programs; and (4) a projection of the future of the graduate programs and what role they will play in serving the needs of the citizens and the country.

Purpose of the Study

The present study was undertaken with the following objectives:

1. To discuss the development of the graduate programs at the University of Jordan from the date of their establishment to the present.
2. To explain why the graduate programs were intended to fulfill some of the needs of Jordan for trained graduate students.
3. To study specific elements of quality of graduate programs in the United States to determine whether such elements are found in the graduate programs of the University of Jordan .
4. To project what role the graduate programs at the University will play in the future toward sustaining the country's development.

Definition of Terms

Faculty: The actual degree program for each specialization leading to the award of a degree.

Graduate Studies: Graduate education will be defined in this study as post-baccalaureate study in any discipline, or field, or area.

Scientific Centers: The University of Jordan has established ten centers as part of the university mission of serving the Jordanian community and taking part in the comprehensive development plans in Jordan and the Arab World.

The Deanship of Scientific Research: Was established in 1973 as a Deanship of Scientific Research and Graduate Studies. Its major objectives was to support academic research and to issue a journal concerned with publishing original academic and scholarly research conducted by the teaching staff of the University of Jordan and other Arab and foreign universities.

The Deanship of Student Affairs: The basic purpose of this deanship is to care for the student as an integrated whole person. This care is motivated by the desire to help him/her develop into a good, useful, faithful, and loyal citizen. These are addressed goals through plans and programs involving carefully conducted studies for activities which are goal-oriented under the direct supervision of the deanship.

University: This refers to the University of Jordan.

Tawjihi: This is a Jordanian diploma which is equivalent to the diploma granted to high school students in the United States.

Graduate Programs: Refers to the Master's degree, Doctoral degree, and Diploma of Higher Studies.

Diploma of Higher Studies: Refers to the degree offered by the University after the Bachelor's degree upon completion of 30 credit hours.

Graduate Student: Refers to a student who is pursuing a Master's or Doctoral degree.

Undergraduate Student: Refers to a student who is pursuing a Bachelor's degree.

Bacaloryus Fil Adab: A degree equivalent to the Bachelor's of Art in the United States.

Bacaloryus Fil Uloum: A degree equivalent to the Bachelor's of Science in the United States.

Magestir Fil Adab: A degree equivalent to the Master's of Art in the United States.

Magestir Fil Uloum: A degree equivalent to the Master's of Science in the United States.

Doctorah Fil Falsafah: A degree equivalent to The Ph.D. Degree in the United States.

The Arab World: Refers to the Arab States.

Dirasat: An educational research journal published by The University of Jordan.

Limitations of the Study

Since the establishment of the University of Jordan in 1962, one of its goals was the introduction of a graduate studies program. This was accomplished in 1968.

By presenting the nature and aims of the graduate study programs at The University of Jordan, the study was limited to the factual and growth aspects of the programs since they were established and to the projected future role they will play. In particular, the study sought to establish how the graduate programs of the University of Jordan were a response to the needs of Jordanian students as well as the demands of Jordanian society in general.

CHAPTER II

REVIEW OF THE LITERATURE

This review of the literature will be limited to graduate education and higher education (1) in the United States; and (2) in the Arab world. The following summarizes the history and main events leading to the establishment and the development of higher education and graduate programs in the United States, and in the Arab world.

Graduate and Higher Education in the United States

Graduate education is an important part of the higher education system in the world. Thus, the Arab world, Europe, and the United States have utilized graduate education to address the political philosophies, social, and economic needs of their countries.

Every age group and every country develops its own educational system. The prevailing social, economic, and political philosophies play a dominant role in its development. Likewise, the discovery of new knowledge and the emergence of new needs affect the pattern of development. Since their early beginning, universities have been concerned with a wide variety of intellectual fields depending on the community they are in. They are now, as in the past,

associated with scholarship, philosophies of life, educational systems, professional training, with state, law and finance, and in recent times, with interests in technical progress and the economic system (Carmichael, 1961, p. 64).

Storr (1953) stated that the effort to found universities in the United States was intended to develop those programs which could provide, in some way, different categories for graduate work. Men like Benjamin Pierce thought of the university primarily as a repository of all knowledge, a living encyclopedia. Their chief desire was to assemble the preeminent academic talent and some of the material resources which the multiplication of small colleges had scattered up and down the country in one location. The effort to found a great university in New York demonstrated the magnitude of the difficulties to be overcome. Another view of the true character of a university was closely associated with Yale. It resembled a combination of the German gymnasium and the German university, which consisted of an undergraduate college to which were added distinct graduate courses, and possibly with facilities for unmatriculated students.

Carmichael (1961) noted in his study of graduate education that Harvard established a graduate school in 1872; John Hopkins was founded in 1876, with a major emphasis upon research from the beginning, and Chicago was opened in 1891. Chicago was the first institution to announce that, among its purposes, teaching was secondary to research. Graduate

schools developed departments of advanced studies which have carried the torch for this research activity.

Bells (1963) suggested that not only is society witnessing a revolution of attitudes toward men and women of high ability and advanced training, but also that such men and women are in demand on a wide scale. Today, as a result of far reaching social and technological developments in society, the need to identify and utilize is of great importance.

McCarthy and Deener (1970) define the graduate program which includes all or most of the following elements: (1) lectures, seminars, and guided independent study; (2) use of special facilities such as libraries, laboratories, computers; (3) research or investigational activities; (4) internship or guided introduction to professional practice; (5) student services, such as admission, enrollment, counselling, housing, health activities; (6) operational and administrative services for handling both academic and fiscal affairs; and (7) graduate student financial aid.

McCarthy and Deener went on to say that colleges and universities which offer graduate degree programs must recruit and maintain qualified faculties with an appropriate commitment to research, whereas in undergraduate and community colleges, faculty devote their attention mainly to formal teaching. Institutions which offer Doctor of Philosophy degree programs must be staffed with professors who can and do study and teach at the frontiers of knowledge, examine the

quality of the evidence available, extend evidence and concepts to the production of new knowledge, educate or train graduate students who themselves discover new knowledge, and finally advance the institutions's overall capabilities in original scholarship and research.

Cartter (1966), in viewing the strengths and the weaknesses of graduate schools, found that graduate schools have successfully fulfilled their mission in graduating well-trained scholars for both teaching and research.

The awarding of the first Ph.D. by Yale in 1861 established several of the elements of a graduate studies program. At that time it was decided that the degree would follow the German university model, and be called a Doctor of Philosophy. Candidates for the degree would pursue their studies for the year preceding their examination for the degree, and the examination would cover all the courses prescribed. The candidates would also present a written thesis reflecting the results of original investigation. Thus, the Ph.D. degree with its course requirements, comprehensive examinations and thesis established the direction of graduate study.

Johns Hopkins and Clark Universities attempted unsuccessfully to offer coursework only in the graduate fields. In those universities, graduate divisions offered Master's and the Ph.D. programs, in which complete requirements gradually grew from two to six years. Some graduate programs required up to eight additional years of

graduate study (Mayhew, 1972).

Rudolph (1990) stated that the German model was followed in American universities. In this model, there was an emphasis on the arts and sciences and on the idea of a body of scholars and students pushing forward the frontiers of pure knowledge for the benefit of society.

A national commitment to graduate education is essential. A strong graduate education program is vital to the continuing health of all society. Higher education provides new knowledge it discovered through research, and the services it supplies are central to the health of the economy, to the well-being of the citizens, and to the defense of the nation. A national commitment means maintaining the opportunity for the nation's most talented and capable students to go to graduate school so that they can, in turn, better serve society. Finally, a national commitment provides the impetus for action (Smith, 1985, pp. 169-179).

No segment of higher education has so significant a role to play as the graduate school during the 1960's. It was the pace setter for enterprise. Much depended upon its effectiveness during this critical period when college and university enrollment climbed to an unprecedented high. College educated individuals are critical to the health of the American economy. The health of the economy is dependent upon the development of qualified scientists, qualified researchers, and more support for educating those professionals. Additionally, higher education is recognized

as essential to the nation's long-range defense. Top future leadership in all phases of American economic, scientific, political, and industrial life will require more than the first degree (Carmichael, 1961).

Carmichael, in stressing the needs of graduate schools, said that not only higher education, but the whole American economy owes a great debt to the graduate schools and their products, for they have made American research-conscious and thus indirectly have been responsible for the great economic and industrial progress of the past century. After all, the success of graduate education is the concern not of graduate schools alone but of secondary schools, colleges, and universities-indeed, of the entire educational system. Inefficiencies in these schools affect education at all levels, hence all those interested in educational programs have a stake in seeing that they are fully effective in their operation.

Tooms and Tierney (1991), in reviewing the college and department curriculum, stated that every institution partly reflects the social, economic, and political system, but partly also lives a life of its own, independent of the interests and beliefs of the community. Kent and Spring (1972) commented on the best universities by saying that,

perhaps the best most universities can do will be to adopt the practice that already exists in some graduate schools that permits any student, with the advice of a small group of faculty members of his selection, to design his own program drawing on the total resources of the university, provided only that competent control

of suitable analytical techniques emerges, and that a serious research attack is made on an interesting or significant problem (p. 146).

Kent and Spring also said that graduate education, in the American style, embraces both course work that is aimed at bringing the student to an understanding of the conceptual structure at the frontier of his field, and research should be aimed at pushing the frontier back further. Thus graduate work is appropriate in those fields, usually called disciplines, in which there is a body of organized knowledge that can be mastered and, through research, expanded. They continue by saying that the graduate schools are needed to sustain and enhance the significance of the disciplines. Graduate education is aimed at enhancing competencies to develop positive social solutions that contribute to the betterment of lives in the country and abroad. Seeking a better way is the task that lies ahead.

Spurr (1970), in addressing the needs for graduate education, emphasizes that technology requires a vast army of professionals to keep it in motion. Industries that are involved in research, development, and even production of modern products have increasing needs for scientists who have much greater exposure to many areas of modern physics, such as quantum mechanics, than can possibly be realized in an undergraduate program. Many of these industrial jobs may require some exposure to the techniques and results of modern physics, while not demanding the training as a fully independent investigator that is the primary aim of the

research experience provided in the Ph.D. program.

Although the Master's degree dates back to the founding of the first universities, it has undergone more vicissitudes than the Bachelor's or the Doctor's degrees. Tally to the point of becoming a formality in England, it was revived as a degree and as a first professional degree in the United States and, more recently, in western Europe. A problem exists, however, in lack of uniformity of standards, in the multiplicity of forms of the degree, and in the fact that the holder of the Bachelor's degree may proceed directly to the doctorate without completing a Master's degree enroute. The word "master" is derived from the Latin word magister meaning teacher. The Master of Arts degree originated at the University of Paris in the twelfth century as a formal designation of a license in the faculty of arts. In the United States, the Master's degree is generally recognized as the first postbaccalaureate degree both in liberal arts and in professional fields (Spurr, 1970).

The Master's degree in America has passed through various stages during the three centuries that it has been in use. In 1899, a Harvard University professor said that there had been at least six different classes of Master's degrees in use at the University (Bells, 1963).

The Doctor's degree represents the most advanced degree conferred by American institutions of higher education. The Oxford English Dictionary defines a doctor in the academic sense as "one who, in any faculty or branch of learning, has

attained to the highest degree conferred by a university." Without question, the most important research-based doctorate in American institutions of higher education is the Doctor of Philosophy. The Ph.D. was first provided as an earned research degree in the United States at Yale University in 1860. The professional type of earned doctorate, as distinguished from the research type, are, in American practice, limited almost entirely to medical and allied fields (Bells, 1963).

Graduate And Higher Education in the Arab World

Graduate study is an area of higher education in the Arab World that is constantly undergoing change. Graduate study has assumed a special urgency for two interrelated reasons: expanding development plans are mushrooming in the Arab states; and pressing needs for highly trained human-power to develop and utilize the vast resources of the region. It is worth noting in this context that virtually every field for research and knowledge, as it pertains to the region, is still insufficiently explored, if at all (Massialas and Jarrar, 1983).

Graduate study in the Arab universities, in its approach, standards, and level of excellence, depends on the system followed. Universities following the European model depend on research and writing papers. Course work is minimal, if at all applicable, especially for the doctoral

level. The main vehicle for training that students have at their disposal is the dissertation and its defense. The primary source of student guidance comes from a major professor who is assigned to oversee the work of candidates who do most of the necessary work independently.

In the universities that follow the American model of higher education, which stresses course work as a major part of graduate study, the process appears to be more productive for the student. Graduate students have to take a certain number of courses and to pass a comprehensive exam before they begin work on their thesis or dissertation. Namely, faculty/graduate contact is more frequent in this system. The progress of graduate students is more closely monitored. Student capabilities are enhanced as they advance through required courses. Students under the American model are required to pass with a minimum of a B average work in order to be eligible for graduation, upon the successful defense of a thesis for a Master's degree or a dissertation for Doctoral degree (Grigg, 1965).

Graduate programs in the Arab World are burdened by the lack of proper research facilities, properly equipped laboratories and workshops, and library resources and facilities (Badran, 1989). The higher education system in the Arab world has witnessed impressive gains in the last three decades. Despite these gains, some of the more fundamental characteristics have not only proven impermeable to change and reform, but have almost become endemically entrenched.

In fact, higher education in the Arab world has failed to measure up to the task of revitalizing the Arab social order and recasting it to meet the challenges of the times.

Massialas and Jarrar suggest that:

The university in its modern form is a new and alien phenomenon in the Arab world ... there is a lack of understanding by the society and the state of the role of the university. This condition is a result of the imposition of higher education upon the Arab society -- an imposition which corresponded neither with the society's intellectual and cultural development nor its material growth (p. 194).

The ministries of higher education in the Arab world assume responsibilities for colleges and universities. At the higher institution level, some of the Arab countries have free education up to the doctoral level, while others offer free education up to the postsecondary level. The Arab world is witnessing a stage of development which creates a high demand for qualified graduates of higher institutions. Governments in the Arab countries have found a great need to expand their higher education institution system and to refine their educational policies to address their plans of development.

In most of the Arab countries, the requirement for the Master's degree is two to three years of study beyond the Bachelor's degree. An additional two to three years beyond the Master's degree is required for the Ph.D., including the completion of research, a dissertation, and in some cases, an oral examination (Schmida and Keenum, 1983).

Prior to World War II, the majority of Arab students

went to the United Kingdom, France, and other European countries for studies in postsecondary education. Gradually, the interest of most Arab countries in overseas education has shifted from Europe to the United States, even for those who disagree with the policies of the United States (Sawa, *The University of Jordan's: Dirasat*, 1987, pp. 6-36). After World War II, most of the Arab countries achieved independence. They entered the stage of overall development through modern science and technology, but clung to many of their traditional values. The Arab governments began opening their doors to outside influence to develop their higher educational systems, particularly to Western Europe and the United States. Today, many Arab educators and politicians, recognizing the need for science and technology, are calling for educational reforms that includes the rapid adoption of Western ways. Since the United States has been the global center of technological development, most of the Arab governments send students to the United States to gain more education and training, primarily at the graduate level.

Sawa (1987), in his article, stated that the Arab governments and people are generally convinced that economic and social development, currently pursued in varying degrees in all Arab countries, depends mainly on educational development. These governments are convinced of the necessity to orient and utilize education to enable everyone to acquire the intellectual and technical skills to

reach the level of awareness which will make them effective promoters of development. They realized in all Arab countries the importance of social, economic, cultural, and, most of all, educational development. They accepted the means of development through the process of higher education of their citizenry. As a result, many higher educational institutions have been built. At the time of this writing, there are over 75 universities in the Arab World.

Massialas and Jarrar (1983) reported that there was a need for some changes and reforms at Arab universities. They noted that universities have been affected by rapid expansion in enrollment; they are falling short of achieving their stated goals of preparing the manpower needed for development; there have been some problems resulting from borrowing foreign models; there is an absence of career guidance and counseling; and there is a shortage of faculty. Institutions of higher education in the Arab world also fall short in training the scientifically qualified technical skilled graduates that are badly needed to meet the growing developmental needs of the area. Therefore, graduate schools should be restructured to meet the developing demands of the communities they serve by continuously updating to reflect the state of the art as well as social needs.

Conclusions

There is a good deal of literature available that relates to graduate programs in the United States and the

Arab world. This literature is useful to the extent that it shows the importance of graduate programs in meeting student needs as well as the developmental needs of the nations in question. Graduate programs are now, as in the past, associated with scholarships, philosophies of life, educational systems, professional training; with state, law and finance; and in recent times, with interest in technical progress and the economic system (Carmichael, 1961, p. 64). Rudolph (1990) stated that the German model was followed in the creation of the new American university model. In the development of this model, there was a shift in the philosophy of the graduate faculty of arts and sciences to the idea of the university being composed of a body of scholars, and students pushing forward the frontiers of pure knowledge.

A strong graduate education program is vital to the continuing health of any society. Higher learning provides individuals with new knowledge it discovers through research, and the services that it supplies are central to the health of the economy, to the well-being of the citizens, and to the defense of the nation. The American economy owes a great debt to the graduate schools and their products, for they have made Americans research conscious and thus, indirectly, have been responsible for the great economic and industrial progress of the past century. After all, the success of graduate education is the concern not of graduate schools alone but of secondary

schools, colleges, and universities, and indeed, of the entire educational system. This is becoming true in the less developed countries of the Arab world.

Today, many Arab educators and politicians, recognizing the need for science and technology, are calling for reforms in the higher education system and for the rapid adoption of Western systems. Since the United States has been at the center of technological development, most of the Arab governments send their students overseas to gain more education and training mainly at the graduate level. Sawa (1987) stated that the Arab governments and peoples are generally convinced that economic and social development, currently pursued in varying degrees in all Arab countries, depends mainly on educational development.

The Arab world is going through a stage of development which requires a high demand for qualified graduates of higher institutions. Governments in those countries feel the need to expand their higher education and graduate programs and to refine their educational policies to cope with their development plans. As stated earlier, one needs to remember that graduate study has assumed special urgency for two interrelated reasons: expanding development plans which are mushrooming in the Arab states; and the need for the highly trained human-power to develop and utilize the vast resources of the region.

Graduate programs in the Arab world on the other hand are still burdened by the lack of proper research

facilities, properly equipped laboratories and workshops, and library resources and facilities (Badran, 1989).

This is not the only available literature dealing with the graduate programs, but the researcher felt that the literature reviewed impacts the graduate studies offered by higher educational institutions in countries discussed as well as at the University of Jordan. The historical review of the literature dealing with graduate programs is of special importance to the present study and to the graduate programs in Jordan in particular.

Graduate schools have graduated well-trained scholars for both teaching and research. Today, as a result of far-reaching social and technological developments in society, a need to identify and utilize talent is of great importance. It is the university graduate school that has the responsibility for setting the tone of professional as well as undergraduate teaching. Medicine, law, science, engineering, nursing, business administration, and a host of other professions are increasingly requiring graduate work. One such area is the graduate doctoral degree for persons who teach at professional schools.

Spurr (1970), in addressing the needs for graduate education, emphasized that technology requires a vast army of professionals to keep it in motion. Industries that are involved in research, development, and even production of modern products have increasing needs for scientists who have much greater exposure to many areas of modern physics,

such as quantum mechanics. Only advanced graduate programs are capable of providing this quality of high-level training to university students.

Most of the changes in the Ph.D. program today relate to the scientific manpower needs of the nation and to the desire to provide a greater variety of talents among research scholars produced (Grigg, 1965). Environmental factors have also influenced the changes or development of postgraduate programs. Some of these environmental forces include the challenges posed by strong market demands for courses, the pressure put by professional licensing bodies on course boards in certain applied subjects, and the emphasis given to certain themes as a result of financial sponsoring from industry, commerce or the government.

It has been duly noted that the Jordanian system of higher education was patterned after the American model. In terms of the development of American higher education institutions, four main objectives of higher educational institutions were summarized by Beacher and Kogan (1980) as follows: (1) instruction in skills suitable to play a part in the general division of labor; (2) the promotion of powers of the mind; (3) the advancement of learning; and (4) the transmission of a common culture and common standard of citizenship of the top future leadership in all phases of American economic, scientific, political, and industrial life. Also stated is that meeting these objectives will require more than the first, or baccalaureate degree.

Because of the established history of following the American pattern of higher education development, the adoption of similar objectives appears also to be the most likely movement to be adopted in Jordan as well as the remainder of the Arab countries associated with the Arab world.

Graduate and higher educational programs at the University of Jordan have not been previously studied, and the findings are expected to have a positive impact on higher educational institutions in Jordan.

CHAPTER III

METHODOLOGY

The graduate and higher education programs at The University of Jordan were studied in terms of quantitative historical growth and development. They were studied according to (1) type of graduate programs introduced; (2) number of graduate programs; (3) growth in the number of faculty; (4) growth in the number of students; (5) developmental characteristics of the programs; and (6) specified elements of quality.

Data and information were gathered about each of the above areas. Facts and figures were analyzed to show the development of the graduate programs as well as specific elements of quality. An effort was made by the researcher to assess how strongly The University of Jordan followed its stated vision and its commitment to quality graduate and higher educational programs.

Hiemstra (1972) enumerated what a university must do to meet societal needs. This study will determine whether the graduate programs at The University of Jordan have followed this model in order to serve the needs of the Jordanian society. Hiemstra gave the following: (1) educating people at the undergraduate and the graduate level for citizenship role; (2) conducting research for a variety of problems;

(3) providing specialized services for needs outside the University; and (4) taking the lead in solving some of the problems vital to the development of the country. The researcher has considered these criteria to determine whether The University of Jordan's programs advance the educational system as well as strengthening the development of the country.

Sources

Data and information regarding the graduate and higher education programs at The University of Jordan were sought and obtained from all available resources. These sources were generally categorized as: (1) primary sources and (2) secondary sources.

Primary Sources

Primary sources consisted of government documents from the Jordanian Ministry of Higher Education, The Ministry of Planning, and publications, catalogues, statistics, journals, and articles from The University of Jordan.

Secondary Sources

Secondary sources consisted of books and newspaper articles on higher education focusing on The University of Jordan.

The researcher used information and tables to demonstrate the various activities and achievements of The University of

Jordan such as changes in the numbers and types of graduate programs at the University; changes in the number of teaching faculty; student enrollment; changes in the number of graduates; and majors and programs offered at the University of Jordan.

Other available sources were used, and actualities regarding the graduate programs at The University of Jordan were presented in a developmental manner. However, the present attempt by the researcher is not a formal historical treatment, instead it is an overview seeking important elements quality in the current graduate programs at The University of Jordan.

The graduate programs at the University of Jordan and other universities in the country have followed the established and innovative programs by other universities. The adoption of these has helped Jordan advance and develop its educational system in general.

Special attention was given to correlate the growth of The University of Jordan with the development of the country. In accordance with the increased demand for higher education, the University expanded programs to accommodate the increasing student enrollment.

CHAPTER IV
PRESENTATION AND ANALYSIS OF THE GRADUATE
AND HIGHER EDUCATION PROGRAMS AT
THE UNIVERSITY OF JORDAN

This chapter will consider four topics: (1) the graduate and higher education programs at The University of Jordan, especially historical and growth considerations; (2) criteria for evaluating graduate and higher education programs in the United States; (3) the economic and social factors relating to the graduate and higher education programs at The University of Jordan; and (4) how this might determine the future role of the University's graduate and higher education programs in serving the nation's development. It was the main purpose of the researcher to provide an overview of the existing graduate and higher education programs, highlight the criteria and the main objectives of the graduate programs in general, and discuss the future role of the graduate programs at The University of Jordan as far as they relate to national development.

The Graduate Programs And Higher Education
at The University of Jordan, Historical
and Growth Considerations

Colleges and universities have always been centers for the preservation, transmission, and advancement of knowledge. Traditionally, as a significant part of the student educational training and examination program, each prospective Master's or Doctoral student puts forth new propositions in his/her thesis or dissertation and then presents evidence publicly to defend the validity of those positions. Faculty and graduate students, joined in some cases by research staff personnel, may generate substantial new knowledge (McCarthy and Deener, 1972).

McCarthy and Deener also pointed out that benefits and values placed by individuals, institutions, groups within society, and society at large depend upon graduate program outputs. The output from graduate degree programs provides benefits to graduate students, to donors who help support colleges and universities, to the institutions, and also to society at large.

Since the middle of this century, Jordan headed in the right direction by establishing the first university in the country. The establishment of The University of Jordan came as a result of the increasing demands for economic and

social development in Jordan and of the growing interest shown by different sectors, mainly education (Ministry of Higher Education, 1988), (See data on growth in Chapter I).

Because of the increased demand on higher education institutions resulting from the rapid development of Jordan, especially in the past twenty years, four universities were already in existence in 1988. Between the year 1988 and 1993, five additional public and private universities were opened. By 1994, two new private universities will be in operation (Ad-Dustour Newspaper, May 2, 1993).

Due to the strong demand for higher education, academic teaching at The University of Jordan began on February 15, 1962, in the Faculty of Arts with 167 students and eight faculty members. Today, the University awards B.A./B.Sc., M.A./M.Sc., and Ph.D., as well as a Diploma of Higher Studies and a Professional Diploma.

During the short period since its establishment in 1962, progress and expansion at The University of Jordan is evident by the number of faculties, programs, and students. These programs employ 797 faculty in more than 55 academic departments, offering about 3,500 courses a year, and housed in more than 50 buildings. The number of students at the University in 1992 was 21,042. The number of faculty was 98 in 1970, 243 in 1970, and 482 in 1980. The number of undergraduate students who graduated from The University of Jordan increased from 1,422 in 1970 to 17,497 in 1984. The number of students graduated at the

Master's level increased from 36 students in 1975 to 2,154 students in 1991. By 1992 the enrollment had increased to 2,733 students in both masters and doctoral level (The University of Jordan: The University of Jordan Catalogue 1990/1991) (See Tables I, p. 39; IV, p. 51; V, p. 53).

TABLE I

SUMMARY DATA OF ACADEMIC DEGREES GRANTED
AT THE UNIVERSITY OF JORDAN

Faculty	B.A/B.Sc.	M.A/M.Sc.	Ph.D.
Arts	X	X	X
Economic	X	X	
Science	X	X	
Islamic Law	X	X	X
Medicine	X	X	
Nursing	X	X	
Agriculture	X	X	
Education	X	X	X
Engineering	X	X	
Law	X	X	
Physical Education	X	X	
Pharmacy	X		
Dentistry	X		

Source: The University of Jordan, Facts and Statistics, Amman, Jordan, 1991/1992, p. 24.

Among the established universities in Jordan, The University of Jordan has the highest enrollment. Almost 51 percent of the undergraduate students attending universities

in Jordan in 1990 were enrolled at The University of Jordan. The University is the largest and most dynamic university in the country (See Table II).

TABLE II

SUMMARY DATA OF STUDENTS ENROLLED AT JORDANIAN
UNIVERSITIES FOR THE YEAR 1989/1990

University	Bachelor	Masters	Doctorate	Total
Univ. of Jordan	14413	1887	71	16371
Yarmouk Univ.	9367	703		10070
Mu'tah Univ.	1533			1533
Science and Tech.	2780	92		2872
Total	28093	2682	71	30846

Source: Ministry of Higher Education, Annual Statistical Report 1980/90, Amman, Jordan, p. 37.

To cope with a growing demand for scientific research in different cultural and social areas, two specialized deanships were established in 1973: the Deanship for Scientific Research, which supports and publishes research in its research journal Dirasat; and the Deanship of Student Affairs, which focuses on the student talents, abilities, and social activities.

To study the graduate programs, the researcher has

first reviewed the undergraduate programs to correlate the two levels and attempt to find if all undergraduate programs in the future and be expanded into graduate programs.

The Undergraduate Programs at The
University of Jordan

As was noted above, the Faculty of Arts was the first faculty to be established at the University, on February 15, 1962. The faculty offered study programs leading to the award of the Bachelor's degree.

The Faculty of Science was one of the earliest to be established at the University, being formed in 1965. The Faculty soon expanded to account for an increased number of students. Its graduates have entered public service and have worked for private institutions. They are an essential core of science teachers who have joined the Ministry of Education schools in the various regions in the country. In addition, chemical factories, plants, engineering firms, private and government hospitals, and natural resource establishments have hired university graduates who are providing valuable service to those national institutions.

The Faculty of Science seeks to make its presence known through faculty and students research, conferences, specialized seminars, and training courses which are intended to contribute to the development of the Jordanian community. The Faculty of Science has graduated 3,698 students in the past twenty-two years. A group of these

students has gone to other universities for their graduate studies (The University of Jordan: The University of Jordan Catalog, 1990/91, p. 143).

To provide the society with qualified graduates in the various fields of economics, administration, statistics, accounting, and political science, the Faculty of Economics and Administrative Science was established in 1966. This faculty awards Bachelor's degree.

The ever-changing needs of society have made it necessary for the departments to keep updating their programs. One change is that practical training is now a requirement for graduation. An agreement was reached with private and public organizations to provide this training. Training gives the students the opportunity to focus their studies on management problems and on solving appropriate operational problems.

The Faculty focus encourages academic, professional, and cultural exchanges with Arab, American, and British universities to develop and update its programs.

The Faculty of Islamic Law (Shari'a) was established in Amman in 1964 as an independent college, later joining The University of Jordan on January 1, 1971. The stated goals and main objectives of the Faculty are: to educate Moslem students in righteous path of Islamic life; to meet the needs for Jordan and other Islamic countries for qualified religious preachers, religious leaders and teachers; to graduate specialists in the field of Islam to teach in

public schools, private schools, and Islamic centers; and to train qualified court judges.

In September 1, 1971, the Faculty of Medicine was established to meet the country's needs for medical services. The Faculty awards a Bachelor's degree. To obtain a license to practice medicine, a one-year training program (internship) is required of each student.

The University of Jordan also established the Faculty of Nursing in 1972 to provide services in the field of Nursing. This Faculty awards Bachelor's degree.

The Faculty of Agriculture was established on February 15, 1972, to meet the country's need in the field of agriculture. The Faculty awards a Bachelor's degree. The faculty has set the following as its goals and objectives: To prepare specialists in agricultural sciences in both the theoretical and practical fields; to conduct research relating to agricultural production; to help in finding solutions for major problems in Agriculture; and to provide consultations and offer practical solutions of problems to organizations and individuals.

The Faculty of Education was established in 1973/1974. The Faculty offers courses leading to the award of a Bachelor's degree. The Faculty of Education has an agreement with the Institute of Education at the University of London providing for the exchange of teaching staff and joint supervision for graduate students. In the area of community service, the Faculty of Education provide free

consultation services to various educational institutions in the country and carries out the responsibility of setting up a model for schools nationwide, in the form of the University's Model School.

To train engineers and technicians, The University of Jordan established the Faculty of Engineering and Technology in March 29, 1973. The Faculty offers programs leading to a Bachelor degree.

The University of Jordan sensing a need for legal experts, established the Faculty of Law was established on September 16, 1978. The stated goal was to graduate high caliber students in the various fields of law who master the Arabic language. Graduates are expected to meet the local demand for higher studies in law, and interpret Jordanian law where it has not been interpreted. They will also participate in developing and modernizing Jordanian regulations/legislation to bring them in line with the changing needs of Jordanian society.

To train specialists such as teachers, trainers, coaches, and specialists in various sports activities in the field of Physical Education, The University of Jordan established the Faculty of Physical Education on October 1, 1979. The Faculty also provides services to the community through its facilities which are operated under the supervision of its faculty members. The Faculty offers Bachelor degree.

As part of the medical program, The University of

Jordan established the Faculty of Pharmacy in 1980. The Faculty offers a Bachelor degree. This faculty is active at the local, Arab, and international levels, particularly in the area of basic and clinical research.

The Faculty of Dentistry was established in 1983, and instruction began in the academic year 1984-85. The stated main goals and objectives for establishing that faculty are the training of highly qualified dentists to advance the profession of dentistry in Jordan. It also encourages research in the various fields of Dentistry. Being the largest and the most modern specialized center for dentistry in Jordan, the Faculty recently updated its study plans and programs to keep in line with recent developments in the field.

The Faculty of Dentistry, in addition to its program of instruction, conducts scientific research, and its faculty participates in local and international conferences. Faculty research focuses on dental problems within the Jordanian community. Its programs for Preventive Dentistry to the community are served by of its nurses, technicians, and specialized professors.

The University rules and regulations for awarding of degrees in all the faculties are set in compliance with Ministry of Higher Education's recommendations. They were used by the Deans Council in accordance with the stated University regulations governing the awarding of degrees at the University. The regulations govern the awarding of the

Bachelor's degree by all the University faculties, and they specify the University requirements and rules regarding attendance. (In Arabic, this degree is called Bacaloryus Fil Adab or Bacaloryus Fil Uloom.) The regulations apply to the regular students who are registered for the Bachelor's degrees. The degree may be awarded after a student earns between 132-144 credit hours, depending on the major. (The University of Jordan: The University of Jordan Catalogue, 1990/1991).

At the beginning of each academic year, the Deans' Council, determines the number of students to be admitted in each department, focused on the country's needs in each discipline. This action is taken following consultation with the Ministry of Planning to determine the job market demands.

The Ministry of Education is also involved in determining the standards to be met by high school students seeking admission at all universities in the country. A student who graduates from the scientific branch of the high school system is accepted in all disciplines, while the Literary branch students are only accepted in the humanities; that is the Faculty of Arts, Economic, Business Administrative, Islamic Law (Shari'a), Education, Law, and Physical Education.

The high school grades of the student and the percentile cut off assigned to each faculty will determine which students will be accepted at the University each

year. Students who obtain 85 percent or above in Tawjihi are admitted to the Faculty of Medicine and Dentistry, those with 80 percent are accepted in the Faculty of Engineering and Pharmacy, and those with 65 percent are accepted in the rest of the Faculties.

Graduation requirements are met following recommendations made by the separate Faculty's Councils, the Deans' Council ratifies the study plans for each program leading to the awarding of an academic degrees at The University of Jordan. The credit hours required for each degree are shown in Table III.

TABLE III
SUMMARY DATA OF CREDIT HOURS REQUIREMENTS AT THE
UNIVERSITY OF JORDAN FOR THE YEAR 1991/1992

Faculty	Ph.D.	M.A/M.Sc	B.A/B.Sc
Arts	60	36	132
Economic		36	132
Science		36	132
Islamic Law	60	36	132
Medicine		4-5 years	6 years
Nursing		36	145
Agriculture		36	138
Education	60	36	132
Engineering		36	165
Law		36	138
Physical		36	132
Education			
Pharmacy			160
Dentistry			192

Source: The University of Jordan, Facts and Statistics, Amman, Jordan, 1991/1992, p. 23.

Below is an outline of the specific rules and regulations for each plan of study for the undergraduate degrees. This shows that the graduate programs are based on the substantial undergraduate programs at The University of Jordan.

The duration of study for the Bachelor's degree with a normal course load is eight semesters or four academic years, except in the Faculty of Agriculture, where it is eight semesters and two summer sessions. The University regulations specify that the minimum duration for the first University degree shall not be less than three academic years with each year consisting of two semesters plus an optional summer session. A semester is sixteen weeks, including the examination period. The summer session lasts eight weeks including the examination period.

The minimum credit hour load for a full-time student is 9 credit hours per semester, and the upper limit is 18 credit hours per semester with the consent of the Dean of Faculty concerned. Students enrolled in undergraduate study are classified as: first year Freshmen, second year Sophomores, third year Juniors, and fourth year Seniors. All students are required to attend a specified percentage of all lectures, seminars, and practical sessions provided for in the plan of study.

The University's Bachelor's degree is only awarded to students who fulfill the University requirements of passing all the course requirements prescribed in the plan of study,

obtaining a cumulative grade average of not less than 60 percent, and fulfilling the minimum attendance requirement. Transfer students should complete two years in residence, and that he/she complete not less than 60 percent of their credit hours at The University of Jordan (The University of Jordan: The University of Jordan Catalogue, 1990/1991).

The University of Jordan is considered to be the first among Arab universities to adopt the American credit hour system. The programs of The University of Jordan are patterned after the American university model.

The Graduate Programs at The University of Jordan

According to Hiemstra (1972, p. 108), American universities have modeled their programs "based upon rapid population growth, technological advancement, and constant social change." These factors have also guided the development of the Jordanian universities. The rapid population growth in Jordan, along with an increase in prestige on education degree bestows on students and family, prompted universities in Jordan to offer more programs at the undergraduate and the graduate levels. The development which occurred in Jordan, especially in the last twenty-five years, required more specialized personnel in technological and professional fields such as engineering, medicine, and agriculture. This prompted The University of Jordan to refine its mission by adding the support of the

developmental needs of the country and its citizenry as part of its mission. This philosophical shift has made the University more sensitive to the developmental processes occurring in the country, and it has become an integral part of the Jordanian plan for technological and social change. The social change resulting from opening the labor market to women made it both desirable and possible for women to seek university degrees. This action alone markedly increased the pressures placed on the universities to meet the growing educational requirements of the female population. The movement from a rather primitive agrarian economy toward a more sophisticated and technologically based agrarian economy was a major incentive for The University to develop programs designed to produce a more qualified work force.

Hiemstra (1972) outlines the following specific ways by which higher education institutions strive to meet societal needs:

1. Educating people both at the undergraduate and graduate levels for citizenship roles.
2. Equipping people for successful careers.
3. Conducting research for a variety of problems.
4. Promoting the cultivation of the arts.
5. Preserving the freedom of intellectual pursuit.
6. Providing specialized service on needs outside the university.
7. Taking the lead in solving problems vital to

survival (p. 108).

From the analysis of the data collected in this project, it appears to the researcher that the best three of the ideas outlined by Hiemsrta have been carefully considered in the development of the mission of The University of Jordan: (1) The University is helping to educate more Jordanian students by expanding its facilities and providing more academic programs to graduate students, (2) Through The University, these students are afforded the opportunity to gain the qualifications required for a career, and (3) The University is providing services to the community in the areas of business, health care, agriculture, and social and entertainment activities.

To cope with increased numbers of students, The University of Jordan offered the first graduate programs of study in 1968. These programs were designed to grant Master's degrees in the major fields of Educational Administration and Supervision. The education programs were followed by the Master's program in History.

TABLE IV
SUMMARY DATA OF MASTERS GRADUATES IN
HUMANITIES AT THE UNIVERSITY
OF JORDAN 1972-1991

Year	Sex	Edu.	Arts	Econ.	Islamic Law	Law	Ph. Edu.	Total
1972-75	M	17	2					19
	F	2						2
Sub Tot.		19	2					21
1976-79	M	63	26					89
	F	15	3					18
Sub Tot.		78	29					117
1980-83	M	68	35	6		5		114
	F	20	9	2				31
Sub Tot.		88	44	8		5		145
1984-87	M	96	72	26	34		8	236
	F	27	23	3				53
Sub Tot.		123	95	29	34		8	289
1988-91	M	186	135	127	71	47	3	569
	F	93	45	36	3	7		184
Sub Tot.		279	180	163	74	54	3	753
Total	M	430	270	159	105	60	3	1027
	F	157	80	41	3	7		288
Grand Total		587	350	200	108	67	3	1315

Source: The University of Jordan, Statistical Year Book, Amman, Jordan, 1990/91, pp. 26-27.

Since that time, The University of Jordan has continued to increase and develop its graduate program and offerings. Table IV shows that the total number of graduates in each faculty. The total number of all graduates in the Humanities was 1,315, of this number, 1,027 were males and 288 females. The number of graduates increased 35.8 times between the years 1972 and 1991.

The Faculty of Education started to graduate students at the Master's level in 1972. By 1991, it graduated 587 students, 430 males and 157 females. The Faculty of Arts followed in 1975, and has graduated 350 students, of which 270 were males and 80 were females. The Faculty of Economics and the Faculty of Law started to graduate students at the Master's level by 1980. Since the year 1984, the Faculty of Islamic Law has graduated 108 students, and the Faculty of Physical Education has graduated 3 students. These faculties were the last to offer graduate studies.

As shown in Table IV, the most rapidly growing faculties are Education and Arts, followed by Economics and Islamic Law. Table IV also shows that Education graduated 44.7 percent, Arts 26.6 percent, Economics 15.2 percent, Islamic Law 8.2 percent, Law 5 percent, Physical Education 0.3 percent. In all, the graduates were 78 percent males and 22 percent females.

TABLE V
 SUMMARY DATA OF MASTERS GRADUATES IN THE
 SCIENCES AND ENGINEERING AT THE
 UNIVERSITY OF JORDAN
 1973-1991

Year	Sex	Sci.	Agri.	Med.	Engin.	Nursing	Total
1972-75	M	10					10
	F	5					5
Sub. Tot.		15					15
1976-79	M	59	3				62
	F	4					4
Sub. Tot.		63	3				66
1980-83	M	53	34	17			104
	F	12	3	4			19
Sub. Tot.		65	37	21			123
1984-87	M	77	38	54	10		179
	F	25	8	8			41
Sub. Tot.		102	46	62	10		220
1988-91	M	107	91	43	100	2	343
	F	32	10	8	7	15	72
Sub. Tot.		139	101	51	107	17	415
Total	M	306	166	114	110	2	698
	F	78	21	20	7	15	141
Grand Total		384	187	134	117	17	839

Source: The University of Jordan Statistical Yearbook,
 Amman, Jordan, 1990/91, pp. 29-30.

Table V puts the total number of graduates in the sciences at 839. Of these graduates, 698 were males and 141 were females. The number of graduates increased between 1972 and 1991 by 27.7 times. The Faculty of Science began graduating students at the Master's level in 1973. By the year 1991 a total of 384 students were graduated, 306 were males and 78 were females. This is followed by the Faculty of Agriculture, which graduated 187 students by the year 1991, 166 were males and 21 were females. The Faculty of Medicine then followed and graduated 134 students by the year 1991, 114 were males and 20 were females. The last two faculties to offer graduate studies were the Faculty of Engineering and Technology, which graduated 117 students by the year 1991. Among those graduating 100 were males and 7 females. In the same year, the Faculty of Nursing graduated 2 males and 15 females.

As shown in Table V, the fastest growing faculties are the Faculties of Agriculture, Medicine, Engineering, and Nursing. The Faculty of Science graduated 45.8 percent of the total, Agriculture 22.3 percent, Medicine 16 percent, Engineering 13.9 percent, and Nursing 2 percent. Finally, the overall the male graduates represented 82 percent and the females 18 percent of the total.

The data contained in Tables IV and V illustrate that the most rapidly expanding faculties in the Humanities were Education, Arts, and Economics, and in sciences were Science, Agriculture, Medicine, and Engineering and

Technology.

The University of Jordan awards Master's degrees in eleven faculties: Six degrees are offered in the Humanities; Arts, Economics and Administrative Science, Education, Islamic Law (Shari'a), Law, and Physical Education. Five degrees are offered in the Science faculties: Agriculture, Engineering and Technology, Medicine, Nursing, and Science.

The University of Jordan also awards Ph.D degrees in the following faculties:

1. Faculty of Arts

- Department of Arabic.

- Department of History.

2. Faculty of Shari'a (Islamic Law)

- Department of Jurisprudence and Legislation.

3. Faculty of Education

- Department of Psychology.

- Department of Curriculum and Foundations of Education

(The University of Jordan: Facts and Statistics, 1991/1992, pp. 24-26).

The Faculty of Arts began graduating Doctoral students in 1987. By the year 1991, the number of Doctoral students graduated were 16 males. Arts is followed by the Faculty of Education which graduated only 2 males. The University of Jordan does not offer Doctoral studies in sciences. The number of students enrolled in the university at the Doctoral level in 1990 was 71; Arabic Language 26, History 17, Psychology 16, Curriculum and Principles of Education 12

(Ministry of Higher Education, 1990, p. 47).

Admission to higher and professional diplomas programs was frozen at the beginning of the 1991/1992 academic year. This decision was taken by the University administration because of "the failure of these programs to achieve their objectives of developing the students' professional skills." It appeared to the University that the only reason for enrolling in a diploma program, which only required a satisfactory grade average, had become for many, a means of gaining admission to a Master's program which normally requires a higher grade point average (The University of Jordan: Campus News, August 1992, p. 13). In the same issue, it was noted that The University of Jordan is planning to upgrade the doctoral programs offered, and special committees have been assigned this task and are now on the verge of completing their work.

Out of concern for research and for expanding graduate study programs, the Deanship of Research and Graduate Studies was established in 1973. The stated aims and objectives of this deanship are: To stress scientific research at the University; to advance student knowledge through research findings embodied in Master's theses and Doctoral dissertations; to train highly specialized personnel to meet society's needs; and to focus on and study local and Arab needs (Bakhit and Zghoul, 1987, p. 503).

The Faculty of Graduate Studies consists of the following divisions:

1. The Division of Graduate Studies in Humanities and Social Science.

2. The Division of Graduate Studies in Shari'a, Law, and Political Science.

3. The Division of Graduate studies in Educational Science.

4. The Division of Graduate Studies in Medical and Health Sciences.

5. The Division of Graduate Studies in Engineering, Mathematics, and Physics.

6. The Division of Graduate Studies in Life and Agricultural Sciences and Natural Resources (The University of Jordan: The University of Jordan Catalogue, 1990/1991).

On the establishment of the Faculty of Graduate Studies at the University of Jordan, The University named a Dean of the Faculty of Graduate Studies and the Faculty of Graduate Studies Council. The Council performs its duties and exercises its authority as stipulated in the University by-laws and regulations. More specifically, the Council is responsible for:

1. Planning for the expansion and diversification of graduate programs to meet the requirements and the conditions for the changing needs.

2. Continuous evaluation of the higher studies programs at the University, creating conditions conducive to developing them, and making the necessary changes.

3. Recommending the establishment of new graduate

programs of higher studies at the University, integrating some of the existing ones in a new reorganization plan with the approval of the appropriate Councils.

4. Revising study plans and requirements conditions governing the award of academic degrees and diplomas by the different faculties.

5. Proposing suggestions concerning the award of Diplomas and Master's and Doctoral degrees by the University, and the systemization of higher studies program at The University of Jordan.

6. Approving the study plans/curricula presented by the Divisions' Councils of the Faculty of Graduate Studies.

7. Proposing criteria for admission to the various programs of the Faculty of Graduate Studies and specifying the number of students to be admitted to each program, upon the recommendation of the Department concerned.

8. Approving the appointment of the advisors, and the formation of Dissertation Committees.

9. Determining the number of scholarships to be awarded to students in each department; eligibility for these awards, and approving them upon the recommendation of the Departments concerned.

10. Approving the appointment Heads of the Sections within the Faculty's Divisions on the advice of the Divisions' Heads and forming committees of faculty members to handle all matters pertaining to the organization of higher studies at the various Divisions.

11. Reviewing and certifying the examination results filed by the Departments concerned.
12. Recommending to the Dean's Council the awarding of degrees.
13. Preparing the Faculty's annual budget.
14. Considering matters referred to by the Dean (The University of Jordan: The University of Jordan Catalogue, 1990/1991, pp. 529-530).

The University of Jordan issues rules and regulations for awarding graduate academic degrees which are similar to those issued for undergraduate studies. The rules and regulations for the Master's degree program were put into affect on June 17, 1975. In order for the student to obtain a Master's degree, he/she has to successfully complete 36 credit hours beyond the Bachelor's degree, including 24-27 credit hours of course work and 9-12 credit hours for the Master's thesis. The student must finish his/her studies within a maximum of 60 months with a passing grade of 70 percent in the major courses and 50 percent in the electives. The graduate grade point average should be 75 percent. The student must write his Master's thesis in Arabic with a 600 word summary in English, French, or German. If another language is the language of instruction, the student must write his/her thesis in that language and submit a 600 word summary in Arabic. The maximum number of pages for the thesis is 250 (The University of Jordan: Rules and Regulations, 1990, pp. 6/14-6/21).

To maintain its leadership role and its service to the country, The University of Jordan has continuously expanded its graduate academic programs.

Table VI gives the number of graduate students at The University of Jordan divided into faculties for the year 1989/1990).

TABLE VI
DISTRIBUTION OF MASTERS STUDENTS ENROLLED AT THE
UNIVERSITY OF JORDAN FOR THE YEAR 1989-90

Faculty	Male	Female	Total
Arts	199	99	298
Economics	223	69	292
Medicine	23	5	28
Education	467	157	624
Engineering	263	15	278
Agriculture	112	26	138
Nursing	2	17	19
Physical Edu.	38	5	43
Law	49	12	61
Islamic Law	111	12	123
Total	1621	464	2085

Source: Ministry of Higher Education, The Annual Statistical Report 1989-90, Amman, Jordan, pp. 55-61.

The history of the establishment of the Faculties shows real expansion. The great demands made on the University,

were matched by efforts of the University to fulfill its commitments to the Jordanian people. Tables VI (p. 61) and VII (p. 63) present figures to show the relative commitment made by each The University of Jordan and Yarmouk University to higher education.

Table VIII (p. 64) shows that among the four universities in Jordan which offer graduate studies. in 1993, The University of Jordan remained the leading university in offering graduate programs. This is a commitment made by the University to meet student and community needs and to share in coping with the country's development needs in all fields. The University of Jordan's enrollment figures, at the graduate level, represent nearly 70 percent of the total graduate enrollment of the four state operated Jordanian universities. Yarmouk university is the only other university that would be considered competitive with an enrollment of 1,183 graduate students. This is slightly less than one-third of The University of Jordan's enrollment figure of 3,836 graduate students.

TABLE VII
GRADUATE STUDENTS AT THE MASTERS' LEVEL
AT YARMOUK UNIVERSITY FOR THE
YEAR 1991/1992

Faculty	Male	Female	Total
Science	116	29	145
Arts	115	50	165
Education and Art	445	128	573
Economics	47	2	49
Islamic Studies	78	18	96
Archaeology & Anthropology	75	37	112
Language (Translation)	29	14	43
Total	905	278	1183

Source: Yarmouk University: In Figures, Irbid, Jordan, 1992.

In comparing the two largest universities in the country, The University of Jordan and Yarmouk University, one will readily see that both universities offer a number of similar programs and also some different graduate programs. Yarmouk University offers graduate studies in six faculties; Science, Arts, Education and Art, Economics, Islamic Studies, Archaeology and Anthropology, and English language translation. The University of Jordan offers graduate studies that are staffed by eleven faculties.

TABLE VIII
 SUMMARY DATA OF GRADUATE STUDENTS
 AT JORDANIAN UNIVERSITIES
 FOR 1993

University	Total
University of Jordan	3836
Yarmouk University	1165
Mu'tah University	237
Science and Technology University	273
Total	5511

Source: Ad-Dustour Newspaper, May 2, 1993, Amman, Jordan.

According to The University of Jordan publication, Facts and Statistics (1991/1992), the number of students enrolled at the University was 21,042. (See Table IX, p. 65) Of this number, 17,610 were undergraduates, 699 Diploma of Higher Studies, 2,615 Master's (12.42 percent), and 118 Ph.D (56 percent) students.

Part from awarding Master's and Ph.D degrees, The University of Jordan awards Diplomas of Higher Studies in eight faculties; namely the faculty of arts, economic and business administration, science, agriculture, education, engineering and technology, law, and physical education (See Appendix A).

TABLE IX

SUMMARY DATA OF STUDENTS ENROLLED AT THE UNIVERSITY OF
JORDAN AT ALL LEVELS FOR THE YEAR 1991/1992

Faculty	Male	Female	Total
Economic	1719	1454	3173
Science	881	1372	2253
Islamic Law	691	690	1381
Medicine	481	229	710
Nursing	275	491	766
Agriculture	916	657	1573
Education	990	1112	2102
Engineering	1895	714	2609
Law	780	517	129
Physical Edu.	420	202	672
Pharmacy	199	327	526
Dentistry	171	238	409
Total	10461	10581	21042

Source: The University of Jordan, Facts And Statistics,
Amman, Jordan, 1991/1992, p. 5.

Criteria for Graduate And Higher Education
Programs in the United States
and their Relevance to The
University of
Jordan

Evaluation of quality in education, at both the undergraduate and graduate levels, is important not only in determining the ranking institutions, but also in identifying lower-ranking colleges. In order for

institutions to improve themselves and to develop excellent qualities, they have to review their educational offerings, the level of their work, and the quality of their students through their selection, environment, and their resources and facilities.

Webster (1986) considered quality ranking of colleges and universities as necessary and important. They provide evidence against which claims may be measured and may provide more accurate information about the comparative quality of colleges, universities, and individual departments and professional fields of study than any other source. Quality ranking still fulfills this useful role in higher education today.

Webster also showed that early and more recent academic rankings are different. Early academic rankings affected colleges and universities differently from the way that modern ones do. Their impact was greater, primarily because rankings, classifications, and stratifications were usually organized by whole institutions, not by discipline. Today's academic quality rankings affect student applications, especially applications to graduate and professional schools, far more than early rankings, classifications, and stratifications.

Recently, multi-disciplinary reputational rankings have been widely stocked by high school and college libraries, where they are in great demand, and they are extensively reported in the press. Early academic quality rankings were

primarily based upon the accomplishments of a college's graduates. Modern rankings are much more often based upon the research accomplishments of the faculty.

Bergquist and Armstrong (1986), pointed to the high quality of the academic program:

In higher education, as in many other institutions in our society, we have tended to look at quantitative input indicators to identify and assess what we mean by high quality. Our criteria often answer the questions, How many? How much? For example: How many volumes are there in the library? How many faculty members have doctorates? How many research projects and publications have been produced? How many students come from upper quarter of their high school graduating class? How many minority students were admitted? How much is the endowment portfolio worth? (p. 1)

They also added that the quality of an educational program will be defined by input, output, and value-added measures, assessed in relationship with one another. A comprehensive definition of educational value must encompass all three dimensions. In an effort to establish such a definition, the following criteria are applied in the design and implementation of academic programs:

1. Attractive: It does something that brings people to it.
2. Beneficial: It does something that is helpful to the individuals and the community.
3. Congruent: It does what it says it will do.
4. Distinctive: It is responsive to the unique characteristics of the institution and its people and, thus, is unlike most other programs.
5. Effective: It operates very well and can demonstrate its effectiveness to others.

6. Functional: It provides learners with attributes needed to perform successfully in today's society.
7. Growth Producing: It enhances growth in a number of important directions of learning (Bergquist and Armsrtong, 1986, pp. 1-5).

Developing high-quality academic programs requires considerable resources (time, money, materials, creativity). A college or university cannot engage, therefore, in the intensive development of several high-quality academic programs simultaneously unless it is exceptionally large and has extensive resources. A systematic academic planning program can therefore help improve the quality of teaching and learning.

Also, Conrad (1985) used five definitions of evaluation that establish the general framework for most evaluations of education today: (1) evaluation as professional judgment; (2) evaluation as measurement; (3) evaluation as the assessment of congruence between performance and objectives (or standards of performance); (4) decision-oriented evaluation; and (5) goal-free/responsive evaluation.

Carmichael (1961) pointed that there is a great need for more than the first degree:

This accounts for the fact that the largest single unfilled need in the American economy is for more and better scientists, more and researchers, and more adequate support for educating them. Not only do economic and educational needs require it, but it is recognized as essential to long-range defense as well. Top future leadership in all phases of American life--economic, scientific, political, and industrial--will require more than the first degree. (p. 14)

He also stated that the Ph.D. serves two purposes: for

teaching in the colleges and universities, and research work in university, industrial, or independent laboratories. In most universities there is little or no recognition of this duality of purpose. He kept emphasizing that the Doctor of Philosophy degree in the United States has a unique status. For the profession of college teaching, it is the union card. With rare exceptions, a teacher cannot advance professionally without it. But government, business, and industry also hold it in high esteem, and employ almost one half of the doctorates produced by the universities each year. They could use many more if they were available; indeed, much of the research they require is done by professors in the universities. He also added that the educational institutions seeking recognition by the accrediting agencies must have a reasonable proportion of their staff with maximum training. Hence, expanding colleges have no alternative: they must seek Ph.D. graduates to staff their classrooms and laboratories.

Spurr (1970), as detailed in Chapter II, discussed some of the needs of the graduate program, pointing out that technology requires a large number of professionals to keep the process in motion. Industries that are involved in research, development, and even production of modern products have increasing needs for scientists who have a greater exposure to many areas of modern physics and other scientific technologies. Many of these industrial jobs may require some exposure to the techniques and results of

physics or other sciences, but not demanding the training and research experience as a fully independent investigator or scholar that is required for the Ph.D. program.

Cartter (1966) discussed the evaluation of quality in graduate education, which gives the public and its formal agencies the needed information on graduate and professional education. It was known that the government agencies and private foundations engaged in making assessments, frequently with limited information, and were basing major decisions on their findings. It was felt that university presidents, deans, and department chairmen could benefit subsequently from having such assessments made available periodically, even if the results were not always flattering.

Cartter also added that quality is an elusive attribute, not easily subjected to measurement. Thus, there should be no single index to measure the quality of an institution by looking only at the size of endowment, number of books in the library, publication record of the faculty, level of faculty salaries, of number of Noble laureates or the faculty.

Cartter stressed that the library is the heart of the university; no other single nonhuman factor is as closely related to the quality of graduate education. Hence, institutions that are strong in all areas invariably have major national research libraries. Departmental strength is directly associated with quantity of publication

performance and with academic salaries in the upper two professional ranks. Overall university strength is closely associated with university salary levels and library resources. If these measures reflect the constituent elements that make up the quality of an institution, it is not surprising that they support one another.

Conrad and Wilson (1985) reported that for those engaged in program review, the assessment of quality has generated more confusion and debate than any other issue. Pressure always existed to define "quality" and to determine which types of information should be collected, but more recently, interest has burgeoned because of the emphasis on program review for reallocation and retrenchment. The problem is that no one has yet found a way to measure quality directly. The issue for evaluators is how to define this concept and how to determine what types of information (indicators) should be used to guide data collection. There are four perspectives on how to define quality: (1) a reputational view, (2) a resources view, (3) an outcomes view, and (4) a value-added view.

Universities benefit from evaluation of their programs. Conrad and Wilson (1985) stated that the use of evaluation at the University of North Carolina at Nashville with six aspects of its programs review process contributed to its usefulness as follows:

1. Clarity of purpose.
2. Involvement of decision makers in all stages of the

purpose.

3. Maximization of communication.
4. Understanding of the political nature of the environment.
5. Recognition of the subjectivity of evaluation.
6. Competence of the institutional research staff and confidence in the data collected.

Kent and Spring (1972) predicted that graduate education in the year 2000 should present unique challenges. With a student body ranging in age from 19 to 60, this might even contemplate a closing of the generation gap for that group of students. Professors will face the challenges of both imaginative youth and men and women from the world outside the University. Increasing complexity is the trend in graduate education as we move toward the year two thousand. In such a period the graduate school is challenged to meet this complexity with administrative policies and procedures.

Graduate education, as part of total college education, is molded by various social, cultural, and political forces both national and international. To speculate on the nature of graduate education in the next thirty years is to speculate on the trends these forces are likely to take and to assess their impact on graduate education. Additionally, to finance these new programs to provide researchers with adequate budgets in each program and to train the new professionals, requiring vast amounts

of capital, will have a direct bearing on graduate education. The reputational view and the outcomes view will be the primary criteria used for studying the quality of the graduate programs at The University of Jordan. The researcher feels that The University of Jordan has achieved a good reputation among Jordanian universities and among the neighboring Arab countries. This is evidenced by the increasing number of foreign students enrolled at the university. The number of non-Jordanian Arab students enrolled at The University of Jordan at all levels in 1992 was 1578; 189 non-Arab were students (The University of Jordan: Facts and Figures, 1992).

The high standards met by graduates of The University of Jordan and the outstanding quality of its programs makes it unique in the country. University of Jordan graduates have consistently proven to be effective in the different fields or disciplines in which they have been trained and in those areas in which they have been involved within the country (University of Jordan Facts and Statistics 1991/1992).

The Economic, and Social Factors Relating
to the Graduate and Higher Education
Programs at The University
of Jordan

Colleges and universities have always been centers for the preservation and transmission of knowledge. The

University of Jordan, through its graduate programs, is intended to play an important role in improving the intellectual and professional skills needed to cope with the development of the country.

Fawzi Gharaibeh, the President of The University of Jordan, on the occasion of the thirtieth anniversary of the University, reviewed the achievement, development, and objectives of the University over the past thirty years. He said that the University is in the process of revising its curricula and expanding its graduate programs with a view to better serving the community. (University of Jordan: Campus News, April, 1992).

In the 1980s, Jordan strove to introduce an educational system that would address serious structural problems in its labor force. The country was facing high rates of unemployment among the educated young people, particularly in the professions of medicine, engineering, and teaching, yet it had a growing need for skilled technical labor. In the 1970s and 1980s, the government, sensing this need, began to expand its vocational and technical training programs to counteract the skilled labor shortage brought about by the large-scale migration of workers to high-paying jobs in the oil-producing countries of the Arab Gulf States. In spite of the recession and high unemployment among professionals, skilled technical labor remained in short supply in the late 1980s. Cultural factors also played a prominent role; great prestige is attached to academic

higher education as opposed to vocational training. In response to this need, the government called for a reorientation of educational policy to meet the needs of the country and the people (Metz, 1989).

The University of Jordan, through its graduate programs, provides many services and is committed to cover as many needs as its capacity and capability permits. According to Bakhit and Zghoul (1987), the following duties and services are provided:

1. It offers afternoon and evening classes mainly to employees who are willing to pursue their graduate studies, are public and private school teachers. It also gives a chance to community colleges teachers with Bachelor's degrees to upgrade their qualifications to advance their career by meeting the rules issued by the Ministry of Higher Education in Jordan, emphasizing that each faculty member teaching at community colleges must have a Master's or a Doctoral degree.

2. To build stronger relations with the private sector and government agencies, the Universities updated their plans to cope with the ever-changing needs of these entities, and opened many channels of interaction by providing free consultation to those organizations. As a result of this interaction, many faculty members and graduate students are encouraged to undertake research dealing with issues relating to potential operational organizational problems and to seek appropriate solutions.

The private and public organizations have agreed to provide undergraduate and graduate students with chances for practical training and research.

3. The University, through the Faculty of Medicine and the Faculty of Nursing, is providing students and the community with the medical services needed at its hospital located on campus. Those faculties are cooperating with other medical and health care agencies for raising the level of services provided for the community. With this kind of cooperation and planning, the graduate students in the medical and nursing fields along with the faculty are involved in every aspect of those plans and services.

4. The graduate programs are geared toward many ways and channels of involvement in society. The Faculty of Agriculture is providing the consultation needed by farmers, and the graduate students in this area of study are encouraged to research agricultural problems in Jordan. The Faculty of Engineering is providing consultation and is encouraging its graduate students to be involved in research in the national industrial agencies and institutions.

5. Since the establishment of The University of Jordan, the idea of one-campus and a unified public service has been utilized to achieve a higher level of interaction. Never the less due to the one-campus structure and the limited fields of studies offered at The University of Jordan, some of the Jordanian students have to pursue their higher education abroad.

Metz (1989), who noticed that the majority of Jordanian students studying abroad choose the field of medicine and engineering, believes that most of the Jordanian students in Eastern Europe and the former Soviet Union were on governmental scholarships of the host countries, while most of the students in Western Europe and the United States were financed by their families with a small percentage of them financed by the government.

The good relationships that Jordan has with Western Europe and the United States plus the perceived high quality of education in the West were factors in making graduates from these areas more desirable for prestigious positions upon their return than of those who graduated from Eastern Europe and the former Soviet Union. The perceived higher quality of education in the West also was a factor in making these graduates more competitive on the job market.

The strong demand for graduate education, shown by both students and the community, as witnessed by the growing student enrollment, made The University of Jordan expand its graduate programs to meet those needs and demands. The establishment of The University of Jordan opened many avenues to higher education and was a response to new plans of development that were taking place in the country. The Ministry of Higher Education points out that when the University graduated the first 21 students with Master's degrees between 1972 and 1975, it discovered that it had to expand its graduate programs to receive a higher percentage

of students seeking graduate studies (Ministry of Higher Education, 1988).

Even before the establishment of The University of Jordan, Jordanians showed an interest in higher education. While this was not recorded statistically until the 1950s, many of them had to go to universities in the neighboring Arab countries to pursue higher education (Egypt, Syria, Lebanon, and Iraq) or to Western universities. Many of the Jordanians who studied abroad were assisted by government scholarships or received fellowships from the British Council. In 1950-1951, no less than 514 Jordanian men and 22 women were studying abroad, 361 of them in Arab countries and 175 in Western countries (of the latter, 146 in the United States). In 1954, there were 529 students from Jordan in the United States alone, 29 of them were women. They studied engineering, science, social science, humanities, medicine, and political science (Pati, 1958).

There has been tremendous growth in Jordan in the last twenty-five years, requiring a large number of professionals, well-trained technicians, and experts in many fields. These changes have forced The University of Jordan to play an important role in this fast growing nationwide development in all its aspects.

In keeping with its mission to serve the local community and to respond to its ever-changing needs, the University, beginning in 1970, established ten scientific centers. Among other things, these centers provided

opportunities for research and development and offered consultation and technical services to individuals and institutions inside and outside Jordan (The University of Jordan: The University of Jordan Catalogue, 1990/1991).

The government has recognized the importance of including The University of Jordan in its development plans, mainly to conduct research studies for its five-year plan (1986-1990). This plan sought to develop higher education in Jordan on a basis of careful and thorough research dealing with its various aspects. These studies focused on the following:

1. Jordanian students abroad.
2. Higher education institutions in Jordan.
3. Curricula and offerings.
4. Accrediting of higher education institutions and programs.
5. Planning for expansion: capacity, programs and specializations, administration, faculty, training staff and activities.
6. Alumni: follow-up employment, levels of performance and relevance to labor-market needs.
7. Institutions of higher education abroad: fields of specialization, academic levels, types and locations.
8. Research: research centers in Jordan, types of research, levels, needs and requirements.
9. Socioeconomic development plans in Jordan: need for specialized and trained manpower at various academic levels (Ministry of Planning: Five-Year Plan for Economic and Social Development, (1986-1990, pp. 263-264).

The results of this research is now being put into effect.

The Future Role of the University's
Graduate and Higher Education
Programs

Even though the number of universities in Jordan will have grown to eleven by the year 1994, the researcher believes that The University of Jordan will always be considered the "mother" or founding university, and will maintain its prestigious position in the country. It will most likely continue to be the a good example for other universities in Jordan to follow. The University of Jordan has grown in terms of enrollment, programs offerings, size, faculties and academic staff. Table VIII, page 64, gives the number of students at the Master's level in four universities for the year 1993; The University of Jordan enrolled 69.6 percent, Yarmouk University 21.1 percent, Science and Technology University 5 percent, and Mu'ta University 4.3 percent.

The University of Jordan, with its large campus located near the capital city Amman, plays a significant role in helping to achieve a higher level of interaction with the community. In fact, the architectural structure of The University of Jordan is the result of well studied plans which sought to blend the University with the surrounding community on one hand, and to provide an integrated whole for different faculties on the other.

The University of Jordan has gained a good reputation

and a place of prestige in the Arab world at large. This reputation may have helped the University to be more efficient in serving the Jordanian society and emphasize the need for applied scientific research in agriculture, economics, business administration and industry. The University has developed and expanded its educational programs and curricula with a view of meeting the immediate needs of Jordanian society. The University of Jordan plans to have higher education accessible to all Jordanians and predicts that in the coming years there will be an increase in enrollment to include for both Arab and foreign students at the graduate level (Bakhit and Zghoul, 1987).

Professor Fawzi Gharaibeh, President of The University of Jordan, speaking at the Sixth Biology Arab Conference held at The University of Jordan in October, 1992, reviewed both the accomplishments and the expansions of The University of Jordan in the last thirty years. He said that The University of Jordan has witnessed an increase in student enrollment and in faculty numbers. In the academic year of 1992/1993, the number of students enrolled at the University was 20,042 (See Table IX, p. 65) and the number of faculty was 797 with Ph.Ds., among them 26 are Arabs and 10 are non-Arabs (See Table X, p. 82). Professor Gharaibeh also noted that the University is concentrating on scientific research especially on research relating to society's needs, and is conducted by the faculty of the deanship of graduate studies (Sawt Al-Shaab

Newspaper, October, 1992).

The University of Jordan recently participated in a meeting dealing with issues common to the universities in the Arab world. The annual meeting of the 83 members of the Arab Universities Union was held in Amman, and it was decided to establish the Arab Council for Student Training at The University of Jordan. This program gives students from all Arab universities the opportunity to train in any of the Arab universities at both the undergraduate and the graduate level (Sawt Al-Shaab Newspaper, April 1993).

TABLE X

DISTRIBUTION OF ACADEMIC STAFF AT THE UNIVERSITY
OF JORDAN FOR THE YEAR 1991/1992

Academic Rank	Male	Female	Total
Full Professor	131	2	133
Associate	191	13	204
Assistant	245	29	274
Instructor	11	34	45
Sub Total	578	78	656
Full-Time Lecturer	47	4	51
Part-Time Lecturer	49	5	54
Assistant Teacher	16	20	36
Sub Total	112	29	141
Total	690	107	797

Source: The University of Jordan, Facts and Statistics,
Amman, Jordan, 1991/1992, p. 17.

The University of Jordan is also playing a role at the

international level, especially in the technological areas. The University through its research centers is participating in a cooperative project between Jordan and the European Group Countries. The two parties, at a cost of 4 million European currency unit (Eurodollar), agreed to help in the development of research at The University of Jordan and thus expanded the role which the University plays in serving societal needs. Students will also have greater opportunities at the graduate level to participate in different projects. (Ad-Dustour Newspaper of Jordan, April 1993).

The government of Jordan gives its full support to education in the country in general and to higher education in particular. King Hussein during a visit to the University in April of 1992, which coincided with the 30th anniversary of the establishment of the University said:

The University has not achieved all its goals. Nevertheless, We have to work hard to attain our objectives. Hard work, he confirmed, should not stop with the student's graduation from the University but rather, it should start from there. Life, he said, is a field of endless challenges and difficulties (The University's Campus News, April, 1992, p. 1).

At the local level, it is stated clearly in the mission statement that The University of Jordan is to provide the services needed by society. The mission statement adds that the University's action to construct bridges with the local community is only meaningful if it:

1. Provides an optimum setting for study and research by offering a range of programs that give priority to quality rather than quantity.

2. Encourages and conducts scientific research that is directly related to all aspects of development in Jordan.
3. Develops the spirit of team work among the students, and encourages them to take the initiatives and think creatively.
4. Safeguards the Arab and Islamic civilization and spread its heritage.
5. Fosters the sense of responsibility and patriotism among students.
6. Utilizes and develops technologies that meet the needs of society.
7. Promotes the Arts and Sciences.
8. Strengthens its links with other Arab and international universities and scientific and academic institutions.
9. Fosters interest in the national and international cultures and develops the national heritage.
10. Provides medical care by coordinating and cooperating with other medical institutions, and by graduating qualified people to serve the local society (University of Jordan: Rules and Regulations, 1990, p. 1/1).

The administration of the University also emphasizes that the relationship between the University and the community should be strong, for that will facilitate the University's mission of solving some of the problems what the community has directly or through the graduates who will be challenged by these problems after graduation. Graduates, especially at the graduate level, who will participate in this through research related to Jordanian society, will be able upon graduation to become involved directly with societal needs and work closely with the people. The

knowledge and the experience which the graduate students gain about society, will be a key factor in guiding their future endeavors and bringing students and people to work together to serve society and the citizens. (Bakhit and Zghoul, 1987).

The University has graduated 29,419 students at the undergraduate level 1,519 students at the Master's and the Doctoral level (University of Jordan: The University of Jordan Catalogue, 1990/1991, p. xi). The number of students graduating with Master's degrees from the University is on the increase. In 1975, there were 36 students, in 1980, 272 students (Ministry of Higher Education, 1985, p. 202). According to statistics from The University of Jordan, the total number of students enrolled at the University in the year 1991/1992 was 21,042 (See Table IX, p. 65). Of this number, 2,615 were Master's candidates, and 118 were Doctoral candidates (The University of Jordan: Facts and Statistics, 1991/92, p. 10). The same statistics, gave the number of graduate students in the same academic year as 302 Master's degrees and 6 Doctorates (University of Jordan: Facts and Statistics, 1991/1992).

The University of Jordan will continue to offer programs at the graduate level in the Humanities and Sciences, because it is the only university in Amman offering such graduate studies, and will continue to do so for the next ten years until newly established universities are able to provide graduate studies.

Tables IV and V (pages 51 and 53, respectively) show the number of students graduated from The University of Jordan between 1972 and 1991. The figures of growth indicated that the fastest growing faculties are Science, Agriculture, Medicine, Engineering, and Nursing. There is also growth in the Humanities: Education, Arts, and Economics.

To appoint more qualified faculty with Ph.D. degrees, The University of Jordan has plans to send candidates on scholarships to study abroad. In March, 1992, there were 69 students on scholarships from The University of Jordan. Those students are studying in seven countries: the United Kingdom (34), the United States (27) students, and the remaining eight at several different countries (University of Jordan: Facts and Statistics, 1991/1992).

The need for a good library promoted The University of Jordan to establish what is considered to be the second largest library in the Middle East, containing 534,014 pieces of different library resources (University of Jordan: Facts and Statistics, 1990/1991, p. 210).

TABLE XI
SUMMARY DATA OF GRADUATE STUDENTS FROM THE
UNIVERSITY OF JORDAN AT ALL LEVELS
FOR THE YEAR 1991/1992

Faculty	Male	Female	Total
Arts	197	515	712
Economic	252	239	491
Science	179	249	428
Islamic Law	127	149	276
Medicine	50	17	67
Nursing	48	108	156
Agriculture	147	112	259
Education	142	207	349
Engineering	212	79	291
Law	130	73	203
Physical Education	85	34	119
Pharmacy	14	39	53
Dentistry	23	28	51
Total	1606	1849	3455

Source: The University of Jordan, Facts and Statistics, Amman, Jordan, 1991/1992, (p. 11).

TABLE XII
SUMMARY DATA OF ACADEMIC STAFF AT
JORDANIAN UNIVERSITIES FOR
THE YEAR 1989/1990

University	Masters	Doctorate	Total
Univ. of Jordan	76	656	732
Yarmouk Univ.	92	346	438
Mu'tah Univ.	13	122	135
Science and Tech.	55	196	251
Total	236	1320	1556

Source: Ministry of Higher Education, Annual Statistical Report 1980-90, Amman, Jordan, p. 27.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The growth considerations and future role of the graduate programs at The University of Jordan are discussed in the following sections: (1) summary of the study, (2) findings, (3) conclusions, and (4) recommendations for future study.

Summary

The purpose of this study was to give a historical analysis of the graduate programs at The University of Jordan, consider their growth, major offerings, and seek to determine whether growth coincided with the growing needs and demands of Jordanian society. Finally an attempt is made to predict what future role the graduate programs at the University will play in upgrading the country's educational system, and share in Jordan's continuous development.

The researcher reviewed various data as well as the literature related to the graduate programs at The University of Jordan. In order to get a better view of the historical development of the graduate programs at the University, the researcher focused on the historical growth

development in each of the academic programs at the University, pointing out the stated mission and objectives of each graduate program and the degrees which the departments are awarding in each field of study.

A review of the literature concerning the history of the graduate programs in the United States and the quality of the graduate programs at American universities was provided. The reputation and the outcomes views as shown by societal needs were felt by the researcher to be a good criteria for measuring the quality of the graduate programs at The University of Jordan.

The review of Jordan's developmental progress in many sectors of the country which created a need for thousands of qualified personnel is the major reason for the establishment graduate programs at The University of Jordan. This rapid expansion in all sectors in the country created the need for trained intellectuals and professionals in many fields. This explains why the academic opportunities which the University has been offering to all Jordanian students at the undergraduate and graduate levels have stressed traditional subjects but also emphasized the technological and scientific fields particularly in the Master's degree programs.

Findings

1. The University of Jordan at its establishment in 1962, started with one faculty, namely the Faculty of Arts.

The number of students was 167 with eight faculty members. The last faculty to be established was the Faculty of Pharmacy in 1980. In the 1992 academic year, The University of Jordan had an enrollment was 21,042. Of this number, approximately 3,455 were regularly enrolled graduate students and 797 were teaching staff members associated with one of the 14 faculties.

2. The first graduate program started by the University was at the Deanship of Scientific Research which was established in 1973. This study found that The University of Jordan is offering graduate programs in both the Humanities and the Sciences in eleven of its fourteen faculties. In comparing The University of Jordan and the other three universities in the country, it was determined that the other universities were also offering graduate programs but their programs were not as extensive as those offered by The University of Jordan. Additionally, some of the newly established universities offered courses only at the undergraduate level.

3. The University of Jordan is the only institution of higher education that grants the Doctoral degree. Doctoral degrees are granted in the Humanities, Arabic, History, and Islamic Law.

4. The data examined, relating to the professional Diploma of Higher Studies, showed that eight faculties awarded such a degree, with a requirement of 30 credit hours. This program has been stopped since the beginning of

the academic year 1992.

5. To graduate quality students, The University of Jordan maintains high admission standards. Only a select group from high school graduates is admitted every year.

6. In the review of the literature dealing with evaluation and the quality of the graduate programs, the study points out that the evaluation of those programs was important not only in determining the front-ranking institutions, but also in finding lower-ranking ones. This standard could be used to rank The University of Jordan.

7. With regard to the quality of graduate programs, the literature reviewed points out that developing high-quality academic programs requires considerable resources (time, money, materials, creativity, and trained personnel). The University of Jordan is not exempt from this factor.

8. The researcher determined that the graduate programs of The University of Jordan given the structure of Jordanian society, have benefitted both the students and the Jordanian society. Students were able to attend a higher education institution in their own country rather than attending one in a foreign country. Many students were able to pursue career opportunities in their home country while attending night classes. The Jordanian society, by keeping its students at home while pursuing higher education goals, benefitted by the restriction of tuition money flowing out of the country. A local university can design programs to

train students specifically for the needs and demands of the Jordanian society. By attracting students, the University expanded both the financial and intellectual resources of the country.

9. The University of Jordan, in directing its programs toward serving the development of the country in various fields, has followed the American model of semesters and credit hours.

10. In the domain of education, graduate programs in education have allowed public school teachers to pursue studies in their particular teaching areas to meet the degree requirements of the Ministry of Education. In the realm of agriculture, students were provided with advanced training in specialized fields specific to Jordan which were of great benefit to the agricultural economy of the country.

11. In reviewing demographic data from all levels, the researcher observed that female students at the undergraduate and the graduate levels slightly outnumbered male students by less than four percent. At the graduate level in the Sciences and Humanities, it was observed that male students outnumbered female students by an average of eighty percent.

12. At the Arab and international level, the researcher found that several activities including research studies and conferences took place at The University of Jordan. This attests to the growing prestige of The University of Jordan.

13. This study has shown that in the past thirty

years, Jordan has witnessed rapid economic and social changes, all of which demand qualified university graduates. The University of Jordan was unable to handle the increase in enrollment of post-secondary students. This prompted the government to establish four additional state-sponsored universities. There is no doubt that the establishment of The University of Jordan provide the expertise needed to establish the four state universities and six private universities in the country. The availability of the higher education opportunities provided by The University of Jordan served as an incentive to Jordanian students to pursue both graduate and undergraduate studies at home.

Conclusions

The findings derived from the study justify the following conclusions about the graduate programs at The University of Jordan:

1. The graduate programs at The University of Jordan have not met the needs of all Jordanian students, particularly at the doctoral level. It remains the only university in the country to offer a very limited number of doctoral programs in the humanities. Most doctoral students still go abroad for their graduate training.

To increase the proportion of Jordanian teaching and staff members, the University authorities have continuously endeavored to select the best qualified graduates, provided them with scholarships, and sent them abroad. These

students are sent to obtain doctorate degrees in the fields that do not exist at the University and return to join the faculty. Those students, are in addition to other Jordanians who are pursuing their graduate studies on their own abroad.

2. There is a growing need for more than the first graduate degree to teach at the colleges and universities and work as consultants and researchers to advance industrial and technological development. Carmichael (1961) supported this conclusion by saying that not only do economic and educational needs require it, but it is recognized as essential to long-range defense needs as well. Professor Gharaibeh, The President of the University of Jordan stressed how, by implementing a good educational system, serious instructional problems in the labor force would be addressed.

3. A good quality educational programs and regular assessment and evaluation of these programs requires time, money, materials, and trained personnel. Assessing and evaluating the graduate programs provides the public and the state agencies with the information they need on those programs. This would benefit the administration of the institution as they need a periodical evaluation of their programs. As the literature points out, a good academic program should possess all or some of the following criteria: to be attractive to students; beneficial to students and society; congruent, distinctive among

institutions of higher education; effective in serving students and community; functional in its program offerings; and growth producing Cartter (1966), Bergquist and Armstrong (1960). Many of the factors considered to represent a good academic program have been found in this study to exist in the graduate programs of The University of Jordan. However, a more effective evaluation system and a greater emphasis on quality is needed to maintain the program quality in the future.

4. Cartter (1966) stressed that the library is the heart of the university. Institutions that are strong in many areas invariably have major national research libraries. The University of Jordan, with its large campus, 14 faculties with more than 800 faculty members, and a large library could continue to increase its offerings at the Master's and the Doctoral level. The University of Jordan has the second largest library in all of the Middle Eastern countries and its salaries are among the highest of all the Jordanian universities.

5. The stated mission of The University of Jordan for both the general and graduate programs is to serve the community and meet its most urgent needs. There is a definite effort to maintain a strong correlation between program offerings at the university and the overall needs of society. Many conditions have always affected the development of the graduate programs at all universities. Several of those conditions are political, economic, social,

and educational in nature. This conclusion was supported by the findings of Carmichael (1961). The University of Jordan is no exception to this, it is continuously revising and expanding its graduate program offerings to better serve the community. The government of Jordan, on its part, is expanding its vocational and technical training programs to offset labor shortage. It has called for a reorientation of educational policy to meet the specific needs of the country and the general more diverse needs of the people of Jordan.

6. The University of Jordan followed the American higher education model in its credit hour requirements as well as the American philosophy of meeting the more urgent needs of society. The study findings indicate that the positive development of the country, combined with university support and guidance, has altered the view of the Jordanian people toward studies in higher education. In addition, these developments have resulted in an increased demand for higher educational studies. With this, the graduate programs at The University of Jordan became the professional training field for those seeking advanced degrees. Besides academic programs, a mission of the University also is to provide services such as free consultation and advice in areas of health care, education, agriculture, and business. As the development of the graduate programs at The University of Jordan followed closely the growth in economic and social development of the country, the future expansion of the economy should continue

to provide support for those programs and help maintain their quality.

7. It was observed by the researcher that females exceeded male undergraduates by a slight percentage. One possible explanation may be in part the Jordanian culture. Families prefer to keep females near their homes and within their country. Another possible explanation is geographic proximity of the University to the capital city of Amman. The wealthy families of the city want the prestige derived by sending both their daughters and sons to attain a university degree. At the graduate level, male enrollment exceeds female enrollment by an average of eighty percent. One possible explanation for this vast difference in enrollment between the two genders may lie in the Jordanian cultural belief that a married woman's priority is her family. Many women who have undergraduate degrees and are qualified to seek graduate degrees are married. In the Jordanian culture, females are expected to commit themselves to family life and to raising their children. After females get married, they do not seek higher education like the males in their society.

8. The University of Jordan appears to have an effective relationship with Arab and international communities. This position is attested to by the enrollment of 1,578 Arab students at the University and 189 students from non-Arab countries. The University has hired some faculty members from Arab and non-Arab countries. In the

year 1991 there were 26 faculty members from Arab non-Jordanian countries (The University of Jordan: Statistical Yearbook, 1991, p. 117) and 10 members from non-Arab countries (The University of Jordan: Facts and Figures, 1992).

Recommendations

On the basis of the findings of this study, the researcher makes the following recommendations:

1. The graduate programs at The University of Jordan have passed through several stages of development. In order to help satisfy its stated aims and goals, the researcher recommends that the University should change its emphasis to facilitate the education and training of specialists, technicians, and experts in various fields to assist in alleviating many of the developmental issues confronting the country.

2. The researcher recommends that The University of Jordan consider concentrating on graduate education and turn over some of its undergraduate programs to the newly established universities. The University, as an established institution of higher education and research, will then shift its focus from general educational programs and place an increased emphasis on research. The University would also assume the responsibility for providing more specialized graduate education degrees for the graduates of the smaller universities. Additionally, research will bring

financial support to the University as well as help in addressing the country's needs. This recommended change result in mutual benefits to the institution and Jordanian society.

3. Future studies of graduate programs in Jordan should include all of the universities in the country. The researcher believes that it would be helpful to view university goals and objectives based on a joint effort on the part of all of the universities and the Jordanian citizens. This collaboration will help to ensure that the needs of the citizens are being continually provided for. Additionally, this collaboration and cooperation between the universities and the citizens will help to reduce the incidence of duplication and repetition of services to the community.

4. The University will benefit from interacting with other universities around the world such as the Arab, European, and American universities. These relationships would help to develop programs and benefit the Jordanian students. The researcher recommends that the universities maintain close professional ties with other universities around the world.

5. The way the University is dealing with the community by providing economic, social and educational services needed by the people is particularly important. The researcher recommends that The University of Jordan should continue to follow the American extension service

model to ensure both flexibility and effective service to the community.

6. The researcher recommends that universities should work toward having joint teams of researchers to include Jordanians as well as non-Jordanians. This is valuable as the graduate programs will be looked at from different perspectives, and the teams will share a diversity of views on research finding, thereby reducing the possibility of biased findings.

7. A future study by the same researcher will be a study of the graduate programs at The University of Jordan to rank the colleges and universities in the Arab World and/or in the region. The researcher recommends that a study be undertaken based on quality indicators of the graduate programs. Considering the time and effort required for such a study, the researcher would appreciate any encouragement or support from The University of Jordan or from any other university in the country. This research project could target the undergraduate and the graduate levels. Ideally, the findings of this study should bring to light additional information that would benefit the quality of life for all.

8. Although cooperation exists between the government agencies and universities, the researcher believes that a greater dedication to the philosophy of cooperation among the Ministry of Higher Education, the Ministry of Education, and the Ministry of Planning, as well as other Ministries

and organizations is necessary for the continued success of any development plans in Jordan. The universities and the ministries could work more closely together to better develop clearer and more focused short and long range plans. This would facilitate the graduation of good quality students who would more closely fit into the job market and serve the other needs of the country.

9. The University of Jordan has a history of serving the needs of the country with quality academic programs. To preserve this quality, the researcher recommends that The University of Jordan constantly monitor its programs to ensure that only high quality academic program offerings are maintained. This will help the University in its goal of supporting the factors leading to growth in educational, industrial, economic, and the social sector of the country.

10. The researcher recommends that it would be beneficial to involve faculty, staff, students, and administrators in the evaluation of all academic programs in higher education. This recommendation extends beyond The University of Jordan to include the other Jordanian universities.

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APPENDIXES

APPENDIX A
PROFESSIONAL DIPLOMAS AWARDED
AT THE UNIVERSITY
OF JORDAN

PROFESSIONAL DIPLOMAS AWARDED

Faculty of Arts

- Department of Geography
- Department of Philosophy
- Department of Demography

Faculty of Economic and Administrative Science

- Department of Business Administration
- Department of Political Science

Faculty of Science

- Department of Mathematics
- Department of Physics
- Department of Chemistry
- Department of Geology and Minerals

Faculty of Agriculture

- Department of Plant Production
- Department of Animal Production
- Department of Nutrition and Food Processing
- Department of Agricultural Economic and Extension
- Department of Plant Protection
- Department of Soil and Irrigation

Faculty of Education

- Department of Psychology
- Department of Curricula and Foundations of Education

Faculty of Engineering and Technology

- Department of Civil Engineering
- Department of Mechanical Engineering
- Department of Chemical Engineering
- Department of Industrial Engineering

Faculty of Law

Faculty of Physical Education

APPENDIX B

**A LETTER TO THE VICE PRESIDENT
OF THE UNIVERSITY
OF JORDAN**



Oklahoma State University

DEPARTMENT OF EDUCATIONAL ADMINISTRATION
AND HIGHER EDUCATION

STILLWATER, OKLAHOMA 74078-0146
309 GUNDERSEN HALL
405-744-7244

March 2, 1992

Professor Suleiman Arabiat
Vice President
The University of Jordan
Amman, JORDAN

Dear Professor Arabiat:

Over the years, I have been honored by being able to work with a number of outstanding Jordanian educators. Some of those individuals were associated with the public school and junior/community college levels of education, and most of those came to the United States because of contracts agreed to by the Kingdom of Jordan, the World Bank, and Oklahoma State University.

In other cases, we have been able to work with Jordanians interested in education at the University level. Currently, I am working with Mr. Mohammad Ashour, who is enrolled in the doctoral program with Higher Education Administration as his major focus. He is now developing a dissertation proposal which deals with the University of Jordan, and I believe his scholarship will be truly enhanced if he is able to secure relevant documents through your office. Unfortunately, such documents are not owned by the Oklahoma State University Library.

Specifically, Mr. Ashour is working on a history of the University of Jordan and will be seeking information about the establishment of the University, its organizational structure, the aims and objectives of the members colleges as well as of the University as a whole, yearbooks and annual statistics, and related information. I hope your staff will be able to provide modest assistance since the research effort is worthy and will no doubt be valuable to the University.

If I may provide any additional information which you require, please do not hesitate to contact me. I thank you for your kind consideration.

Sincerely yours,

Thomas A. Karman
Professor

APPENDIX C

A LETTER TO THE PRESIDENT
OF THE UNIVERSITY
OF JORDAN



Oklahoma State University

OFFICE OF ASSOCIATE DEAN
ADMINISTRATIVE AFFAIRS AND RESEARCH
COLLEGE OF EDUCATION

102 CLUNDERSEN HALL
STILLWATER, OKLAHOMA 74078-0408
(405) 744-6508 - Phone
(405) 744-7713 - FAX

March 16, 1992

The Honorable Dr. Fawzi Gharaibeah, President
University of Jordan
Amman, Jordan

Dear Dr. Gharaibeah,

I am writing this letter on behalf of Mr. Mohammad Ashour, who is a senior doctoral student at Oklahoma State University in the department of Educational Administration and Higher Education. To assist Mr. Ashour with the completion of his doctoral requirements and the preparation of his learned doctoral thesis, we are requesting information and publications about the University of Jordan. Specifically, we would appreciate receiving publications and public relations information about the organizational structure, the aims and objectives of the individual academic colleges as well as the university as a total entity, yearbooks and annual statistics, and any other related information that has contributed to the development and stature of the University of Jordan to this date. Mr. Ashour will be preparing a dissertation on the evolution and development of the University of Jordan and this information will assist him greatly in this process. We also believe his dissertation will be of great interest to the academic community in your country as well as scholars throughout the Middle East and the United States. It is with a great deal of admiration and appreciation that we make this request. Anything that you and/or your staff can provide to assist in this process will be truly appreciated.

With this letter I send my highest regards and all best wishes to you and the University of Jordan for success in the future

Sincerely,

Kenneth H. McKinley, Ph.D.
Associate Dean
College of Education
Oklahoma State University
Stillwater, Oklahoma
USA

KHM/tmb

cc: Dr. Tom Karman, Professor and Dissertation Advisor
Dr. Amad Al-Tal, President Zarka National College
Mr. Mohammad Ashour, Stillwater, Oklahoma

APPENDIX D

A FOLLOW-UP LETTER TO THE PRESIDENT
OF THE UNIVERSITY
OF JORDAN



Oklahoma State University

OFFICE OF ASSOCIATE DEAN
ADMINISTRATIVE AFFAIRS AND RESEARCH
COLLEGE OF EDUCATION

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July 17, 1992

The Honorable Fawzi Gharaibeh, President
University of Jordan
Amman, Jordan

Dear Honorable President Gharaibeh:

We wish to thank you for the educational material we received from you recently regarding the University of Jordan and higher education in the Kingdom of Jordan.


In addition to the information you sent us, we would appreciate receiving more information on the following topics:


1. Rules and regulations of the University of Jordan and/or a policy handbook outlining the policies of the faculty and programs of the University.
2. Information regarding the "Community Education Centers" at the University of Jordan.
3. Any books, pamphlets, brochures, reports, or other information regarding the totality of higher education in Jordan.
4. Recent and projected major developments within the University of Jordan and future trends regarding enrollments and program changes. This could include documents or reports prepared by international agencies or the Jordanian Council on Higher Education.

All of this information will continue to be used by Mr. Mohammad Ashour as part of the review of literature and developmental process for his dissertation work at the Oklahoma State University.

Thanking you in advance, we are extremely appreciative of your efforts to reply to this request. Best wishes for all success in the future.

Sincerely,


Kenneth H. McKinley, Ph.D., Associate Dean
Administrative Affairs & Research
College of Education
Oklahoma State University


Mohammad Ashour
Senior Research Associate
Educational Administration & Higher Education
Oklahoma State University

cc: Dr. Joseph Licata, Department Head, Educational Administration & Higher Education
Dr. Tom Karman, Professor, Educational Administration & Higher Education

VITA

Mohammad Ali Ashour

Candidate for the Degree of

Doctor of Education

Thesis: GRADUATE STUDIES AT THE UNIVERSITY OF JORDAN:
GROWTH CONSIDERATIONS AND FUTURE ROLE

Major Field: Higher Education

Biographical:

Personal Data: Born in Azarieh, Jordan, January 4,
1953, the son of Mr. and Mrs. A. Th. Ashour.

Education: Graduated from Hasan Kamel Al-Sabbah
Secondary School, Irbid, Jordan, 1971; received
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