A COMPARATIVE STUDY OF INTERLIBRARY LOAN FUNCTIONS AND THE DEVELOPMENT OF A MODEL INTERLIBRARY LOAN NETWORK AMONG ACADEMIC LIBRARIES IN SAUDI ARABIA

With Compliments from
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Dedicated

To

My Mother

A COMPARATIVE STUDY OF INTERLIBRARY LOAN FUNCTIONS AND THE DEVELOPMENT OF A MODEL INTERLIBRARY LOAN NETWORK AMONG ACADEMIC LIBRARIES IN SAUDI ARABIA

Moid A. Siddiqui

ABSTRACT

The purpose of this study was to survey and analyse the condition of the present system of academic libraries, defined in this study as the seven university libraries, in Saudi Arabia; determine the perceptions of academic librarians in Saudi Arabia toward cooperation; and design a model interlibrary loan network (ILLN) for the academic libraries of Saudi Arabia.

An extensive analysis of international literature related to interlibrary loan developments and resource sharing networks in developed, as well as developing countries was conducted. A document review, questionnaire survey, and structured interview were used for data collection. A questionnaire was administered to the seven Deans of academic libraries to obtain data related to library personnel, collections, budgets, library equipments, the extent of cooperative interaction among the libraries, and the network opinion, etc. Interviews of the librarians of the subject academic libraries were also conducted.

Major findings of the questionnaire survey are: six of the seven academic libraries of Saudi Arabia do not meet the ACRL standards in respect of collections. No library indicated that 'All of the Needs' in respect of textbooks, research, and recreation are being provided

by their respective libraries. All seven libraries indicated that they have cooperation with all other academic libraries, but they borrow/lend materials either occasionally or do not borrow/lend at all. Inadequate finances and inadequate resources were ranked number one as factors hindering cooperation among academic libraries. The interlibrary loan by photocopy service was ranked number one as area of cooperative activities by all academic libraries. There was also agreement that current cooperative activities were inadequate. They strongly favor participation in an ILLN and rated an ILLN as highly desirable.

It was determined that the collections of the academic libraries are small and not up to any reasonable standard. Therefore, they are unable to adequately fulfill the needs of their users. The need for the immediate initiation of a cooperative and coordinated collection development policy of monographs and serials among the academic libraries is evident.

This study proposed an ILLN that will both be a distributed and centralized network in which academic libraries will coordinate and communicate directly with each other. Requirements, such as telecommunication systems, bibliographic tools, ILL policy, and ILL forms; potential financial sources; etc. have been presented. The proposed ILLN will be formal, systematic, and regular. This will provide greater cooperation, coordination, efficiency, cost effectiveness, and will ensure comprehensive sharing of available resources.

efforts in arranging and binding the dissertation.

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CHAPTER I

INTRODUCTION

RATIONALE FOR INTERLIBRARY LOAN

In the name of God, Most Gracious, Most Merciful

The following Verses 1-5 of Sura Iqraa (mean "read" or "recite or rehearse") were the first direct Revealation to The Holy Prophet Mohammad (peace be upon him) from The Almighty Allah (God), in the cave Hiraa:

Sura XCVI.

Iqraa, or Read ! or Proclaim !

Or *'Alaq*, or The Clot of Congealed Blood.

In the name of God, Most Gracious, Most Merciful.

1. Proclaim ! (or Read !)
In the name
Of thy Lord and Cherisher,
Who created —

2. Created man, out of
A (mere) clot
Of congealed blood :

3. Proclaim ! And thy Lord
Is Most Bountiful,—

4. He Who taught
(The use of) the Pen,—

5. Taught man that
Which he knew not.



بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِيْمِ

١-اِقْرَأْ بِاسْمِ رَبِّكَ
الَّذِىْ خَلَقَ ۚ

٢-خَلَقَ الْاِنْسَانَ مِنْ عَلَقٍ ۚ

٣-اِقْرَأْ وَرَبُّكَ الْاَكْرَمُ ۙ

٤-الَّذِىْ عَلَّمَ بِالْقَلَمِ ۙ

٥-عَلَّمَ الْاِنْسَانَ مَا لَمْ يَعْلَمْ ؕ

The message was clear: the man is contrasted with the high destiny offered to him in his intellectual, moral, and spiritual nature by his "most bountiful" Creator. No knowledge is withheld from man, on the contrary, through the faculties freely given to him, he acquires it in such measure as outstrips his immediate understanding, and leads him ever to strive for newer and newer meaning. God teaches us new knowledge at every given moment. Individuals learn more day by day; nations and humanity at large learn fresh knowledge at every stage.

The believers were directed to learn and seek knowledge; and mankind has acquired knowledge to such an extent that he finds it difficult to manage the information explosion. Although information is regarded as an inexhaustible resource, to make it fully available and easily accessible in meeting the diversified needs of its users requires that it be collected, organized and, moreover, be shared. Therefore, for reasons of efficiency and economy, resource sharing is a present day necessity, and may also be seen as a positive virtue in a devout Muslim country as is Saudi Arabia.

It has long been recognized that no university library, no matter how large, can acquire every item that might be needed by its faculty and students. Even the largest libraries contain only a small fraction of the world's publications. Consequently, cooperative arrangements in the form of interlibrary loan, especially for the sharing of resources, are necessary. University libraries have played a major role in this century in the development of a cooperative interlibrary loan system.

Samuel Green, in an article in 1876, proposed that it would add greatly to the usefulness of our reference libraries if an agreement

is made to lend books to each other for short periods of time. (2) He expressed two concerns: the need for a single library to provide a level of service which would satisfy its clients, and the concomitant need for a regularity in the means by which the librarian could increase the possibilities of service to a level nearer to the librarian's own expectations of what might be satisfactory service.

Lending books from one library to another is probably the oldest, and certainly the easiest method since a single loan requires only a borrower, a willing lender, and the means of transmission. (3) The idea of cooperation through interlibrary loan arrangement has long been a tradition among libraries. (4)

The flow of information will continue to increase at an even faster rate than at present. At the same time, the expenses associated with acquiring, processing, storing, and retrieving the materials will continue to increase at a faster rate than library budgets. (5)

Presently, library budgets are shrinking and the libraries are unable to cope with the flood of information available. From a currently inadequate budget, about sixty percent of a library's budget is used to support staff and only a portion of the remaining budget is allocated for acquisitions. (6) Besides, the rise of small new specializations tends to drive up the price of books and journals because the clienteles are small. (7) This statement is true from the point of view of academic libraries. Academic programs are becoming more diverse, and students are becoming more sophisticated and library oriented. Almost any library collection is inadequate when the research specialization among students,

faculty, and researchers is intense.

Resource sharing cooperation will maximize the availability of materials and services, and minimize the expenses. It is only possible if the emphasis is placed on access rather than possession. The effectiveness of resource sharing depends on the availability of appropriate communications, technology, and delivery systems. The computer has been an extremely effective device for processing and locating materials quickly and conveniently. As more integrated systems of resource sharing develop, more benefits can be realized. (8)

With the advancement in computer technology, library automation is a new encouraging factor which has a great impact on the development of interlibrary loan. More and more academic libraries are becoming increasingly involved in automation as it provides easy and quick access to a library's collection and facilitates interlibrary loan. Also, information about the valuable and extensive collections of several libraries may be accessed by forming networks.

One way of overcoming the inherent problems in voluntary cooperation necessary for an activity such as interlibrary loan is to form a network to share resources. A library network has four basic elements: (a) a point of access for users; (b) a database which may include books and journals in traditional form, miniaturizations of these, and data stored in other forms, including computer discs and tapes; (c) a system of direct communication; and (d) a contractual basis for finance and administration. (9)

Discussing the impact of networking on interlibrary loan, Dougherty stated that "those who desire materials will be able to discover more easily which libraries own a particular title; they

will also be able to address a request to the nearest library, instead of the present tendency of routing automatically a request to the nearest large research library." (10)

Saudi Arabia is a developing country, and within the last two decades it has developed almost in every field, including library and information science. Librarians have been engaging in library cooperation as they become aware of increased needs and of the limitation of self-sufficiency. By developing a new resource sharing system, libraries in Saudi Arabia will be able to increase their effectiveness by limiting the growth of collection and expenditure.

BACKGROUND OF THE STUDY

Country

The Kingdom of Saudi Arabia is best known as the birthplace of Islam, and the Saudi Government takes seriously its stewardship of the holy places of Islam. Islam obliges all muslims who can do so to make the Hajj, or annual pilgrimage to Makkah (birthplace of the Prophet Mohammad), at least once during their lifetime.

The modern Saudi Arabia state was founded by the late King Abd al-Aziz Al-Saud. In 1902, Abd al-Aziz recaptured Riyadh, the Saud dynasty's ancestral capital, from the rival Rashid family. Continuing his conquests, Abd al-Aziz vanquished al-Hasa, the rest of Nejd, and the Hijaz between 1913 and 1926. On 23 September 1932, these regions were unified as the Kingdom of Saudi Arabia.

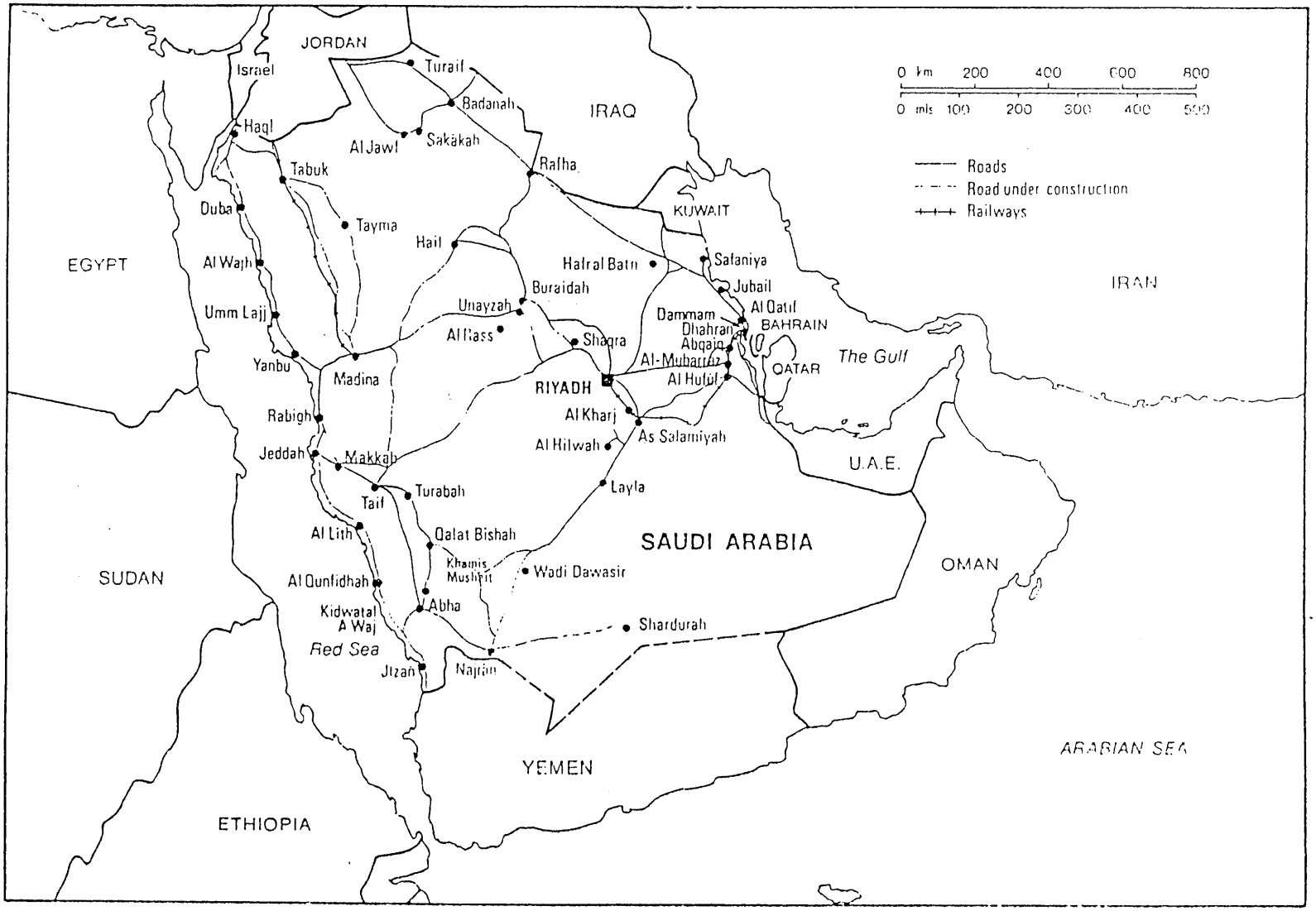
The country's southern border with Yemen was settled by the 1934 Treaty of Taif, which ended a brief border war between the two states. Two neutral zones - one with Iraq and the other with Kuwait - were created. The Saudi-Kuwaiti neutral zone was administratively partitioned in 1971, with sharing of the petroleum resources. Tentative agreement on the partition of the Saudi-Iraqi neutral zone was reached in 1981, and partition was finalized by 1983. The border between Saudi Arabia and the United Arab Emirates was agreed upon in 1974.

Location

The Kingdom of Saudi Arabia in the Southwest of Asia, the largest country of the Middle East; it occupies about four-fifths of the Arabian peninsula and covers an area of 2,149,690 sq km (829,997 sq mi). (11) It is bordered by Jordan, Iraq and Kuwait to the north, by Yemen to the south, by Oman to the south and east, and by Qatar and the United Arab Emirates to the north-east. Saudi Arabia has a long western coastline on the Red Sea, facing Egypt, Sudan and Ethiopia, and a shorter coastline on the Persian Gulf, with the Bahrain archipelago just offshore and Iran on the opposite coast. Much of the country is arid desert, and some places are without rain for years. However, the weather has changed considerably during the last few years.

Structurally, the whole of Arabia is a vast platform of ancient rocks, once continuous with north-east Africa. In relatively recent geological time a series of great fissures opened, as the result of which a large trough, or rift valley, was formed and later occupied

Map 1. Kingdom of Saudi Arabia



Source: Country Profile: Saudi Arabia. The Economic Intelligence Unit, London, Oct. 1987, p. 18.

by the sea, to produce the Red Sea and Gulf of Aden. The Arabian platform is tilted, with its highest part in the extreme west, along the Red Sea, and it slopes gradually down from west to east. Thus, the Red Sea coast is often bold and mountainous, whereas the Persian Gulf coast is flat, low-lying and fringed with extensive coral reefs which make it difficult to approach the shore in many places.

Language

Arabic is the language of all government offices and the majority of the population, as well as the language of instruction at all levels of schooling which precede university. At the university level, programs such as medicine, science, and engineering are taught in English. Each of the seven university libraries houses large English collections, in addition to Arabic collections.

Government

Saudi Arabia is an absolute monarchy, with no legislature or political parties. Constitutionally, the King rules in accordance with the Shari'a, the sacred law of Islam. He appoints and leads a Council of Ministers, which serves as the instrument of royal authority in both legislative and executive matters. Decision of the Council are reached by majority vote, but require royal sanction. The Council of Ministers presently consists of a prime minister, the first and second deputy prime ministers, 20 ministers, two ministers of state, and a small number of advisers and heads of major autonomous government organizations. The royal capital is Riyadh and the administrative capital is Jeddah. (12)

The country is divided administratively into five regions: Western (Al-Hijaz), Eastern (Al-Hasaa), Southern (Asir), Middle (Najd), and Northern regions. All governors are appointed by the King to govern these regions.

Economy

A most important event in the modern history of Saudi Arabia was the discovery of oil in the 1930s. Hence, the economy of Saudi Arabia is dominated by petroleum, of which the country is by far the largest producer and exporter within the Organization of the Petroleum Exporting Countries (OPEC). Saudi Arabia, one of the richest countries of the world, has received massive revenues from petroleum exports, which it has used in part to finance an ambitious programme of infrastructural development and modernization, as well as far-reaching programmes for health, social and educational purposes. Over 90% of the oil is produced by the Saudi Arabian American Oil Company (Saudi ARAMCO), fully owned by the Saudi Government.

LIBRARY SYSTEM

Most of the libraries available today throughout the Kingdom were established after the present Kingdom was founded in 1932. After assuming power, King Abd al-Aziz gave much attention towards developing the country. While he spent a major part of the country's resources in opening schools and colleges, he also tried to establish libraries in educational institutions as well as in big cities for public use. With its limited resources, the government did not have large amounts of money for libraries. That is why we did not see any remarkable progress towards libraries until the

early 1970s. (13)

The income of the petro-dollar after 1973 brought a rapid change in every sector, including libraries. New libraries were opened and old libraries started expanding. Presently, the following types of libraries exist in Saudi Arabia:

Public Libraries

The earliest libraries in Saudi Arabia, as in most parts of the Islamic world, were the Mosques. Since the time of the Prophet Mohammad (peace be upon him) in the 7th century, Mosques have served as repositories of human knowledge and played important cultural and educational roles similar to that of schools and public libraries. For that reason most of the libraries in Saudi Arabia evolved mainly in the two holy cities of Makkah and Medina. The Al-Haram Mosque of Makkah and the Prophet's Mosque in Medina were the sole cultural and educational centers, and they put heavy emphasis on theological education. These libraries were established either on the Mosque premises or were adjacent to the Mosques. The rich collections of both the Mosques of Makkah and Medina developed through various channels such as donations from scholars, caliphs, sultans, distinguished pilgrims, endowments, and so on. (14)

Except for these private collections and Mosque libraries, there is no record of any good public library existing in Saudi Arabia. The actual development of public libraries in Saudi Arabia, in the modern sense of the term, was in 1959 when the Ministry of Education established the General Directorate of Public Libraries to supervise and coordinate public library services in the country. Some public libraries have also been established under different

government ministries and agencies such as the Ministry of Pilgrimage and Endowment and other religious departments. Of the total of the fifty-seven public libraries in the country, forty-seven are administered by the General Directorate of Public Libraries of the Ministry of Education. (15)

Public libraries have been established in almost every city of Saudi Arabia. Table 1 lists public libraries under different ministries and agencies with date founded and their collections. Out of 57 public libraries, the Ministry of Education supervises a total of 47 public libraries, whereas the Ministry of Pilgrimage and Endowments supervises 7 public libraries. Out of 3 remaining libraries, 2 are administered by the Department of Holy Mosque and one is supervised by the Department of Religious, Ifta, Dawah, and Guidance.

The second 5-year development plan of Saudi Arabia, for the period 1975-1980, paid special attention to the national library system. Public libraries were improved through a program of renovation and remodeling in keeping with modern trends in library science. Library activities have been expanded to include annual exhibitions of student art and book fairs displaying new publications in various fields.

In recent years, the Saudi government has spent millions of Saudi Riyals in building libraries of all kinds all over the country. For instance, the construction of the building for the King Abdul Aziz Islamic Library in Medina is said to have cost over 10 million Saudi Riyals. The Quranic Library established in 1972 inside the Prophet's Mosque, is unique; it is the only one of this nature in the whole world. (16)

Table 1. Public Libraries in Saudi Arabia

	Library	Collection*	Year Founded
MINISTRY OF EDUCATION:			
1.	Abha	37,600	1974
2.	Baha	15,560	1975
3.	Bisha	24,840	1976
4.	Bukairiyah	20,760	1972
5.	Buraydah	46,410	1955
6.	The 2nd Buraydah	10,000	1975
7.	Dammam	40,900	1962
8.	Dar al-Kutub al-Wataniyah (The National Library)	91,500	1968
9.	Dawadmi	16,560	-
10.	Delum	-	-
11.	Dherma	10,000	1980
12.	Hafuf	25,300	1960
13.	Hail	25,500	1975
14.	Hariq	18,000	1957
15.	Huraymila	23,740	1959
16.	Hutat Bani Tamim	24,000	1956
17.	Hutat Sedair	21,500	1957
18.	Jeddah	45,500	1976
19.	Jizan	25,200	1974
20.	Khammaseen	-	1981
21.	Khamis Mushait	16,560	1977
22.	Kharj	20,800	-
23.	Khobar	25,500	1974
24.	Layla	20,000	-
25.	Marrif Unayzah	18,000	1975
26.	Majmah	27,800	1973
27.	Makkah	36,400	1977
28.	Medina	24,560	1980
29.	Mudannab	18,560	1971
30.	Muzahimiyah	20,146	1966
31.	Najran	20,000	-
32.	Qasab	-	1981
33.	Qorayat	10,000	1981
34.	Quwayayah	18,560	1975
35.	Qunfudah	18,600	1975
36.	Riyadh	45,000	1977
37.	Rodat Sedair	20,700	1970
38.	Russ	19,760	-
39.	Sakakah	20,800	-
40.	Shagraa	29,907	1951

Table 1. Public Libraries in Saudi Arabia ... Cont'd

	Library	Collection*	Year Founded
41.	Tabouk	25,400	1966
42.	Taif	40,250	1967
43.	Unayzah	29,900	1954
44.	Ushagra	19,430	1954
45.	Wadi Addwaser	16,000	-
46.	Yanbu	20,800	-
47.	Zulfi	24,000	1972
	MINISTRY OF PILGRIMAGE & ENDOWMENTS:		
1.	Abdulla Ibn Abbas Alelmiyah Assalihayah	10,100	1953
2.	Arif Hikmat	7,997	1853
3.	Mahmoudaya	7,079	1821
4.	Medina	16,304	1960
5.	King Abdul Aziz Library	108,590	1985
6.	Mus-haf	1,744	1971
7.	Makkah	12,000	1959
	DEPT. OF RELIGIOUS, IFTA, DAWAH, & GUIDANCE:		
1.	Saudi Riyadh	19,850	1950
	DEPT. OF HOLY MOSQUE SUPERVISION:		
1.	Al-Haram al-Makki	65,535	1850
2.	Al-Masjid al-Nabawi	6,345	1923

* - As of 1991.

In general, Saudi public libraries have a number of problems. They have scattered operational responsibility without any means of cooperation among four separate agencies. (17) Still, there is no formal or known cooperation among them or their responsible agencies. As a result of the scarcity of professional librarians and the ignorance of many university graduates as to the value of librarianship as a career, (18) as well as the low salaries which discourage bright and ambitious young men and women from joining the profession, there is a significant lack of trained personnel. Another problem is the small number of public libraries in some of the big cities in the country. For example, there is only one public library in Jeddah, which has a population estimated at one million. Finally, as far back as 1979, Khurshid identified the absence of library legislation (19), even to date (1993) this is still the case. Enaction of library legislation may play a tremendous role in the development of libraries.

School Libraries

As is true in many developing nations, Saudi Arabia's rapidly expanding school population and advancing educational aspirations are outstripping its ability to furnish more and more schools throughout the country.

The majority of schools have no libraries at all, and the existing school libraries are not real libraries in the true sense of the word; in primary and secondary schools they are merely a small collection of books placed in small cupboards. Some primary schools have glass boxes containing a few books. There are only eleven libraries that we can call real school libraries. The

largest collection being 3500 volumes (Thaghr school in Jeddah), and the average being 1500-2000 volumes with only a few local newspapers and magazines. Very few librarians in these libraries have library qualifications. The collections are housed in a room similar to any of the classrooms; the furniture is insufficient. The pupils cannot use these libraries, except in spare time of the school day. They have no real role in education process. (20)

Previously, the Department of Public Libraries was also responsible for school libraries. But, the Department could not give enough attention to developing libraries, therefore, it was considered more appropriate to establish a separate administration for school libraries. As part of their program to open school libraries, the government has established a Department of School Libraries under the Ministry of Education. Soon after its inception, the Department sent out a questionnaire survey "to determine the state of school libraries, their services and problems." With the findings of this survey they prepared a program to improve the condition of these libraries by providing adequate funds for the purchase of books and furniture. (21)

The inadequate number of school libraries has resulted in a remarkable level of ignorance on the part of university students as to the use of the university libraries. Ashoor notes in his Ph.D. dissertation on users' attitudes towards the resources and services of three Saudi university libraries, that more than 50 per cent of the students reported that they had never used any type of library before coming to the university. (22)

At present, the situation of school libraries is rather gloomy. Reliable figures for school libraries indicate that only about 25%

of those schools that have libraries have the basic collections of general books and textbooks selected centrally by the Directorate General of Libraries of the Ministry of Education. The Ministry of Education is well aware of this deficiency, but is faced with serious difficulties in solving the problem.

According to plans for the future, all schools will have a library. Those to be built in villages will have a separate room with a separate entrance to the outside, and are to serve as both a school library and a community library. Second, untrained staff are running most of these libraries; trained librarians are badly needed. The Department of School Libraries is planning to start short term training programs for school librarians. Third, very few books are published in Arabic for childern; sufficient children's literature will be produced to remove this problem. (23)

In 1988, Al-Misfer investigated the current state of public and secondary school libraries under the supervision of the Educational District of Riyadh to determine factors that hinder their development and the attitudes of the librarians, teachers, and public library patrons toward the present system. The findings revealed that the existing public and school libraries are not meeting the needs of their users. Specific reasons cited included the lack of awareness on the part of both the public and educational leaders of the importance of public and school libraries; a shortage of qualified professional and trained staff; and a lack of funds. Al-Misfer recommended merging of public and school libraries, initially within the Riyadh District and ultimately within Educational Districts throughout the Kingdom, as a solution to these problems. (24)

Special Libraries

Among the most vital libraries in Saudi Arabia are those classed as special libraries. Within this group are libraries which serve industry, business, government, and special agencies. The scene in special libraries is slightly better, although few in number, they support a real need in their institutions.

Saudi Arabia has about forty special libraries as is evident from Table 2. (25) Majority of these libraries belong to government agencies; only few libraries belong to private companies. Saudi Aramco library has the largest collection of books (55,000) and periodicals (1,600). Thirteen libraries have the collection between 10,000 to 35,000 volumes. The average collection in majority of special libraries (twenty-five) are less than 10,000 books.

The libraries attached to some of the government ministries are nothing more than small storage places for their own publications. However, some organizations have established special libraries to support their needs: those in the Institute of Public Administration, King Abdulaziz Research Centre, the Saudi Arabian Consulting House, and Saudi Aramco are noted for their important role in the performance of their respective institutions.

Special libraries have increased in Saudi Arabia in the past few years. (26) Many new ones are being developed to add to those already providing special services. However, the shortage of professional librarians is considered to be the major problem that impedes their growth. While in many respects the future is bright for the Kingdom's libraries, the problem of library science education and staffing could forestall future progress. (27)

Table 2. Special Libraries in Saudi Arabia

	Organization	Collection		Staff
		Books	Serials	
1.	Chamber of Commerce & Industry, Dammam	8,000	200	8
2.	Chamber of Commerce & Industry, Jeddah	1,200	26	2
3.	Chamber of Commerce & Industry, Riyadh	586	76	1
4.	Dept.of Investigation & Public Sec., Riyadh	738	8	2
5.	Educational Data Centre, Riyadh	12,585	100	6
6.	General Org.for Social Insurance, Riyadh	598	5	2
7.	General Personnel Bureau, Riyadh	1,500	20	1
8.	Industrial Studies & Dev. Centre, Jeddah	1,000	20	1
9.	Industrial Studies & Dev. Centre, Riyadh	11,000	120	3
10.	Institute of Public Administration, Dammam	24,310	130	9
11.	Institute of Public Administration, Jeddah	22,690	120	9
12.	Institute of Public Administration, Riyadh	33,469	160	12
13.	Islamic Development Bank, Jeddah	1,250	40	3
14.	Islamic Research & Training Inst., Jeddah	7,000	-	2
15.	Jeddah Broadcasting, Jeddah	3,000	-	2
16.	King Abdulaziz Military Academy, Riyadh	20,000	-	6
17.	King Abdulaziz Research Centre, Riyadh	28,000	200	4
18.	King Abdulaziz City for Science & Technology, Riyadh	13,000	400	6
19.	King Faisal Centre for Research & Islamic Studies, Riyadh	30,000	180	8
20.	King Faisal Specialist Hospital, Riyadh	5,000	425	3
21.	Ministry of Agriculture & Water, Riyadh	2,000	100	7
22.	Ministry of Education, Riyadh	12,585	100	6
23.	Ministry of Finance & National Economy,Riyadh	5,000	100	8
24.	Ministry of Higher Education, Riyadh	682	-	1
25.	Ministry of Justice, Riyadh	1,892	-	3
26.	Ministry of Labour & Social Affairs, Riyadh	5,000	38	4
27.	Ministry of Petroleum & Minerals, Dammam	1,500	40	1
28.	Ministry of Petroleum & Minerals, Riyadh	3,762	80	2
29.	Ministry of Planning, Riyadh	10,000	100	3
30.	Ministry of Public Works & Housing, Riyadh	520	195	3
31.	Saudi Arabian Airlines, Jeddah	8,000	200	11
32.	Saudi Arabian Consulting House, Riyadh	15,000	140	2
33.	Saudi Arabian Monetary Agency, Riyadh	11,000	200	5
34.	Saudi Arabian Standards Organization, Riyadh	1,000	22	1
35.	Saudi Aramco, Dhahran	55,000	1,600	9
36.	Saudi Basic Industries Corporation, Riyadh	700	80	2
37	Saudi Consolidated Electric Company, Dammam	3,335	177	3
38.	Telecommunications Training Centre, Jeddah	1,250	-	1
39.	Traffic Library, Riyadh	4,320	35	2

University Libraries

Higher education in Saudi Arabia has been recognized as among the best in the Arab world. In order to produce and improve additional human resources, the government of Saudi Arabia has established seven universities under the Ministry of Higher Education. The first university was established in 1957 and the last (seventh) of this chain of new institutions was founded in 1975. The seven universities are:

1. King Saud University (KSU), Riyadh, established in 1957 (formerly Riyadh University) with faculties of Art, Science, Commerce, Pharmacy, Agriculture, Engineering, Education, Medicine, Dentistry, and Nursing.
2. Islamic University (IU), Medina, established in 1961 with faculties of Sharia, Islamic Call, and Principles of Religion.
3. King Fahd University of Petroleum & Minerals (KFUPM), Dhahran, established in 1963 (formerly the University of Petroleum & Minerals) with colleges of Applied Engineering, Science, Engineering Sciences, Architecture, and Industrial Management.
4. King Abdulaziz University (KAAU), Jeddah, established in 1971 with faculties of Economics, Arts, Science, Engineering and institutes of Applied Geology, and Physics.
5. Imam Muhammad Bin Saud Islamic University (IMSU), Riyadh, established in 1974 with colleges of Sharia and Arabic Language.
6. King Faisal University (KFU), Dammam, established in 1975 with faculties of Agriculture, Education, and Veterinary and Animal Wealth at Hofuf; and Medicine and Medical Sciences, and Architecture and Planning at Dammam.
7. Umm Al-Qura University (UAQU), Makkah, established in 1981

(formerly King Abdulaziz University, Makkah Branch) with faculties of Sharia and Education.

Of these seven universities, three are religious in orientation: Islamic University in Medina, Imam Mohammad Bin Saud Islamic University in Riyadh, and Umm Al-Qura University in Makkah. King Fahd University of Petroleum and Minerals in Dhahran specializes in science, technology and engineering, and King Faisal University specializes in medicine and medical science, architecture, agriculture, and veterinary medicine. King Saud University and King Abdulaziz University are mainly concerned with humanities and social science.

The development of university libraries began with the establishment of their parent universities. In the beginning, the libraries were very small and limited in their services and resources. However, during the last two decades, all seven libraries have witnessed rapid development and expansion; they are, therefore, considered among the most advanced in the Arab world.

University library systems in Saudi Arabia have developed significantly as a group. This is due to the teaching of modern science as an essential part of university programs. Additionally, the Kingdom hopes to enhance its regional and international position by becoming technologically self-sufficient. The development of university library system in Saudi Arabia, according to Khurshid is "due to the government's conviction that the library is critically important to university curriculum." (28)

The library systems of all Saudi universities are centralized. Each university has a central library and a number of departmental

libraries at several locations on the campus. These small libraries are simply independent collections, however, their holdings are indicated in the central catalog. The central library is responsible for almost all the activities of the system, controlling the acquisition and processing and the distribution of the staff. The Dean of Libraries is the top administrator, holding a senior position within the university administration. Regarding acquisition, approximately three-fourths of university library books are obtained from Europe and the United States, and over 80% of all orders are placed with foreign sources. The remaining 20% of orders are placed with Arabic and local book dealers and publishers. (29)

Library budgets are large and continue to grow. This fact has a great influence on the collection development of all university libraries. It is assumed that within five years most of these libraries will exceed 1 million titles in each system and will face severe space problems. (29) However, as of 1993, collection of only King Saud University Library has exceeded one million volumes. Collection in the remaining six university libraries vary from 300,000 to 500,000 volumes. (30) The collection of libraries has not grown, as expected, due to slump in oil prices during 1980s.

One of the problems faced by university libraries is the shortage of native professional librarians. In King Abdulaziz University Library in Jeddah, for example, of the twenty-three professional librarians only three are Saudis; (31) in King Faisal University Libraries, none of the fourteen professional librarians are Saudis. (32) Presently at the KFUPM Library all except four of the 30 professional librarians are foreigners. In fact, the staff situation has not changed much due to manpower shortage.

Disregarding the lack of native professionals, the overall number of professionals is inadequate for the number and size of library collections and the increasing size of university enrolments. Even the largest university libraries, the central libraries of King Abdulaziz University and King Saud University, are below international library standards in their resources and services. (33) In 1982, Isa concluded that none of the university libraries meet the proposed standard in providing the space required for collections, staff, and users of the library. None of the university libraries provide faculty status with a faculty salary scale for librarians except for deans and deputy dean's positions. At the present time none of the university libraries in Saudi Arabia have their own budget. (34) The conclusions made by Isa study are still valid even after a decade; nothing has been done to improve the situation.

In a study of user attitudes towards the resources and services of three Saudi university libraries, Ashoor found that only 20% of the students and 50% of the faculty were satisfied with the library services. Ashoor also found that 40% used the library principally to study their own textbooks; 28% reported that they go to the library to use or to check out library materials; 97% said that they borrowed one to four books during any given semester while 98% said that they borrowed one to four books for research projects during any given semester. In addition, only 17% indicated that they were assigned additional reading 'frequently', while 43% were 'sometimes assigned additional reading.' (35)

Finally, there is little cooperation between university libraries in Saudi Arabia as there are no formal structures/agreements of library cooperation. There is neither an inter-library

lending program nor a resource-sharing agreement to help overcome the problem of inadequacy in individual holdings and services. Coordination in areas of bibliographic control, automation of library processes, etc. should also be considered.

LIBRARY EDUCATION

In 1954, UNESCO's Regional Seminar on the Development of Libraries in Arabic Speaking Countries had identified the lack of adequate library training facilities as the largest single factor regarding library development in the area and had recommended the establishment at the earliest opportunity of full time library schools with adequate training programs for various levels of library work. (36) The seminar did not result in opening library schools in Saudi Arabia until the early years of 1970s when many new libraries opened and existing libraries started expanding their collection and services rapidly.

The Arab League of Education, Scientific, and Cultural Organizations (ALESCO) and other professional agencies are also involved in the development of the library profession in Saudi Arabia. Saudi Arabian librarians have begun to participate in professional conventions and are members of professional library organizations. (37)

Library education in the modern academic sense is very new to Saudi Arabia. The first academic program in library education was established in Saudi Arabia in 1972. The Department of Library & Information Science in the Faculty of Arts of King Abdulaziz University in Jeddah is the largest and oldest department in the country. In 1975, another department was opened in the Faculty of Social Sciences of Imam Muhammad Ibn Saud University in Riyadh. Both

programs offer an undergraduate degree in library science. In addition, in 1976, the Department of Library Science in the Faculty of Arts of King Saud University started a one-year program leading to a master's degree in library science. In 1977, the King Abdulaziz University Department of Library and Information Science started a two-year program leading to a master's degree in library science. A few years ago, Umm Al-Qura University in Mekkah has also started a program leading to a bachelor degree in library science in Arabic medium.

In addition to these academic programs, the Institute of Public Administration in Riyadh, Jeddah, and Dammam have started a short training program of 4 months leading to the award of a library diploma for library personnel. The objective of the program is to train library personnel to cope with the basic library requirements. Training courses are also offered at King Saud University.

There are three major problems facing library education in Saudi Arabia. Firstly, there is an inadequate number of faculty members; in King Abdulaziz University, for example, there are only five faculty. Secondly, a lack of textbooks in the Arabic language. Finally, the ignorance of students at the universitly level about library science as an academic program and librarianship as a career.

The established library schools in Saudi Arabia should be expanded, more library materials and equipment should be made available for students, and new library schools should be opened. The library schools should adopt single curriculum with build-in flexibility allowing for special strength in certain fields and

eliminating fields which are the specialities of other schools. (38)

More scholarships in library and information science should be offered to students to study in foreign countries both at the undergraduate and graduate level. Their foreign training will help in improving and broadening the standards of libraries. The availability of literature is very important to develop any discipline. In Saudi Arabia very little appropriate library literature exists.

Professional associations play a very important role in the development of the library and information science profession. Presently, there is no library association in Saudi Arabia. However, it is hoped that library professionals will establish associations to protect their interests. Associations work closely with other organizations concerned with education, research, cultural development, recreation, and public service and thus, better results can be achieved. (39)

STATEMENT OF THE PROBLEM

A library can not own even a significant part of the world's literature. It is universally acknowledged that no library, no matter how large and well funded it may be, can be self-sufficient enough to provide from stock all the materials that its users demand. Yet, it is necessary for library facilities and services to be as effective and efficient as possible.

The increase in the volume of printed material has been occurring at an exponential rate. The cost of acquiring and processing materials has made it very difficult for a single library to carry out responsibilities alone. As costs of providing library services have increased, and as more and more materials have become

available, it has become impossible for libraries to maintain any semblance of self-sufficiency. (40)

The flow of information from all sources and the expenses associated with acquiring, processing, storing, and retrieving information will continue to increase at a faster rate than library budgets. (41)

To solve the cost and the unavailability of materials problem, libraries in developed countries have turned to cooperation with other libraries as a partial solution. The increases in the volume of information along with the advancements in technology and communication devices have opened the door for librarians to look for collaborative solutions to the problem of coverage, or of access to more literature at reduced cost. (42) Libraries have been able to provide more materials to more users by collaborative systems.

University libraries in Saudi Arabia have been confronted with a shortage of library resources which are of vital importance to the support of teaching and research programs of those institutions. This shortage is due to the lack of adequate funds, trained personnel, and the unavailability of suitable materials. It is not financially feasible to provide various facilities in each library, therefore, a way is needed by which all libraries may share their resources.

An important and effective means by which libraries in developing countries can satisfy their user's needs is through the establishment of Interlibrary Loan Network (ILLN). ILLN offers the advantages of greater efficiency, economy, and availability of resources, beside maximizing the availability of materials and services and minimizing the expenses.

Additionally, an ILLN facilitates the access to the holdings and facilities of other libraries in the system by each library. An effective ILLN reduces the expenses of unnecessary duplication of materials, services, personnel, etc. It is necessary that the cooperation is formal and based on mutual benefits, so that each library gets equal access to the materials, directly, or through cooperative arrangements. However, voluntary and unorganized cooperation between libraries is not enough to meet the challenge of providing more information to more users. (43)

PURPOSE OF THE STUDY

Tameem in his article on the evaluation of academic libraries in the Kingdom of Saudi Arabia concluded that at present, cooperation among academic libraries in Saudi Arabia does not yet exist, because of the lack of network utilities. There is no interlibrary lending program nor is there a resource-sharing agreement to help overcome the problem of inadequacies in individual holdings and services. (44) There is little cooperation among the different university libraries.

Interlibrary Loans (ILLs) are transactions in which library materials are made available by one library to another for the use of an individual. Practices and procedures of ILLs have been modified in Saudi Arabia as the desirability of interlending has grown, but no significant attempts have been made to develop a coherent system to serve present and future needs as effectively and economically as possible. There is a great need for an efficient system of resource sharing by creating an Interlibrary Loan Network (ILLN) among the academic libraries of Saudi Arabia.

An ILLN provides a framework within which libraries can share materials and ensure ILL participants have equal access to the

SCOPE AND LIMITATIONS

Line said that "a system designed to serve one kind only can almost certainly serve the needs of other kinds also; separate systems duplicate efforts and may greatly increase cost." (45) However, experience has shown that resource sharing systems are more successful if established among homogenous, i.e. same type, institutions. Therefore, the study will consider the possibility of establishig an ILLN between the seven academic libraries of Saudi Arabia. Accordingly, the population consists of:

1. King Saud University Library, Riyadh
2. Islamic University Library, Medina
3. King Fahd University of Petroleum & Minerals Library, Dhahran
4. King Abdulaziz University Library, Jeddah
5. Imam Muhammad Bin Saud Islamic University Library, Riyadh
6. King Faisal University Library, Dammam
7. Umm Al-Qura University Library, Makkah

Since 100% of the population will be studied, no sample will be drawn.

RELEVANCE OF THE STUDY

The study provides an accurate picture of the present ILL system in Saudi Arabia which is critical to the functioning of the proposed model ILLN. The model ILLN developed by this study will give direction to the efforts of academic libraries for the development of an efficient ILLN in Saudi Arabia to facilitate the improvement of interlibrary loan services. The model ILLN, it is hoped, will make university libraries more cost effective by reducing duplications in staff, equipment, collection development,

etc. At present no directly relevant model exists, nor has any significant research been conducted in this area.

CONTRIBUTION TO THE FIELD

It is believed that upon completion, the study will greatly contribute to the library and information science field in the developing countries, and particularly in Saudi Arabia. In brief, the study will serve as a guide to the:

1. Saudi Arabian government officials, trustees, and librarians in developing an attitude and philosophy of true, unbridled, and unselfish cooperation between the university libraries.
2. Saudi Arabia in seeking membership in international associations to facilitate exchange of publication between developed and developing countries.
3. Saudi Arabian governmental authorities, who are now beginning to recognize the important role library and information science play today in economic and social progress so that adequate financial support for libraries is allocated to carry out their activities smoothly.
4. Saudi Arabian library professionals by providing a description of successful ILLN available in other parts of the world.
5. Chairmen of Departments of Library and Information Science at King Abdulaziz University at Jeddah, Imam Mohammed Ibn Saud Islamic University at Riyadh, and Umm Al-Qura University at Mekkah, responsible for library and information science education in Saudi Arabia, to modify and enrich their curricula.
6. Other developing countries which are interested in developing ILLN facility on the same lines.

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CHAPTER II

REVIEW OF RELATED LITERATURE

INTRODUCTION

Because even the largest libraries contain only a small fraction of the world's publications, satisfactory service to users depends on resource sharing. The oldest and most important form of such cooperation is interlibrary loan as it is evident from the review of literature. Actually, interlibrary lending is the most ancient and to this day, the most common form of resource sharing in libraries.

As information continues to be generated on such a prolific level, the reduction in library budgets, and increase in cost of the new publications, the sharing of resources becomes a viable strategy that libraries can use to alleviate the need for each library to collect all documents that might be requested by clientele. (1)

Kent stated that resource sharing denotes a mode of library operation whereby library functions are shared among several libraries. The functions may be classified as acquisitions, processing, staff development, storage and delivery of services, etc. Resource sharing is a method by which these problems may be solved. (2)

Resource sharing is an omnibus expression to cover cooperation, coordination, interlibrary loans, cooperative acquisition and cataloging. Cooperation of yesteryear has today matured into library systems, networking, and resource sharing. The latter, the most all-embracing phrase, has been described as "the life style of the future for libraries." (3)

A certain intriguing and basically human tension has long existed between concepts of self-sufficiency and resource sharing. The whole of human experience demonstrates over and over again that no man is an island and neither is a library. Man is a sharing animal - at least at his best. It is through sharing that he finds self-realization, enlightenment, and fulfillment. (4)

Clapp has defined this problem when he says that "from earliest times two principles have controlled the growth of libraries - the principle of local self-sufficiency and the principle of sharing the resources ... Neither has ever won exclusively control and the likelihood is that neither ever will." (5)

The resolution of the tension between self-sufficiency and resource sharing is at all no easy task. Dougherty stated that "because the cost of self-sufficiency has become undeniably prohibitive, libraries can no longer afford to act as free agents." (6) Blasingame, on the other hand, takes issue with the idea "that tough financial times reinforce a need for ILL cooperation." (7)

The flow of information will continue to increase at a faster rate than in the present. Expenses associated with acquiring, processing, storing, and retrieving will continue to increase at a faster rate than library budgets. Presently, resource sharing is the only feasible and suitable way available by which this problem may be solved. Many academic and special libraries with severe budget problems have recognized interlibrary loan activity as one of the most important methods to overcome budget cuts and the continuing increase in cost of publications. (8)

This chapter will focus, beside defining the terminologies used in this study, on the historical development of interlibrary loan in

developed countries, particularly in the United States. In addition, this chapter will discuss the development of interlibrary loans in developing countries.

DEFINITION OF TERMINOLOGIES USED

Bibliographic Utility

An organization that maintains online bibliographic data bases, enabling it to offer computer-based support to any interested users, including national library network participants. A bibliographic utility will maintain components of the national library network data store and provide a standard interface through which bibliographic service centers, and individuals national library network participants may gain access to the nationwide network. (9)

Communications Channel

The connection between the point of entry of data into a network and the point of usage of the data (a data link) in a communication system, such as interlibrary loan information exchange system. (10)

Cooperating Libraries

A library that joins with another library or a group of libraries in some common plan, such as coordinated development of collections and services or contribution of entries to a union catalog. (11)

An association of libraries and similar institutions formed for mutual assistance and undertaking functions where the sharing of resources or division of costs can be advantageous and efficient. (12)

Document Delivery

Hosts enable users to order copies of materials retrieved by online searches, either by direct despatch of items by the Host, or

via an agent. Such document delivery may also be offered online to the users' termainals, rather than in hard copy, or via electronic mail. (13)

The document delivery involves several functions, such as establishing a request, achieving awareness of the existence and location of a document, locating the document, shipping the document, and checking on the return of the loaned material, unless it is photocopied material not to be returned. (14)

Interlibrary Loan

Schemes whereby users of one library or information system may request their service point to borrow from other library systems materials not held in their own library system. Most libraries participate in interlending schemes, which may be locally, regionally, nationally, or internationally organized. Many requests will be lodged with library services set up to act as interlending bases, for example the British Library Document Supply Centre. (15)

A transaction in which, upon request, one library lends an item from its collection, or furnishes a copy of the item, to another library not under the same administration or on the same campus. (16)

The National Interlibrary Loan Code of 1968 defined interlibrary loan as follows: "Interlibrary loans are transactions in which library materials are made available by one library to another for the use of an individual; for the purposes of this code they include the provision of copies as substitutes for loans of the original materials." (17)

Interlibrary Loan Code

A code that prescribes policies and procedures to be followed in interlibrary loan transactions. (18)

The first draft of the Interlibrary Loan Code was issued by the American Library Association in 1916. The purpose of interlibrary loan is: (a) to aid research calculated to advance the boundaries of knowledge, by the loan of unusual books not readily accessible elsewhere, (b) to augment the supply of the average book to the average reader; subject, in both cases, to making due provision for the rights and convenience of the immediate constituents of the lending library, and for safeguarding the material which is desired as a loan. (19)

The Interlibrary Loan Code was revised in 1940, 1952, and 1967. In the first revision of the ILL code in 1940, photocopying of materials was considered as a substitute for the original document. Also, libraries making reproductions observe the provisions of the copyright law and the right of literary property. (20) The second revision in 1952 included 5 appendixes with explanations of interlibrary loan procedures to aid librarians in performing an effective interlibrary loan process. (21) In the third revision in 1967, the Reference Service Division of the American Library Association adopted the National Interlibrary Loan Code. The scope of the code stated that interlibrary loan is restricted to those materials needed for research and serious study. Also, the borrowing library was made responsible for all costs charged by the lending library. (22)

In 1970, ALA published the Interlibrary Loan Procedure Manual which is considered to be a set of standard procedures to be followed by librarians while processing an interlibrary loan request. (23)

Since, the Interlibrary Loan Code alone was not sufficient to meet all ILL requirement, a Model Interlibrary Loan Code for

regional, state, local, or other special groups of libraries was formulated. This Model is flexible and includes many workable guidelines which are applicable to various situations. (24)

The Interlibrary Loan Code was most recently revised in 1980 and published by the American Library Association, Reference & Adult Services Division Interlibrary Loan Committee. The objective of this code indicated that an interlibrary loan request could be for any type of material or for a copy of it. Besides, loans were not restricted for the purpose of research or serious study. Also, no limitation was placed on the borrower's status, as was done in the former codes. (25)

Library Cooperation

Library cooperation is a general term which denotes joint library effort. According to Immroth, "cooperation," "consortium," "network," and "resource sharing" may be used as synonymous or interchangeably. A group of libraries working together in a cooperative manner may be called a consortium, a library network, or a resource sharing system. (26)

The term "cooperation" is used, in general, to describe efforts made by librarians to organize the lending of books from one library to another; and the sense of the words "lend" and "borrow" is always confined, unless otherwise stated, to lending books. (27)

Library Network

Technically, a network is an interconnected or interrelated group of nodes (28), meaning two or more libraries engaged in information exchange through certain links for common library

objectives.

A specialized type of library cooperation for centralized development of cooperative programs and services, including use of computers and telecommunications, and requiring the establishment of a central office and staff to accomplish network programs rather than merely to coordinate them. (29)

Library Resources

The total accumulation of materials provided by a library for its target group. Synonymous with library collection and library holdings. (30)

Library Service

A generic term for all of the activities performed and programs offered by libraries in meeting the information needs of their target groups. As such, it can encompass a broad range and hierarchy of services (e.g. public services, circulation services) which are determined for a particular library by its goals. (31)

The facilities provided by a library for the use of books and the dissemination of information. (32)

Materials

Physical entities of any substance that serve as carriers of information, e.g. books, graphics, audiorecordings, machine-readable data files. (33)

National Union Catalog

The National Union Catalog is a central record for location of materials, in addition to being the basic American bibliographic source for verification, description, and identification. It has existed since 1901 as a card catalog at the Library of Congress and as a book catalog since 1956. The publication of the National Union

Catalog has greatly expanded interlibrary loan activities as it helps in locating copies of older imprints on a national basis, with minimum efforts. (34)

Resource Sharing

A term covering a variety of organizations and activities engaged in jointly by a group of libraries for the purposes of improving services and/or cutting costs. Resource sharing may be established by informal or formal agreement or by contract and may operate locally, regionally, nationally, or internationally. The resources shared may be collections, bibliographic data, personnel, planning activities, etc. Formal organizations for resource sharing may be called bibliographic utilities, cooperative systems, networks, consortia, bibliographic service centers, etc. (35)

Transactions

Interlibrary loan is a transaction in which library materials are made available by one library to another for the use of an individual. (36)

A request sent out whether filled or not. If a request is filled by the first library to which it is sent, this is two transactions, one for the borrowing library and one for the lending library. If the same title must be sent to three libraries before it can be filled, this constitutes six transactions, three for the borrowing library and one for each potential lending library that handled it. (37)

Union Catalog

A catalog of the collections of all the libraries of a library system (a central catalog) or of a group of independent libraries cooperating for this purpose, with indication by means of location

marks of the libraries in which a given bibliographic item may be found. (38)

A catalogue of stock in the various departments of a library, or of a number of libraries, indicating locations. It may be an author or a subject catalogue of all the books, or a selection of them, and may be limited by subject or type of material. (39)

Willemin defined the Union Catalog as: "a union catalogue is an inventory common to several libraries and containing all or some of their publications listed in one or more orders of arrangement." (40)

Union List

A list of bibliographic items of a given type, in a certain field, or on a particular subject, in the collections of a given group of libraries, with indication of the libraries in which a given bibliographic item may be found. (41)

A complete record, usually printed, of holdings of material in a certain field, on a particular subject or of a given type, such as of periodicals or annuals, for a group of libraries. (42)

Patrick defined the Union List as a guide which identifies the location of resources for each member library. It helps "in avoiding unnecessary duplication of less-used materials and indicates the strengths and weakensses in the consortium collections." (43)

HISTORICAL DEVELOPMENT OF INTERLIBRARY LOAN IN DEVELOPED COUNTRIES

Interlibrary loan (ILL) is one of the oldest forms of library cooperation. Informal borrowing and lending of books and other materials existed long before the word "cooperation" crept into the

librarian's language. Among the first methods, if not the first method, of cooperation between libraries was the interlibrary loan. Before the advent of networks and computers, it was an established system of sharing between libraries for a century, and it continues as such today. Due to its importance, interlibrary loan has been thoroughly studied, researched, and written about. The literature contains both extensive and diversified articles about ILL.

The need to share resources is probably almost as old as libraries themselves. Some evidence is available to indicate that the library at Alexandria loaned books to the library at Pergamum around 200 B.C. (44)

In the mid-fourteenth century, Johannes Boston Buriensis, an Augustinian monk belonging to the abbey at Bury St. Edmunds, compiled an author catalog indicating author's names arranged in alphabetical order, locations, and their opening words of books available in English libraries, thus making "one library out of many." (45) However, according to Jackson, this catalog was built in the late-fourteenth century by Henry of Kirkestede, of Bury St. Edmunds (until lately attributed to John Boston), of 195 English libraries. There is no mention about the catalog use, unless it was prepared for the purpose of interlibrary loan. (46)

In the seventeenth century, two centuries later, a French humanist Nicolas Claude Fabri de Peiresc made an effort to establish a kind of interlibrary loan system between the Royal Library in Paris and the Vatican and Barberini libraries in Rome. In a period when interchanges of this sort were extremely difficult and entirely unorganized, he freely acted as an intermediary in such activities. Through his many contacts in Europe, he successfully acquired

manuscript materials on loan. (47)

Librarians started efforts to establish a viable interlibrary loan service in the United States in the late-nineteenth century. On September 4, 1876, Green, Librarian of the Worcester Free Public Library wrote a letter to the Editor, Library Journal and suggested to consider the lending of books to one another by libraries, as it is operational in Europe, for an effective library system. He wrote: "It would add greatly to the usefulness of our reference libraries if an agreement should be made to lend books to each other for short periods of time. It happens not unfrequently that some book is called for by a reader, or that in looking up the answer to a question, a librarian has occasion to use a book which he finds in the catalogue of another library, but which does not belong to his own collection. The book, very likely, is one that can be replaced if lost. But it would take time to get it through ordinary channels; it might be necessary to send it abroad for a copy or to wait to pick up one, if the book is scarce. In such a case it would be a great convenience to be able to borrow a book for a few days." (48)

Green further wrote: "If libraries were to agree to help one another in this way, much good would result ... I should think libraries would be willing to make themselves responsible for the value of borrowed books, and be willing to pay an amount of express-age that would make the transportation company liable for the loss in money should the books disappear in transit ... Reference libraries, it is true, all have exceptionally valuable books that they would not be willing to lend." (48)

After a month, on 4 October 1876, in a conference of Librarians held at the Pennsylvania Historical Society, Philadelphia, Green

presented a paper entitled, 'Personal Intercourse and Relations between Libraians and Readers in Popular Libaries.' During the course of presentation, he informed the fellow librarians that "a plan of this kind is in operation in Europe, and that in many places it is easy to get through the local library books belonging to libraries in distant countries. Valuable books and even manuscripts are thus sent from one library to another." He asked librarians and others to consider whether it would not be well to form one, and whether it is not feasible to make one in the United States. (48)

Exactly after sixteen years later in September 1892, the Library Journal published another letter on the same topic from Samuel. In the letter, the author wondered "why libraries should not enter into an agreement by virtue of which books may be furnished by any institution, upon request, for use by the other library?" Besides, the author put forth some advantages of such an agreement, which he thought might help. (49)

The editor's note to Samuel's idea was not encouraging when the editor wrote that "the lending of books between American libraries is not unexampled. Harvard College Library and the Boston Anthenaeum have been drawn upon in that way. The tacit agreement is that outlined above; but we do not know of any case in which a written agreement has been made." (50)

In reply to editor's note, Samuel clarified his proposal saying that "my proposal looked to a general union of the various libraries of the country - or at least the more important ones - in the agreement proposed. Such an agreement would not, as it seems to me, be necessarily in writing. But a mutual understanding on the subject would, of course, be necessary among the institutions

concerned, such as I do not think at present exists." (51) Actually, at this time, his proposal gave birth to the idea of interlibrary loan principles, guidelines, etc.

The Library Journal in its May 1892 issue published a report about the initiation of a direct mail service which was reported in the Boston Post (March 6, 1892). The report said that the National Medical Library at Washington, one of the best in the world, is circulating books on interlibrary loan to those physicians of the country who have deposited $50 as security. The report also mentioned that why should not the Congressional Library, a national library, sent out packages of books to poorly equipped libraries, under certain guarantees. There seems to be no reason why such a scheme should not be successfully carried out. (52)

Putnam reported in the 45th report that the Boston Public Library established an ILL system to loan books to other libraries of New England. Blank forms for requesting books were printed and made available to borrowing libraries, if they agree to care of books and pay penalty in case of loss or mutilation. (53)

The Librarian of the University of California reported that his library has adopted the system of ILL of books and invites the cooperation of other libraries in carrying it out. The Librarian further reported that his library will provide books on loan to other libraries of the United States, which are willing reciprocally to loan books to the University of California Library. Explaining the new plan, Rowell said that "the growing demands of scholars, incapable of satisfaction by any one library, and the economical management of library finances" has forced us to adopt the ILL system. He also laid down following rules for regulating the ILL

system: a) the borrowing library shall be responsible for all books while loaned and in transit, and shall make good any loss or damage to the satisfaction of the lending library; b) books shall be sent and returned by express (not by mail), and all expense of carriage, both ways, shall be paid by the borrowing library; c) upon receipt and upon return of borrowed books, the respective librarians shall immediately send acknowledgment; and d) books in frequent use, or those of excessive rarity or of extraordinary value, may be loaned only at the discretion of the librarian. (54)

In July 1898, Andrews, Chairman, John Crerar Library, Chicago presented the Report of the Cooperation Committee of the American Library Association and reported considerable progress in the cooperative work of interlibrary loans. The Centralblatt fur Bibliothekswesen records the addition of several European libraries to the list of those who agree to exchange manuscripts; the Prussian government has formulated rules for the exchange of books; the Boston Public Library and the University of California have taken similar action. The Committee also announced that the subject of interlibrary loan would be discussed in the program of the College and Reference Section. (55)

Green, after awakening an interest in ILLs 22 years previously, presented a paper entitled, 'Inter-library Loans in Reference Work,' at Chautauqua Conference of ALA in New York on July 7, 1898. Beside explaining his experience about borrowing and lending of books from and to, to other libraries, he also explained the need for formal ILL cooperation among libraries. Green opined that "the system of library interloaning should be more widely extended, and that small libraries should lend to one another, as well as the smaller librar-

ies borrowing from larger ones." He hoped that college and city libraries, in the long run, will find substantial returns for kindness rendered to investigators in small places through libraries.(56)

In 1899, Richardson, Librarian Princeton University Library presented a paper at the Atlanta Conference of ALA on cooperation in lending among college and reference libraries. Richardson pointed out four practical methods by which cooperation may come in to ameliorate the situation, and these may be described under "cataloging," "Purchase," Specialization," and "Lending." By cooperation in cataloging is meant the employment of some method by which it may be readily known where books can be found; cooperation in purchase meant some arrangement to supplement rather than duplicate one another's collections; cooperation in specialization meant various libraries would each develop some speciality, whereby scholars would know most probable supply for his need; and cooperation in lending meant development of some practical scheme, whereby large libraries would send books from one to another. (57)

In 1900, Jackson, General Theological Library, Boston describing 'New England's Present Library Problem,' shared his ILL experience that his "library is lending books on theology to clergymen of all religious thought through local libraries and distributing books to local patrons and sending them to members and subscribers in various parts of New England." He informed that in a few years, according to the estimate of the several state librarians, the number of libraries will be increased to nearly 1100 from the present 750; and then, very few clergymen in New England will be without opportunity to read the best books known to their profession. (58)

In the Fall of 1901, Eliot, Harvard's President in the Report of Harvard College 1900-01, proposed that "the increasing rate at which large collections of books grow suggests strongly that some new policy is needed concerning the storage of these immense masses of printed matter ... It may be doubted whether it be wise for a university to undertake to store books by the million, when only a small proportion of the material stored can be in active use ... The unused might be stored in a much more compact manner than they are now, even in the best-arranged stacks." (59) Although the space concept was proposed by Eliot, few deposit libraries were born of space problems mounting during the depression years.

In 1906, Roberts, New Jersey Library, lecturing in 'Small Libraries: Round Table Meeting,' commented on 'What the Large Library can do for the Small Library.' Roberts pointed that "through the courtsey of the ILL the smaller libraries are able to do more than otherwise for their own members, and the library service of the whole state is improved. The Newark Public Library furnishes blanks to librarians in the state. The restrictions are: no new book, no fiction, no books in demand by the Newark public, no books already owned by the library making the request." She informed that in 1905, 582 books were borrowed by 22 New Jersey libraries. (60)

Peck, Librarian in the state of New York, also lecturing in the round table meeting on small libraries talked about interlibrary loans. He was of the view that "it is our duty to provide the material to readers. If there is any book which is not available in the library, the library should get the book on interlibrary from the state library. Last year, my own institution had the loan of 268 books." Encouraging librarians, Peck concluded the lecture

saying that "we are poor, but we are rich in enthusiasm, in willingness to have, we are willing that the right book shall go at the right time into right hands." (61)

Also, in 1906, Richardson, read the 'Report of Committee on International Relations' in the fifth sesion of Narragansett Pier Conference and informed that the German government has offered to the United States government direct international lending of manuscripts and documents. "This proposition is in effect to extend to American libraries the same system of exchange which now exists between various European nations. It contemplates mutual loan, under proper conditions and safeguards, at the expense of the borrowers, of such manuscripts or documents as may properly be loaned." (62)

The Library of Congress in its report for the fiscal year ending on June 30, 1907, stated: "Under the system of ILLs, the Library of Congress will lend books to other libraries for the use of investigators engaged in serious research ... The purpose is to aid research calculated to advance the boundaries of knowledge, by the loan of unusual books not readily accessible elsewhere." (63)

In 1908, Gould, Librarian McGill University, Montreal published an article in Library Journal entitled, 'Regional Libraries,' and emphasized the need for the establishment of regional libraries to further the cause of ILL cooperation between libraries. Describing the objective of regional libraries, Gould said that "each of these regional libraries would serve as a reservoir upon which all the libraries of its district might freely draw. They would cooperate unrestrictedly with each other in matters of exchange, loan, purchase of rare or particularly costly works." (64)

Also in 1908, Lane, Librarian of Harvard University, spoke about "a central bureau of information and loan collection for college libraries." He talked about a systematic plan for interlibrary cooperation in the interests of all American college and reference libraries by establishing a College Library Lending and Reference Bureau. The tasks: a) to collect whatever records already exist relating to the books in other libraries; b) to obtain information from libraries supplementary to that already in print in catalogs and reports; and c) to become familiar with the conditions and the rules of the principal libraries that can be depended upon for lending, to gain their confidence. Lane concluded that "I count myself fortunate in being permitted to bring this scheme for library cooperation to public notice ... a plan, the realization of which would give us a central agency cooperating with American college libraries and helping them to cooperate with one another." (65)

By 1909, interlibrary loan cooperation was a topic of such concern that it was chosen as the principal theme of ALA. Gould, after becoming president of ALA in 1909, talked about 'Coordination, or method in Cooperation' at the Bretton Woods Conference. By citing examples of Chicago libraries, California libraries, European experiments in Belgian, Germany, and England, etc. he mentioned that ILL cooperation have been going on for years, and have now grown very usual, but they are still effected chiefly between the bigger libraries. He asserted that any "system of libraries" should include the small and medium size libraries, which form the great majority of libraries in the United States. He suggested establishment of regional (or reservoir) libraries in several region which will get into touch with the National Library and other great libraries

throughout the country to learn at least the strong points of the collections of each, and arrange for reciprocal exchange. (66)

Bishop, Superintendent of the Reading Room, Library of Congress presented the summary of libraries which borrowed books from the Library of Congress in the fiscal year ending on June 30, 1909. A total of 1,023 volumes were loaned to 119 libraries. Of these, 49 were academic libraries and 44 were public libraries. Bishop indicated that ILL is an expensive process as it requires, at its lowest terms, at least eleven different processes. They are: a) a letter of request; b) a search for the books; c) a special charge of some sort; d) wrapping and directing; e) shipping of material; f) acknowledgement of receipt; g) advice of return to the owning library; h) wrapping and directing to return; i) shipment; j) discharge; and k) acknowledgement of receipt. (67)

Bowker sent a questionnaire to various libraries to get the views of librarians on the point of 'Coordination or Affiliation of Libraries.' The results published in March and May 1910 issues of Library Journal showed that the majority of librarians wish to develop ILLs among various libraries. Besides, the librarians preferred the plan of a central lending library because books stored in a central lending library could be used by hundreds of libraries.(68)

Gould, Chairman of the Committee, presented the report of the Coordination Committee appointed at the Bretton Woods Conference. The committee discussed two plans: a) a central lending library and bureau of information, discussed by the College and Reference Section at the Bretton Woods Conference; and b) regional or reservoir libraries, considered by a general meeting of ALA at the same time. The committee submitted the following resolution: "That certain

libraries, which are now lending, or are willing to lend to others, adopt uniform rules for lending, with the right to exceed these rules in generosity when such action seems desirable to the lenders; and that the rules thus adopted be printed and circulated with the addition of the names of the libraries that have adopted them ... In view of the growth of ILLs, libraries cooperating in such work would favor charging a small fee to cover the labor involved. That an effort be made to develop a system of interlibrary readers' cards, which will be good between specified libraries." (69) The resolution was accepted without any objection. The move towards an ILL code was, therefore, well underway.

In 1911, a symposium on printed catalog cards was held in which librarians from the Library of Congress, Harvard University, New York Public Library, the John Crerar Library, Boston Public Library, etc. participated. Each libraries experience about stock of cards, size and weight of cards, methods of storing cards, cost of the cards, etc. were discussed. It was concluded that if cooperative cataloging may be carried out between American, British, and German libraries, duplication of work and expenses may be saved. (70)

By 1916, it was felt necessary to prepare an ILL code so that huge collections of the libraries may be used by other libraries to fulfill the requirements of library patrons. Therefore, an ALA Interlibrary Loan Code was first published in 1916. (71) A proposal to revise the code was made, but nothing was done until 1940. First revision of ILL code was published in 1940; while second and third revisions were published in 1952 and 1967, respectively, which became the national standard for ILLs. (72)

In 1945, Downs made an assessment of cooperative programs in the United States. His study revealed: "... certain important principles which have influenced the success or failure of various kinds of library cooperation. First, distance is a handicap. Second, regional library cooperation has its greatest opportunities in those areas with inadequate books resources. Third, libraries should not be asked to give up anything but rather to assume positive responsibilities and receive direct benefits. Fourth, agreements must be flexible enough to provide for expansion and adjustment. Fifth, complete elimination of duplication between libraries is not possible or desirable. Finally, only a comparatively limited number of libraries are at present equipped to make any substantial or effective contribution to a general program of cooperation on the research level." (73)

In 1949, the Center for Research Libraries was established by ten universities as a non-profit institution with the primary purpose of increasing the library research resources available to cooperating institutions in the Midwest. Four areas of activity were initially outlined. First, the deposit into a common pool of the infrequently used library materials held by the participating institutions in order to reduce their local space needs. Second, the cooperative purchase and centralized cataloging and housing of infrequently used library research materials that were not already adequately available to the participants. Third, the centralized acquisition and cataloging (sic) of the materials acquired by the participants for their own collections. Fourth, the coordination of the acquisitions of the individual participating libraries to avoid unnecessary duplication. (74)

In 1952, Colwell, a university president provided another assessment of cooperative programs: "It is my personal judgement that those that work best are of two sorts: they are either between universities, or parts of universities, of equal status and quality or, at the other extreme, that differ widely in status or quality ... But where the gradations in quality are small in extent but noticeable, cooperation is exceedingly difficult ... the obstacles of cooperation are not material ... (They) are found in the mind and spirit of man. They are institutional pride and institutional jealousy ... They are inertia and complacency. It is self-satisfaction, institution-wise, that makes the building of effective cooperation a difficult thing. And I would say, finally, that it is an irrational provincialism or an emotional particularism on the part of college faculties which makes cooperation difficult." (75)

In 1956, the development of ILL got a great boost when the Library of Congress began publication of both cumulative and current catalog of books represented by Library of Congress printed cards and its supplements in the form of the National Union Catalog (NUC). The NUC is considered a reference and research tool for a large part of the world's production of significant books as acquired and cataloged by the Library of Congress and a number of other North American libraries. The National Union Catalog is a unique publication, because it has largest number of entries, available world-wide, and is the most commonly used catalog for ILL. (76)

Also, in 1956, the Public Library Association (PLA) published a guide in which it said, "libraries working together, sharing their resources and services can meet the full needs of their users. The cooperative approach on the part of libraries is the most single

important recommendation." (77) After more than a decade later in 1967, the PLA reaffirmed its earlier commitment to library cooperation in its "Minimum Standards for Public Library Systems." (78)

In 1967, the boards of directors of four American Library Association divisions - the associations of Public, State, School, and College and Research Libraries - approved a joint statement on ILL cooperation. The statement set forth "the imperative need for cooperation" within the assumption that "no one library can be self-sufficient" and that "libraries acting together can more effectively satisfy user needs." The statement outlines the prerequisites for fruitful interlibrary cooperation: a) that primary responsibility for each type of library to its special clientele must be defined before ILL cooperation can be established to augment service; b) That effective cooperation depends upon adequate resources, administrative capability, and efficient communication; c) Each library must realize its responsibilities to the network and assume its appropriate share of responsibility; and d) that all libraries must maintain an attitude of flexibility and experimentation. (79)

The Ohio College Library Center (OCLC) was incorporated in 1967 by nine public and private colleges and universities as a not-for-profit corporation. The OCLC articles include the statement that "the purpose or purposes for which this corporation is formed are to establish, maintain and operate a computerized, regional library center to serve the academic libraries of Ohio and designed so as to become a part of any national electronic network for bibliographic communication; to create, maintain and operate a computerized central catalog of books and journals in the participating libraries; and to do such research and development related to the above as are

necessary to accomplish and to extend the concept." (80)

That same year, the OCLC trustees approved a statement of two principal goals: "a) increase of resources for education and research to faculty and students of its member institutions; and b) the deceleration of per-student costs in its member colleges and universities ... OCLC will stand ready to participate in newer information servicing activities, and it may well be that furnishing powerful computation service will be among its earliest activities." (81) This indicates a major operational interlibrary endeavor.

The operational computer-based retrieval systems of the 1960s mostly were off-line batch processing systems, using magnetic tape as the storage medium, and serially searched. Although some experimental online systems were in use in the early 1960s and a few major online systems were operational in late-1960s, online information retrieval really came into its own in the 1970s. (82)

While reviewing the relationship between online technology and library functions, Drake commented that computer technology has had a significant effect on all library services, including ILLs and collection development. The facts of library usage, the cost of new construction, and rapidly increasing costs of operating current facilities provide the justification for shared storage. The configuration of resource sharing in the United States is evolving. Librarians are emerging from the catalog closet, stopping the revolution about the record keeping axis and taking charge of the revolution to come. (83)

It is the perception of responsibility which can make or break efforts of library cooperation. Dougherty sums up this line of thought when he writes that "in truth, cooperative programs succeed

only as long as each participant perceives the arrangement as beneficial to his institution." (84) It is the awakening of just such a perception that challenges the communicating capacities of those involved with resource sharing activities.

The Research Libraries Group (RLG) was formed by Columbia, Harvard, and Yale Universities, and the New York Public Library (NYPL) to develop a common bibliographic system, share resources, cooperative acquisitions, and a program of book conservation. The presidents of the three universities gave their strong endorsement to the RLG concept, and the Trustees of the NYPL demonstrated their support by voting in October 1974 to allow materials from the research libraries to be sent to other RLG members on ILL. The RLG was incorporated in Dec. 1975 as a not-for-profit corporation. (85)

In 1975, the National Commission on Libraries and Information Science (NCLIS) designated that Library of Congress as the National Library. And in its role as a National Library, it should accept the following responsibilities in the National Program: "The Library of Congress has been interlibrary lending a variety of its materials to other libraries for many years. In the development of a national system of information resources, there will be complexes of collections organized for sequential service level. Loan of library and information materials will, in some cases, have to come from the most comprehensive collection, that of the Library of Congress." (86)

DEVELOPMENT OF INTERLIBRARY LOAN IN DEVELOPING COUNTRIES

The discussion here concentrates in respect of those developing countries, where information is available, about interlibrary loan cooperation. Different areas have been discussed separately.

The Arab World

The state of the art of library cooperation in the Arab world is very much the same as that of other developing countries. The concept of libraries in the Arabian Peninsula goes back to the rise of Islam in the first quarter of the seventh century AD when the Prophet Mohammed (Peace Be Upon Him) promised to free all war captives if each of them would teach ten Muslim children. (87)

"The Arab world has had a long tradition of scholarship and a proud record of contribution to literature, philosophy, medicine, and sciences ... In the first half of the ninth century AD, Arab scholars had compiled bibliographies of all sciences in encyclopedic treatment ... The first comprehensive Arabic rational bibliography was compiled by Ibn Al-Nadim in 1528." (88)

Despite the fact that Arab countries have many things in common to share (language, religion, culture, history, etc.), interlibrary loan cooperation among Arab libraries is totally unknown. (89)

International organizations, such as United Nations Educational, Scientific and Cultural Organization (UNESCO) played an important role by sending a group of experts to develop and coordinate library activites with Arab states. UNESCO also helped by providing an opportunity to library personnel to get training for the library development in the region. These activities advanced their knowledge of library technology which has helped in establishing schools of library and information science and organizing regional seminars on library problems in Arabic speaking countries. (90)

The first such regional seminar, sponsored by UNESCO, on library development in Arabic speaking countries was held in Lebanon on 8-9 December 1959. The seminar recognized that sound planning on a

nation-wide scale was the essential condition of library development. The need was stressed to develop cooperation within each national network to share bibliographical resources, etc. Several recommendations were made including that libraries should participate in interlibrary lending. "The practice of interlibrary loans should be broadened and a code for such loans should be worked out, using experience gained in other countries." (91)

Wormann discussed cooperation of national libraries with other libraries in the same country and in other countries. He emphasized that "the national libraries play a leading and decisive role in developing countries because 'a national library, at its best, is a libraries' library.' On the basis of their own collections, their knowledge of the library holdings in their countries, national libraries are the center for ILLs ... National libraries are usually not only the national, but also the international exchange and loan centers, either carrying out all these functions themselves or doing so in cooperation with other libraries." (92)

The UNESCO Department of Documentation, Libraries, and Archives, in cooperation with Government of Egypt, organized a meeting of experts on the National Planning of Documentation and Library Services in Arab countries, in Cairo, from 11 to 17 February, 1974. Participants recognized the importance of ILL as a cooperative library service. The meeting made several recommendations; one of them being that "efforts be made to promote effective cooperation between all types of documentation and library services, particularly in the fields of cooperative acquisition, centralized processing, the establishment of union catalogues and ILL lending systems." (93)

The most important meeting in the history of the development of library cooperation in the region was the meeting organized by the University of Baghdad with UNESCO assistance, from December 5 to 9, 1976. In the meeting, common problems connected with librarianship, including library cooperation and education, were discussed. (94)

UNESCO played an active role in the development of libraries during 1960s and 1970s in developing countries. Keresztesi noted that from its inception, UNESCO has paid considerable attention to the role of libraries and librarianship in developing countries. Fellowships for study and travel have been an important means by which UNESCO has attempted to advance the cause of library education. In this capacity as a supra-national body mandated to facilitate national and international library cooperation among a variety of professional groups and interested learned audiences, UNESCO has constantly sought ways and means by which cooperation could be made more effective. There is no doubt that UNESCO performed an indispensable service in promoting library cooperation in developing countries. (95)

Beside the UNESCO's efforts, other international agencies, such as International Federation of Library Associations and Institutions (IFLA), International Federation for Information and Documentation (FID) were also involved in promoting cooperation in the field of librarianship and bibliography, and in particular to carry out investigations and make proposal concerning national and international relations between libraries, library associations, etc. Several Arab countries - Egypt, Libya, Jordan, Sudan, Tunisia, Lebanon, Iraq, Kuwait - are members of IFLA. FID Arab members are: Syria, Egypt, Morocco, Kuwait, Sudan, and Tunisia. (96)

Professional librarianship has not yet become a reality in the Arab region. This is due to several negative factors, such as lack of library planning, lack of cooperation, absence of library standards, difficulties in purchasing foreign materials, absence of effective library legislation, traditional system of education, lack of library literature and associations. Lack of ILL cooperation among libraries in the Arab region can be noticed in the absence of the following: union catalogs, union lists, and subject catalogs; bibliographic control, indexing and abstracting services; library communications, educational meetings, workshops and communication networks; exchange of information about their holdings. (97)

Due to the above described negative factors, interlibrary cooperation is not available in Arab countries. In fact, in the Arab world, libraries have more extensive relations with libraries in the USA and Britain than with themselves. Libraries in the Arab world know very little about library development in other parts of Asia, and the relations of interlibrary cooperation either do not exist at all or are very limited. (98)

In most developing countries, only a few of the larger libraries are adequately staffed. Arab countries are no exception. Referring to the growth of university libraries in Arab countries, Sharif said that these libraries grew far faster than a qualified staff could be found to run them. (99) Hence, given the troublesome problems of funding, communications systems, and obtaining professional library personnel, it is understandable that interlibrary cooperation is still in an infant stage in developing countries.

The gap between the promise and the reality of interlibrary cooperation, of which the situation in the Arab region is but one

example, has led a number of writers to express skepticism about the opportunities offered by such schemes. Certainly, the search of effective interlibrary communication has added another reason for the current difficulties in the Arab region to establish cooperative ties among the Arab libraries. Other than those studies proposing cooperative plans for a few Arab countries - namely, Egypt, Jordan, and the Sudan - no one Arab country is known to have promoted interlibrary cooperation.

Egypt

In Egypt, the National Library has been the leader in library development. It is attempting to serve as the leader in a national library system which brings together the services of university, special, public, and school libraries. Although it has not been completely successful in its attempts in interlibrary cooperation in the country, the National Library of Egypt has at least begun to assume its responsibilities as a national library. (100)

Referring to Egyptian university libraries, Aman pointed out the paucity of exchange programs among these libraries. He observed that: "It is rare to see books leaving campus for another on interlibrary loan basis. Students have to travel from one library to the other in order to read certain books, or to find the necessary information which their library cannot provide." (101)

The Egyptian library scene was viewed as unfortunate because libraries have no plans for cooperative acquisitions, or for sharing of the resources they already have. Therefore, two studies proposed some kind of information systems in Egypt attempting to remedy the situation. Machaly attempted to survey the prevailing conditions of

the present system for handling scientific technical information in Egypt and to find out whether there is a need for establishing a national scientifc and technical information system. Based on her findings that libraries in Egypt suffer from insufficient funds, lack of needed resources, shortage of library professionals, and lack of cooperative effots, she proposed a model for a plan of action to establish a national technical information system. Her proposal includes the objectives and propositions on which the system would be based. (102)

In another study, Osman explored the factors responsible for the present state of the art of ILL in the city of Cairo and to propose a system for formal interlibrary lending which can be modified for other developing countries. This study also identified inadequate resources, such as lack of standardization, lack of bibliographic tools and nonexistent formal lending agreement, which are similar to Machaly's findings. In the proposed system, coordinator role will be performed by the national library, whereas the other role (ILL and acquisition) will be performed by the member libraries. (103)

Rehman discussed the six variables which are identified as significant indicators of national library and information infrastructure of Arab countries. First, Egypt has a national library which is responsible for planning and integration of library and information services. Second, Egypt has not produced national bibliography, but is in the process of producing one. Third, national bibliographies, union catalogue, union lists, and indexing and abstracting services are the basic means for ILL cooperation; unfortunately, these are not available in Egypt. However, national library maintains a comprehensive catalog of Arabic and Islamic

manuscripts. Fourth, an overview of cooperative interconnections and accomplishments reveal that Egypt does not have a formal system of interlibrary cooperation. Fifth, as for networks and networking, at the national level, the Egyptian National Library has initiated a project of establishing a network of reference libraries in the country. Sixth, no progress has been reported in the field of automation activities in Egypt. (104)

El-Arini commenting on the state of affairs of Egyptian university libraries pointed out that "some of the problems still faced by college and university libraries are: lack of cooperation, absence of union catalogs, insufficient hard currency necessary to purchase foreign scholarly publications, lack of standards, etc. In general, cooperative acquisition, centralized processing, sharing of library resources and interlibrary loans are among the major steps which should be taken into account in order to improve the current situation in Egyptian university libraries." (105)

In spite of the progress of Egyptian libraries, they still suffer from inadequate funds and the absence of a philosophy of library service. Recommendations should be made to increase libraries' funds, integrate the philosophy of modern library service, strengthen library training, encourage bibliographical tools, link reference library networks and set forth interlibrary cooperation programs among similar institutions. (106)

Describing his personal experiences in the field of library and information work in Egypt, Lees says about interlibrary cooperation that, "this ingredient is vital for library development and appears to be an almost alien concept in Egypt. Union catalogues, bibliographies, accurate periodical lists and current awareness, all are

extremely rare. There is no ILL or photocopy service although some organizations run a document delivery service ... The researcher in Egypt will have problems of inadequate periodical listings, not only at a national level, but also in the university libraries. Even if the researcher finds a location for the document then getting a photocopy can prove to be very difficult. As there is no national ILL system, the researcher has to visit the larger libraries to get the photocopy." (107)

To correct the situation in Egypt, the national library should mobilise its services for library cooperation in the following ways: a) by providing access to overseas data bases through its reference and bibliographic collection; b) by establishing its centres in each state to develop collection to meet national needs; c) by arranging ILL and exchange of information and thus arranging for national wide circulation of books, periodicals and non-book material, in coordination with public and university libraries; and d) by becoming National Centre for foreign ILL lending and borrowing. (108)

Jordan

Practically speaking, the modern library movement in Jordan started in 1950s. The development which affected all aspects of library service in the country started in 1956 when the Ministry of Education sent the first Jordanian to study library science in England. (109)

The 1960s represent a turning point in the history of the library movement in Jordan. In addition to the establishment of a number of libraries of all types, the decade witnessed a number of occurrences, such as opening of the University of Jordan and its

library (1962); establishment of the Jordan Library Association (1963); publication of the Message of the Library Journal (1965); and the introduction of library science courses (1966 and 1967), which led the library movement in Jordan to grow. (110)

Libraries in Jordan received more attention in 1970s. The most notable event was the establishment of the Royal Scientific Society Library in 1970. Its main objectives were: a) providing all types of library materials and information; b) collecting and organizing information on the Arab states; c) exchanging publications and information with relevant research centers all over the world; d) establishing standards and procedures that can be followed by other libraries in Jordan; and e) promoting cooperation and interlending among libraries in Jordan. (111)

The University of Jordan was not able to organize library cooperation nationally upto 1974. But this has not prevented the existence of day-to-day cooperation among individual libraries. This includes the exchange of the publications. In addition, the library has started establishing exchange activities with foreign institutions. Information has, and will, be exchanged with a large variety of libraries all over the world. (112)

In 1977, a few missions were organized to study the library situation in Jordan and then advise on system development. Jusseaume recognized the need for sound organization and administrative machinery as a prerequisite for developing a national information network. He envisaged a system that "would entail an extensive network of gathering, storage, preservation, retrieval and usage to embrace all kinds of documents, records, and materials held in different libraries, archives, and record centers within the

country." (113)

Grolier proposed a national documentation center with information subsystems, including public libraries, media centers, academic libraries, archives, and museums. He concluded that "Jordan can be an appropriate place for conducting a kind of pilot project for establishing a model valid at least for the Arab countries." (114) On the other hand, Bentil's mission was to fill in the gap and to complement the work done on library cooperation. Another objective was to propose a program of action for achieving the objectives of an integrated documentation and information service in Jordan. (115)

In the absence of a national library, the University of Jordan performs functions, such as preserving the national literary heritage, issuing bibliographies, etc. (116) The library also serves as the depository for all publications issued. It must be noted that the library has cooperative ties for the exchange of information and library cooperation with about 200 universities and other cultural organizations all over the world.

Librarians emphasise that an information system in Jordan is indispensable. A librarian finds that "in Jordan there is a growing recognition of the need to improve information resources and ... exchanges." (117) Another further emphasises that "it is impossible for any library in Jordan to become self-sufficient or obtain all library materials needed for educational and research purposes," and an "interlibrary program is a necessity for Jordan libraries to provide better services to their users." (118)

By 1982, it was clear that the library profession in Jordan was receiving more attention than ever before. However, the profession has not yet achieved a level of self-sufficiency, nor has it received

the required priority at the government level. The importance of libraries and their role in the society are now being recognized due to the zealous activities carried out by the few but vigorous young library professionals in the country. (119)

Younis conducted a study to design a resource sharing and information network specifically for academic and special libraries in Jordan to determine the feasibility of an information network, and to formulate the networks' components in the light of the country's present situation and future potential. The study concluded that a resource sharing network in Jordan was feasible and highly desirable. Therefore, a "plan of action" was proposed to achieve cooperation among libraries in Jordan. The proposed network included five cooperative modules: acquisition, processing, interlibrary loan, storage, and delivery of service. These components were perceived to be interrelated, forming a whole unit. (120)

If a developing country is fortunate enough to have established a system of interlibrary cooperation, it is common that it lacks the planning and organization necessary for the system's efficiency and success. No surprise then that cooperation among libraries in Jordan was found to be informal and limited to interlending, gifts and exchange, and photocopying. (121)

Jordan does not have a national library for planning and integration of library and information services. However, Jordan is in the process of producing a national bibliography. Union lists, union catalogue, and indexing and abstracting services are not available in Jordan; although they are basic means for interlibrary cooperation and resource sharing activities. Jordan does not have a formal system of ILL cooperation; however, Jordan has exchange units

in national libraries. There is no networking activity in Jordan at the national level. However, Jordan is an active contributor and receipient of the international indexing service of Agricultural Information System (AGRIS) and International Nuclear Information System (INIS). There is no automation activity in Jordan. (122)

Libraries in Jordan are experiencing an era of transition. They are departing from traditional librarianship practice, and moving towards modern information science. This is evidenced in the increasing number of libraries implementing computer systems in their functions. Document delivery is one area that is most benefitted by the technology. New technology is also being used for information retrieval, linkage with regional and international information networks, and to produce the Jordanian National Union Catalogue of Monographs, etc. These activities will help libraries in Jordan in implementing the interlibrary cooperation. (123)

Sudan

Sewell, a former UNESCO library expert in Sudan, reported that "library coordination and cooperation are vital in both developing and well-established countries. The Khartoum University Library has already begun work on a Union List of Periodicals in academic and special libraries, which will form the basis for interlending ... The need for a National Library to conserve the national literature, to act as centre and coordinator for research and scholarly libraries and to produce the National Bibliography has been realised." (124)

The Khartoum University Library is the major centre for bibliographical activity in the Sudan. Public and school libraries do not play a significant role in the country; however, the establishment

of an adequate nation-wide public library service must receive high priority in any plans for library development. (125)

Established in 1973, the National Documentation Centre was to encourage cooperation between existing special libraries and documentation centres and to ensure that their resources are fully utilized. The centre should be responsible for compiling and publishing catalogues, indexes, bibliographies, and providing adequate reprographic facilities. While the existing library resources in the field of scientific and technical information are probably adequate to meet the needs of the small number of active researchers, there is a great need for better library cooperation and distribution of these resources, for improving access to them and for more active dissemination of information to their users. (126)

Libraries in the Sudan have suffered from wasteful duplication, lack of cooperation, fragmentation of resources, and inadequate services. In addition, there are factors that call for a well-organized information system capable of meeting new demands: the increasing number of users, new user requirements, and the increasing number of documents, with which it is becoming more and more difficult to cope in the tasks of acquiring, organizing, and disseminating information. Besides, "stronger and more unified systems organized on a national basis are essential to significantly improved library and information services." (127)

To overcome above described deficiencies in the Sudan's information services and encouraged by other national and international efforts to plan and develop national information systems, Istasi conducted research on the problems and written the Planned Guidelines for a National Scientific and Technical Information System in the

Sudan. The study attempted to propose the goals, objectives, functions, and prerequisites of a national information system for the Sudan; including its organizational structure, a subsystem of information for industry, its operational requirements, links with other national and international systems, the priorities, and obstacles to implementation. (128)

There is no current national bibliography of the Sudan, nor any general trade list of Sudanese publications. However, The Classified Catalogue of the Sudan Collection in the University of Khartoum Library attempts to include a complete list of all publications. The National Documentation Center in 1977 issued its Union Catalogue of the Periodical Holdings in Sudanese Libraries, which supplements the List of Periodicals in the Main and Branch Libraries of University of Khartoum Library. (129) These lists help in ILL cooperation.

Sudan does not have a national library, which is a central focal point for their national information infrastructure. There is no activity on the compilation of a national bibliography in the Sudan; a major obstacle for interlibrary cooperation endeavour. Union catalogues, union lists, indexing and abstracting services are the basic means for resource sharing and ILL cooperation activity; these are not available in the Sudan. There is also no formal system of interlibrary cooperation in the Sudan. Also, Sudan does not have any networking activity at the national, regional, or international levels. There is no automation activity in the Sudan. (130)

Middle East

The Middle East consists of six countries, namely Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. The

development of interlibrary loan in Middle Eastern countries will be discussed country-wise alphabetically.

In Bahrain, most libraries depend on the British Library for photocopying because of insufficient bookruns of material. The Bahrain Union List of Serials and Standing Orders, prepared by the University College of Arts, Science, and Education staff, includes academic, special, and school libraries. (131) "ILL cooperation in the Gulf is very strongly endorsed by the Arab Bureau of Education for Gulf States (ABEGS), and all libraries indicate a willingness to follow the percepts. In reality, due to the factor that most libraries have an inadequate collection, the borrowing tends to be centered on a few large Saudi libraries ... University of Bahrain Library has developed a bibliographic tool for serials; unfortunately, updating is a significant problem, so this valuable tool lags behind reality." (132) In the absence of a National Library in Bahrain, the Directorate of Public Library has extended its efforts since 1980 in collecting Bahrain's publications, and the Bahrain Centre for Studies and Research has assumed the responsibility of collecting governmental scientific research studies and providing bibliographical access to this material. In addition, the Bahrain Historical Document Center collects rare manuscripts and provides scholars with bibliographical access to that material. (133) Bahrain's two teachers' training colleges and one public library joined together to produce a Union Catalogue, required for interlibrary loan cooperation. But, there is no effort to develop union lists and indexing and abstracting services in Bahrain. Bahrain has been instrumental in sharing bibliographical information for interlending based on the Union List of Serials produced by the

King Abdulaziz City for Science & Technology (KACST), through GULFNET(Gulf Network), the first store-and-forward network in the Arab world for the academic and research institutions in the Arab Gulf countries. (134)

In Kuwait, "the Libraries Department operates an ILL service with local libraries, and plans are being made for an international loan service ... The University Library will assume its responsibilities as both a University Library and a National Library, especially in the areas of bibliographic control and coordination of a library services network in the country." (135) "The National Heritage Center (Kuwait National Library) was established in 1971. The tasks of publishing the national bibliography and specialized bibliographies were assigned to the Center ... Kuwait University Library published the Selected Bibliography on Kuwait and the Arabian Gulf (in two volumes), nucleus for the National Bibliography. Selected bibliographies were also published on Arab Civilization, Yemen, and Saline Water Conversion. An Arabic List of Subject Headings was also published by the Kuwait University Library." (136) Concluding the discussion on libraries and librarianship in Kuwait in 1975, Zehery said that a plan should be developed which "should include a national ILL system and a comprehensive network of library and information centers to foster cooperation and sharing of resources." (137) Dessouky conducted a study in 1985 to examine the expanding role of libraries and information centers in Kuwait's financial institutions. The survey revealed several challenges, such as widely scattered sources of information, lack of resources, variety of services required, etc. She recommended that computers can be used for creating union catalogs, serials control, collecting and storing

inhouse bibliographies, indexing and abstracting, etc. Pooling of resources, including the establishment of an ILL system, will help overcome these problems. (138) In 1992, Salem stated that the University libraries were affected tremendously due to Iraqi invasion as all the libraries were destroyed and damaged. The total looting and damage of materials came to 650,000 items, and the cost six million Kuwaiti dinars. The library and information services were affected too, and all operations were frozen. The effect of Iraqi invasion on Kuwait will remain for a long time as it was a vicious aggression against a cultural movement especially for the library and information infrastructure in Kuwait. (139) It was a tragic setback for library cooperation in the region.

In 1991, Karim discussed the library developments that took place in the Sultanate of Oman during the past two decades. Rapid social and economic development in Oman has not been matched by adequate improvements in library and information infrastructure. The largest academic library - Sultan Qaboos University Library was established only in 1986. There is little interlibrary cooperation, and indeed no coordination, among the existing libraries. As there is no designated National Library in Oman, the Sultan Qaboos University Library partly functions as a National Library. (140) "Interlibrary lending began in 1988 by supplementing the materials that are not available in the Sultan Qaboos University Library. The Library has a connection with the British Library in the UK, the Library of Congress in the USA, and the Gulf Cooperation Council Libraries ... A national library, a national union catalogue, a national bibliography, and a depository library, required for interlibrary cooperation, are absent in Oman." (141) "The central

library of the Ministry of Health is housed in the Royal Hospital, Muscat. Its services include reference assistance, ILL lending through national and GCC biomedical libraries, MEDLINE search on CD-ROM and photocopying ... College of Medicine, Sultan Qaboos University also provides various services, including ILL at national, regional, and international level. The increase in demand for copies through ILL, however, has led to a recurrent shortfall in the provision of material. To fill this gap, the medical library has signed an ILL agreement with various medical libraries in Oman, for cooperation and resource sharing. A Periodicals Holdings List of Muscat Medical Libraries is under preparation to serve as a tool for ILL and photocpying, nationally. Besides, a Periodicals Union List of the GCC Biomedical Libraries is also under preparation to serve better regional ILL cooperation." (141)

Describing the interlibrary cooperation in Qatar, Shehadeh in 1980 noted that the University of Qatar Library cooperates with other libraries throughout the Gulf area, compiles bibliographies, and arranges exhibitions. (142) "The National Library, established in 1962, issues the annual Bibliography of Books and Pamphlets in Qatar (since 1970). It also published a Catalogue of Illustration Manuscripts on microfilm, 1962-83 ... The University Libraries provide retrieval service through DIALOG, ILL with other libraries of the region, and access to the British Library." (143) About the Qatar library services, Rashid observed in 1988 that "almost all of the libraries of the country participate in ILL system. Yet the user can hardly get any book through ILL within a reasonably short period. The lack of coordination among various libraries is responsible for it." (144) The Qatar National Library bears

responsibility for publishing the national bibliography. Since 1970, it has issued the national bibliography under the title List of Qatar Intellectural Production, annually. Additionally, the National Library and the University Library issue different bibliographies from time to time. (145)

In comparison to other countries of the Middle East, much has been written about libraries and librarianship in Saudi Arabia. Isa noted that the lack of literature about libraries and information centers makes it difficult for the researcher to review library systems in Saudi Arabia. It is because major part of the existing documents are in Arabic and that this is one reason why the literature on international librarianship either overlooked Saudi Arabia or included only a few sentences about the state of libraries and librarianship in Saudi Arabia. (146) Line has also acknowledged the fact that "little has been written about libraries in Saudi Arabia." (147) In Saudi Arabia, no appreciable progress was made in library system until 1970s. The income of petrodollars after 1973 brought a rapid change in every sector. New libraries opened and old ones started expanding. Within a few years the collection of these libraries grew from a few thousand to hundreds of thousands of volume. (148) However, the major concerns of university library systems in Saudi Arabia relate to the following: the need for establishing more ILL arrangements, training of Saudi professional staff, etc. There is a need for more professional coordination in areas of bibliographic control, ILL, and resources sharing, etc. (149)

A serious attempt was made in 1980 at the first conference of Saudi Librarians held at King Saud University, Riyadh (5-8 April 1980) to lay threadbare the issues that confront library develop-

ment in Saudi Arabia. The problem of interlibrary cooperation was one of the topics discussed at the conference. Another conference sponsored by the Arab Bureau of Education for Gulf States, was held at Riyadh (9-10 January 1982). It discussed, among other things, the proposal of interlending in the Gulf States. (150) Similarly, regional cooperation was also considered at a conference organised by the Kuwait Institute for Scientific Research in Kuwait (15-19 March 1980) where Saudi Arabia was one of the participants. The need for regional cooperation was felt strongly and the desire to create an effective ILL system has been recognised. "Evidently, individual efforts made in different libraries to promote the ILL movement at national and regional levels, are yet to crystallize ... The King Fahd University of Petroleum & Minerals (KFUPM) Library is contributing its share to support the ILL movement in the kingdom by receiving requests from within the kingdom and outside." (151)

Discussing the effect of manpower deficiency in the library and information in Saudi Arabia in 1982, Namlah observed that the establishment of union catalog first in Saudi Arabia and then in the whole Arab region will help to avoid an overload in cataloging and the need for catalogers. The step will boost library cooperation in the region. (152) ILL cooperation program, initiated by the King Abdulaziz City for Science and Technology (KACST), stimulates research in the kingdom. Scholars working in the various universities in Saudi Arabia have submitted hundreds of requests to the university libraries through KACST. (153) Line after visiting Saudi Arabia in 1983, commented that interlibrary lending does occur in Saudi Arabia at present, but there is no organized system and no union catalogs. With its resources, Saudi Arabia could provide a first-rate ILL

service, not only to institutions and users in the country, but to other countries in the Middle East as well. (154)

The National Library of Saudi Arabia, established in 1963, is working more as a public library. It issued a prospective national bibliography under the title Mujam al-Matbu'at al-Sa'udiyah (1973) covering commercial and official publications issued in Saudi Arabia. It also publishes a bimonthly bibliography that includes new additions as well as indexing of periodical articles. (155) Dohaish describing the Makkah Al-Mukarramah Library in 1987, informs that the photocopy department has several machines which are used for making photocopies of manuscripts and rare materials. Students of higher studies and scholars are required to seek permission from Ministry of Haj and Endowments for getting photocpies. This condition is imposed due to the care and importance of the valuable manuscripts and rare materials. (156) Brown in discussing the interlibrary cooperation in Saudi Arabia in 1987 stated that the Saudi Arabian Ministry of Defense and Aviation responded to the libraries' need for more complete and extensive journal holdings. Better journal coverage was achieved through improved communication and cooperation among neighbour libraries. ILL activity was more evenly distributed, and 70% of requisitions which previously had to be handled by foreign libraries, can now be filled in Saudi Arabia. (157) Brown also observed in 1988 that "the increased cooperation in library purchases improved library services and enabled access to more extensive journal holdings through ILL ... The desire for improved access for information continues to be the goal of the Saudi government." (158)

Tameem reviewing academic libraries in Saudi Arabia in 1988 noted that at present, cooperation among academic libraries in Saudi Arabia does not yet exist, because of the lack of network utilities. There is no interlibrary lending program, nor is there a resource sharing agreement to help overcome inadequacies in individual holdings and services. In these cases, government assistance is necessary. (159) Sliney in 1991 indicated shortage of medical journals and the underutilisation of the available medical information in Saudi Arabia. The infrastructure of medical libraries and current levels of information provision point to a degree of cooperation with countries in the region, such as Bahrain and Kuwait. She emphasises that cooperative ventures in the area of purchases, document delivery, ILL, joint periodical indexes should be taken up. It will help in removing potential problems, such as copyright restrictions and those associated with document delivery. (160)

Siddiqui describes the interlibrary loan policy and procedures of the King Fahd University of Petroleum & Minerals (KFUPM) Library which has been established to meet the ILL needs of its clients as efficiently and rapidly as possible. Articles not available in the KFUPM Library are obtained from the Gulf area libraries and major European and North American lending institutions. (161) In 1992, Siddiqui gives a detailed account of ILL services at the KFUPM Library in Saudi Arabia. The Library is one of the most modern science and technology libraries in the Middle East. Although the Library's ILL services have long been in existence it was only in 1987 that an ILL policy was prepared and the service formalized. The purpose of the policy was to improve and streamline the ILL network among libraries in Saudi Arabia, Gulf, and non-Gulf area. The

Library has adopted a very liberal policy of opening its collection and services to any library/institution needing information. The KFUPM Library is a major supplier of ILLs to the libraries in Saudi Arabia and in the Gulf area. (162)

Al-Tasan in 1992 observed that the Document Delivery Department of KACST procures full-text copies of the required documents from a wide variety of sources and makes them available to the requesters. Every effort is made to utilize the rich resources available in the Kingdom libraries before turning to foreign sources. The Document Delivery Department has already supplied about 100,000 documents to researchers in Saudi Arabia. In addition, the KACST Library provides a full range of information services, including interlibrary lending and photocopy of documents. The KACST Library has developed a Union List of Periodicals Database, containing foreign periodicals held by the academic and special libraries in Saudi Arabia; a Union List of Arabic Periodicals held by the University libraries of Saudi Arabia; and Current Awareness Database, to promote resource sharing, nationally and regionally. (163)

In United Arab Emirates (UAE), there is no national library. The book production is negligible. The UAE University was founded in 1978. The library provides ILL with the help of other libraries in the Gulf. The Gulf Documentation Center collects, processes, and disseminates communications information for the Gulf States and the Arabian Peninsula. (164) A major objective of the UAE University Library Development Plan is to provide adequate information resources to meet the curriculum and research needs of the students and faculty. This is achieved by improving the quality and quantity of library materials and through ILL cooperation, nationally and

regionally. (165) The National Library of Cultural Foundation recently published the Catalog of Audiovisual Materials in the National Library 1989-1992, in both Arabic and English, and the Union List of Periodicals in the UAE. It helps locate periodicals and establish bibliographic details about each, improving library cooperation and interlibrary loan. (166) The mission of the National Medical Library, Faculty of Medicine and Health Sciences is to provide and promote efficient and effective access to information resources. The mission is fulfilled through different services, such as ILL, document delivery service, etc. (167)

Discussion

Salem attributes many factors that affect scientific and technological information in the Arab countries, such as economic gap, population densities, the role of national information centers in Arab countries are not clear, manpower shortage, etc. Besides, there are many shortcomings in the information systems of Arab countries, such as lack of surveys of information resources, lack of coordination of information services, lack of objective plans for information services, shortage of training and education in the field of information and documentation, etc. Information problems in Arab countries may be achieved by: joint cooperation to develop the infrastructure, joint training programmes, cooperation between national centers for science and technology. (168)

In 1981, Sharif described that the majority of the Arab countries have started graduate and post-graduate level education to produce librarians who will be able to carry on work in any kind of library. Additionally, they will establish the foundations of librarianship

in the Arab world. (169) Khurshid contends that the development of computer technology and its application in libraries have generated great enthusiasm among Arab libraries. Arab countries with a few exceptions neither have library associations nor professional journals which is detrimental to cooperative progress. Some Arab libraries do not take benefit from other libraries' experiences; rather approach to European and American libraries for help. If cooperative spirit is generated among Arab libraries, they can take a big leap towards library cooperation. (170)

The study conducted by Rehman revealed that the overall situation of the library and information infrastructure facilities are in their developmental stage. Very few of them have any worthwhile bibliographic resources, such as union catalogue, union lists, or indexing and abstracting services. None of them has established a cooperative consortium at national level to pool its resources for lending, shared cataloguing, or cooperative acquisition purposes. The strengthening of the existing infrastructures and planning for resource-sharing consortia are crucial to the development of library and information services in the Arab world. (171)

In 1992, Sliney noted that library cooperation in the Gulf region is still scanty, even in states such as Kuwait and Saudi Arabia which have relatively better-established library services. (172) Young contends that "although the Arab Bureau for Education of Gulf States (ABEGS) supports and campaigns for the free provision of ILL services within the Arab Gulf universities, and although all the libraries agree in theory with this proposal; the actual provision of ILL services within the Gulf have been hampered due to the lack of realisation that there are only a few university libraries with

significant collections, and thus the burden of ILL falls on them. Until the ABEGS recognises that these ILL costs cannot easily be absorbed by the larger lending libraries, libraries in the Gulf will continue to utilise major ILL resources like the BLDSC, etc. ... unless governmental organisations recognise that independent universities are not in a position to provide extensive external services without financial support, librarians will continue agreeing, in principle, that ILL services should be free." (173)

Saudi Arabia is a Kingdom which has a stable government. The government of Saudi Arabia is very concerned about the state of libraries and has integrated librarianship in the national planning. In 1993, the Arabian Gulf Chapter (AGC) of the Special Libraries Association was established. AGC is an effective and well-supported library association in the Middle East and has assumed a leadership role for library cooperation. As for social factors, language is no problem for library cooperation in Saudi Arabia as Arabic is the only official language while English is spoken by foreigners. Illiteracy is very low and the majority people make effective use of libraries. Importance of librarianship and libraries has been accepted in Saudi Arabia which assist in the social, educational, and economic progress of the country.

Asia and Southeast Asia

The Indian library scene is a diverse one because of delegation of responsibility for libraries to each state. The National Library in Calcutta is the center for both national and international ILLs, and has published the Indian National Bibliography since 1957. The

National Library has also compiled and published many retrospective bibliographies. (174) In the paper 'A Note on Resource Sharing in India,' submitted to the International Conference of Directors of National Libraries in Canberra in 1979, Gupta expressed firmly his view on the role of the national library. In his opinion "science and technology was to be left entirely to the Indian National Scientific and Documentation Center, whereas the National Library concerns itself with material relating to study and research in arts and social sciences. National Library also engages in international lending by supplying books on loan, microfilms, photocopies, and xerox copies to foreign libraries." (175) Writing on networking and various ways of sharing resources, Dhir in 1980 says that resource sharing can be done by organizing a network of libraries, each sharing its resources with others. One National Documentation Centre should be founded in each country. These centers should form a Regional Network responsible for ILLs, preparation of bibliographies, cooperative acquisition and cataloging, etc. (176) Rao reports on the document delivery system at the National Information Centre for Food Science and Technology where a 100% satisfaction rate is achieved. Its comprehensive document delivery service is to be extended to institutions in other developing countries and the imminent arrival of a computer will further speed up the service. (177) Networking is part of the wider concept of resource sharing which Prasher maintains is a give and take system of mutual benefit. He briefly mentions features of resource sharing and problems impeding its progress in India. He makes a plea for more ILL cooperation amongst Indian libraries. (178) The Indian Association of Special Libraries and Information Centres drafted a code of practice for ILL

lending. However, Choudhry relates that it has had little impact among university libraries because "the misconception of individualism appears to be rampant among the librarians." He states factors impeding the practice of ILLs in India and suggests ways forward, stressing the importance of cooperation in the modern age. (179)

Pakistan has made considerable progress with a national library, a national scientific documentation center, and university libraries. The National Library of Pakistan acts as the center for ILLs within the country, and has published the Pakistan National Bibliography since 1965, while the National Book Center published the Retrospective Bibliography of Pakistan in 10 volumes in 1969. (180) Both of these publications have played an important role in the ILL service in the country. Muhajir in 1978 commented that making possible an efficient system of ILLs is essential in the development of information system in Pakistan. The scientific and technical libraries have to be encouraged to use the loans efficiently and to consider seriously how far use of the system can reduce the amount of literature they need to acquire. Successful ILL lending depends on ready cooperation between libraries. (181) Hanif made a point in 1981 about the lack of ILL cooperation in academic libraries of Pakistan. Unfortunately in Pakistan, there is no concept of ILL cooperation among libraries. The libraries are developing their collection looking to their individual requirements and not extending any service to other libraries. (182) Discussing computer based reference services in Pakistan, Mirza in 1982 said that before starting document delivery service we have to consider about good location tools, such as regional union catalogs or regional lists of serials. (183)

The pioneer Library Resources in Pakistan, which was published by the Institute of Public and Business Administration, is of considerable assistance in promoting resource sharing. However, the Pakistan National Scientific and Technical Documentation Center is considered the most important of the centers with which the National Library of Pakistan "was to collaborate in the development of its role in national and international information systems." (184) Naqvi in 1989 discussed the need for creating a development information network for Southeast Asia. The cooperative library operations would include: effective lending and provision of copies; provision of contents pages of expensive periodicals; and cooperative acquisition, etc. (185) In Pakistan, the literacy rate is below 30% and library legislation has not been enacted in over 40 years. Ataullah mentions various reasons for the non-existence of resource sharing such as librarian's unwillingness and high mailing costs. He suggests a union list of serials as a prerequisite for an ILL scheme and other forms of cooperation in Pakistan. He also emphasises the need for the Pakistan Library Association and the government to draft and implement an interlibrary loan code. (186)

In Malaysia at the present, the most concrete manifestation of resource sharing takes in the form of ILL based on the Malaysian Interlibrary Loan Code. The term ILL covers not only the actual lending of books and other materials but also the supply of photo-copies. "At the regional/international level, Malaysian libraries are participating in International Serials Data System - Southeast Asia (ISDS-SEA) and National Libraries and Documentation Centres - Southeast Asia (NLDC-SEA) ... One of the many functions of the National Library of Malaysia is to act as the agency for the national

and international lending and exchange of library material." (187) Mun in 1984 describes his experience about document exchange. The University of Malaya Library system has engaged in an active exchange programme with various sister institutions in the region, such as Indonesian, Singapore, and Philippine libraries. However, the exchange programmes are not uniform, nor heavily pursued, particularly with Thai institutions due to language barriers. (188)

The National Library of Indonesia published an impressive list of subject bibliographies, catalogues and listing of holdings which help scholars to gain access to the library's collection. The Scientific Information and Documentation Centre relies heavily on ILL requests to foreign institutions. The Index of Indonesian Learned Periodicals has been compiled and published since 1960. The Indonesian Library Association publishes its journal regularly since 1978. These infrastructures help in interlibrary cooperation in Indonesia. (189)

Asali is of the view that Asia and Oceania has vast area and that cooperation be intensified among national libraries grouped into regional divisions, e.g. Middle East, Southeast Asia, Central Asia, Oceania, etc. The process of resource sharing constitute the first logical step for developing further and wider interlibrary cooperation between all national libraries. International cooperation will co-exist with regional cooperation. (190)

Africa

The state of the art of interlibrary cooperation in African countries, as a whole, is analogous to that in other developing countries. No one national library was found to be a focal point

for, or to have maintained a nationwide resource sharing network; nor was any found to have provided computer based bibliographic or information services.

In Nigeria, an ILL program was proposed by the Conference on Library Cooperation in 1974. But, many factors have hindered its implementation. Adeyemi enumerated several factors as: the lack of a national bibliography, ineffective communication and transportation linkages, and the uncooperative stance of participating libraries. Further, there is no formal library cooperation in Nigeria and the existing limited arrangements for ILLs are on a goodwill basis. Adeyemi attributed the absence of effective cooperation among libraries in Nigeria to a number of factors: the history of library development, lack of institutional leadership, and government apathy. One of his study objectives was to propose a model for cooperation for libraries in Nigeria. Libraries in Nigeria expressed willingness to cooperate. But, Adeyemi concluded that they were skeptical of the system's success and fear loss of their individuality and autonomy in a resource sharing environment. (191) Bozimo also conducted a similar study as Adeyemi did, with an idential result. She evaluated the role of libraries which had fostered and effected cooperative activities. Her study also described cooperative activities among libraries, such as ILL, etc. Bozimo concluded that Nigerian libraries are "emphatically against the idea of centralized acquisitions and process." The poor telecommunication facilities hinder ILL activity. (192) Nwagha refers to the fact that most scientific libraries in Nigeria have stronger ties with foreign libraries in related subjects than with themselves. (193)

Nwoye claims that libraries in the country have often expressed their desire for cooperative schemes and they fully appreciate that no library in this country is or can be self-sufficient. However, their professed belief in the need for interlending cooperation is not always borne out in practice. (194) National Library of Nigeria was opened in 1964. A Standing Committee on Library Cooperation was established in 1964 to consider union catalog of periodicals, etc. Bozimo notes that university libraries have provided some degree of leadership in cooperative activities because of their relatively strong financial backing. (195) Reviewing computerization in Nigeria, Enyia notes that the computerization is intended to modernize the entire library system as in the industrialized countries, and to ensure accuracy, efficiency, effective information management, enhanced interlibrary cooperation, etc. University and research libraries and the National Library of Nigeria are leading the race, however, lack of cooperation between libraries is an obstacle to library automation in Nigeria. (196)

In Kenya, a study of interlending was carried out by means of a questionnaire survey: 16 of the 19 libraries which replied stated that they were actively involved in interlending. However, the importance they attached to interlending was not reflected in their level of activity. Interlending was concentrated on one or two special libraries and academic libraries were less active. Various problems were reported such as delays in returning and the loss of items lent. (197) The overall library situation in Kenya is outlined by Inoti. Problems associated with the provision of ILL services include a lack of adequate bibliographic tools and services, transport and communication difficulties, finance, the application

of copyright law and the lack of reproduction equipment. ILL activity could be improved by the adoption by all libraries of codes of practice, the introduction of cooperative networks, the establishment of a national centre for ILL and a change to a more widespread attitude of cooperation by some librarians. (198)

Qobose, in an article putting the case of greater library cooperation in Botswana, points out that there is great dependence on the South African Interlibrary Lending system. He feels that Botswana should develop far more resource sharing activities on its own within its own borders. At present it is impossible even for a branch of the Botswana National Library System to know what is in any other branch and there is a general reluctance to enter into sharing arrangements. Botswana, says Qobose, must develop more of its own activities and reduce dependence on the State Library in Pretoria, South Africa. (199) A recent article investigates whether Botswana's use of the South African Interlibrary Lending System is information dependency rather than cooperation. The system is operated by South Africa and librarians in other participating countries have no say in its administration or operation. As expected, a high proportion (92%) of Botswana's requests go to South Africa. The fact is that South Africa is requesting an increasing number from Botswana. The authors feel this reliance on outside resources is not only expensive but led to the absence of a domestic infrastructure and lack of a union catalogue. They believe Botswana and other Southern Africa countries must work to free themselves from information dependence on the Republic of South Africa. (200)

A survey was conducted of the three university libraries in Ghana. The survey showed that all the university libraries are

involved in the ILL service. In fact, this is the most popular form of cooperation among the libraries. In the opinion of the writers, ILL provides a very valuable means of augmenting the limited resources of the libraries. It also provides a means whereby materials that are not heavily used by one library could be obtained for users in another library. Interlibrary loans are extremely important in the Ghanaian situation since many materials of research are often out of print and libraires are unable to secure them. (201)

Latin American and Caribbean

In spite of differences in the political systems, economic conditions and social developments in the Latin American countries, there are similarities, namely, they are developing countries which have a common cultural heritage and linguistic unity. Differences in the library scene are, to a great extent, the result of various stages of devlopment rather than the result of different paths. Brazil and Argentina have the most developed library services, Columbia and Chile are not too far behind, while the remaining nations still have a long way to go. (202) The Seminar on the Acquisition of Latin American Library Materials (SALALM) which was held in Port-of-Spain, Trinidad, in 1973 brought into special focus the problems of national, regional, and international planning of library services in several Latin American and Caribbean countries. A review of these topics was most timely, since there have been significant advances in education for librarianship, library services, and information science in that region; yet scant and only piecemeal information of these developments is available. (203)

In Brazil, Lemos explains that "it took many years for inter-library lending to be established as a common practice. He finds that "even today the lending of original publications is negligible and probably nonexistent when requested from abroad." The Brazilian professor explains that "this is due, among other reasons, to the legal prescription that considers books and journals as a capital asset, involving the personal liability of the librarian for all material lent." As Lemos notes, "the provision of ILLs has become more significant with the introduction of copying facilities." He explains that "it is impossible to quantify all the interlibrary lending that takes place because there is no central coordinating body to compile statistical data from all the libraries of the country." He believes that "on the basis of existing fragmentary data, we can presume that ILLs have greatly increased in the past decade, especially after the publication of national union lists of periodicals." (204) McCarthy explains the operation of the ILL service "on a personal basis" and as involving frequently the "sending of a messenger with a note." He declared that through an improvement in the ILL process, on a national scale, "Brazil would do much to save foreign exchange now poured away to buy photocopies overseas." This, McCarthy notes, "has been said to cost about a half million U.S. dollars a year." (205)

Lemos notes that the Institute Brasileiro de Informacao em Ciencia e Tecnologia (IBICT) has been responsible "for the maintenance and publication of the national union catalogue of periodicals" and that this source has tended "to stimulate direct contact between libraries, thus by-passing IBICT," which "does not maintain collections of primary journals." Lemos notes that "the

average delay in satisfying requirements within the country by the cooperating libraries in Brazil varied form 30 to 90 days." (206) Lemos again notes that the Regional Medical Library for Latin American (BIREME) was able to fulfill 71% of all the satisfied requests from its own stock. An additional 19% of the requests had to be referred to the National Library of Medicine of the United States, and 10% were satisfied by medical libraries in Brazil and other Latin American countries. Only 0.2% of the requests were referred to other libraries outside the Americas, including the British Library Lending Division (BLDSC). Another agency, the Empresa Brasileira de Pesquisa Agropecuaria's (EMBRAPA) ILL lending service started in 1974 and it makes use of library collections scattered in different research centers. (207)

One of the weakest points in the structure of library and information services in Brazil is the prompt availability of non-conventional documents from Brazil. It is Lemos' judgement that "developing countries need to build their own library collections in such a way that a very significant part of their information requiements will be satisfied by local resources." He finds that "the general picture of document availability in Brazil is thus one of rapid and continuing improvement. In some subjects heavy dependence still must be placed on foreign sources of supply, and ... delays are still long." He feels that "The total volume of ILL requests, though growing, is small for a country of the size of Brazil." He declares that "Some solution must be found to the problem of lending books, since photocopies obviously cannot be provided for all materials." (208) The TAUBIPE (Total Automacao de Bibliotecas Publicas e Especializadas) automated system was

originated for the use to achieve its purposes of rationalization and organization of technical and administrative library processes and interlibrary cooperation without organizational restructuring or loss of autonomy. Cost reduction and benefits increase through effective updating and the improvement in the quality of information services are important objectives. (209) The National Library in Brazil was founded in 1810. Library activity in Brazil in the 1980s emphasised library and information system automation and the establishment of a natioal program for ILL bibliographic exchange. Since 1976 the Boletin Bibliografico, which disseminates information about legal deposit publications received in the library, has appeared in computerized format. The National Library also acts as Brazilian agency for the International Standard Book Number (ISBN). (210)

In Peru, Bonta observes that several factors affect the manner in which Peruvian libraries provide access to information. These include particularly the lack of security in the Peruvian mail system, the nature of ILL lending. Due to lack of security in the postal system, librarians normally cannot send their materials by mail to other libraries, hence librarians have not been able to establish a nation-wide ILL system. Some librarians said they provide no ILLs, while most indicated that they borrow and lend only to cooperating members of library associations. (211) The Biblioteca Nacional, the National Library of Peru, was founded in 1821; reopened in 1947 after fire in 1943. It publishes the Annual Bibliography of Peru, as well as the National Bulletin, the Peruvian Librarian's Gazette, and other publications. There are two major professional associations which play a vital role in the development of libraries and librarianship in Peru. (212)

In Colombia, academic libraries are supervised by the Colombian Institute for the Promotion of Higher Education. The services offered by academic libraries vary, but the most common are: ILLs, bibliographic guidance, and selective dissemination of information. There are several professional associations which further the cause of libraries and librarianship in Colombia. The Biblioteca Nacional (National Library) of Colombia was founded in 1777. In 1938, it published Biblioteca Aldeana (Village Library) and Senderos (Paths), a magazine. The Instituto Caro y Cuervo publishes the Colombian Bibliographical Annual. (213)

A state of the art review of library cooperation in the West Indies covering the period 1960 to the early 1970s was the subject of Jordan's paper. She identifies the problems confronting cooperative efforts as inadequate finance, communication, and the need for some controlling organization, and observe that, in spite of these problems, a strong cooperative spirit exists among libraries in the West Indies. (214) In 1978, Jordan found that in the English-speaking Caribbean relatively little interlending took place between different islands. (215) The fairly limited areas within which libraries are grouped on each island means that interlending within each island tends to be done on a very informal basis by personal contact. To develop an efficient interlending system requires that the members of the system have between them a sufficiently comprehensive total stock to meet a substantial proportion of the needs of the requesting libraries. (216) Line and Bennett are of the view that the compilation of union catalogs is a time-consuming and expensive business and not one that the Caribbean region could contemplate, even if it were thought desirable. Union catalogs in

developing areas are more likely to come into existence as the result of shared cataloguing systems than deliberate attempts to create them. (217)

Moll observed that the Caribbean region is beginning to automate library systems and through automation it should be possible to find out who has what, but at the moment there is little information on either specific holdings or even strengths of libraries and collections. Librarians can prepare a directory of resources in the region, without involving major financial or staffing commitments. (218) Rodriguez observed in 1988 that at present the three libraries of the University of the West Indies in Jamaica, Trinidad, and Barbados and the Mayaguez campus of the University of Puerto Rico are all members of OCLC and several other libraries have plans to join or automate their cataloguing in other ways. Interlending at present relies chiefly on professional knowledge of collections. (219) Cornish discussing interlending in the Caribbean in 1989, observed that there are three types of barriers to a regional cooperation: a) barriers which cannot be controlled (e.g. politics, language, national frontiers, and currency); b) barriers which can be partially controlled by librarians (e.g. communication, photocopying machines and packaging, and finance); and c) barriers created by librarians (e.g. fears of loss, damage, financial commitments and inconvenience). He concludes that interlending in the Caribbean ought to be a manageable system with considerable benefits for the community as a whole. The problems of locating tools, communications, finance, etc. may easily be solved. (220)

Interlibrary lending in the Latin American countries and the Caribbean area is extremely low because of the lack of developed

library systems and good bibliographic control. Although each of these nations has a library system well enough developed to provide good ILL service. All of these countries have national libraries which generally possess the largest and most important concentration of library resources in the country. But because the catalogs are incomplete and the guides to these resources nonexistent, their use for interlibrary loan purposes is extremely limited. (221) Many of these countries are developing national bibliographies.

DISCUSSION

There is a paucity of articles in the literature on libraries and librarianship in developing countries; only few books and articles have been written on the topic of ILL cooperation. Malhotra claimed that one of the reasons for this paucity is that the developing countries, after attaining political independence from colonial rule, focused their priorities on industrialization to the detriment of information services, such as publishing trade, libraries, and others. He is of the view that a national library movement should be started in all developing countries by opening libraries in all cities, towns, and villages so that book-hungry people can get knowledge through these libraries. (222) As automation has become part of modern library operations, it has also been considered for incorporation into processes of libraries in developing countries. There is growing recognition of the need to improve information resources and information exchange, particularly ILL cooperation among scholars, librarians, and educators. (223) Ombu gave three reasons for the problem relating to the acquisition of foreign materials in developing countries: a) inferior economic

conditions with which libraries of the developing countries have to contend; b) the undeveloped publishing trade; and c) the geographical distance which separates the developing countries from the advanced areas of the world in which the bulk of purchasing is done. (224)

One of the major information service problems seen in the developing countries has to do with the provision of document delivery services. The reasons are: local collections are weak, limited current journal subscriptions, lack of good bibliographic access to resources, regional union catalogs or regional lists are unavailable or non-existent. These information access tools can be incorporated in to the computer based reference services which will help in ILL cooperation. (225) Parker identifies as fundamental obstacles to resource sharing in developing countries the inadequacy of existing resources, the lack of information about them, and uncooperative attitudes and politics. Existing resources should be improved for resources sharing. (226)

Mchombu in 1985 attempted to show the importance of national libraries in an underdeveloped countries struggle to acquire scientific and technical information for development. It is argued that because most LDCs have very limited resources, present attempts by librarians and policy makers to establish national libraries based on models existing in industralized countries will not be successful. Instead of creating a new national library, roles of a national library should be shared among different countries. (227) Bouazza reviewed library resource sharing in developing countries. Library cooperation is non-existent in the bulk of countries. The barriers to library cooperation are: economic, political, human and professional, and cultural and social factors. Developing countries should

benefit from the experience of developed nations to save time and efforts. Small scale schemes of cooperation should be more successful than grandiose projects. (228) Maghalani discussed factors, such as economic, manpower, physioecological, cultural demographic, and social, political, and existing information infrastructure, which affect information technology transfer in developing countries. Industrialization, through technology transfer is one of the most sought after economic objectives of developing countries. However, there are dangers in leapfrogging, inappropriate technologies may be selected for transfer to a society not yet suitably developed. (229)

Tawete discusses the challenge of libraries in developed countries. He concludes that libraries are a social reponsibility which every country must accept. The problems of librarianship in developing countries tend to center on the means of communication, i.e. the book rather than the nature of information itself. This has led library authorities in the developing countries to neglect rural areas for a simple reason - that the population cannot read. The future of librarianship in the developing countries, therefore, depends on how librarians can reform. (230) Ali emphasises the importance of science and technology information and research and development in developing countries. It contributes directly to the economic development of a country. It is really a challenging task to provide access to information for scientists and technologists working in developing countries. The author examines various methods practised in the dissemination of science and technology information in developing countries. (231)

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CHAPTER III

RESOURCE SHARING NETWORKS

INTRODUCTION

In this section, beside discussing goals and literature review about resource sharing networks, we will discuss various past and present interlibrary loan (ILL) cooperative networks available in the developed nations. Resource sharing in developing countries with regional associations, responsible for cooperation, will also be discussed.

"Where there is a will, there is a way." An old saying, but very true. When problems surface, solution to solve those problems starts immediately; and if you try to solve the problem with a strong will, only then a creative solution is found. A review of cooperative programs among academic libraries leads to the conclusion that a few very significant developments and changes have taken place after a century of diverse efforts toward cooperative programs. Long-time cooperative programs have been going-on between academic libraries since mid-twentieth century.

RESOURCE SHARING IN DEVELOPED COUNTRIES

Under this topic, resource sharing in the United States will be discussed, as an example.

Goals

Let us begin by reviewing some of the goals identified for library resource sharing networks in the 50s and 60s. The hope for libraries' cooperation have been expressed by the Public Library's

standards of 1956: "Libraries working together, sharing their services and materials, can meet the full needs of their users." (1)

Another goal intended to initiate cooperation among libraries of different types was expressed by Frantz: "The point of origin for such planning is consideration for the needs of the library users. The goal is to meet these needs as efficiently and economically as possible without regard to the type of library involved and without classifying the user as a public, school, or academic library." (2)

This goal, stated in the Library Services and Construction Act of 1956, is still being argued. In 1968, Purdy admitted: "The ultimate feasibility of a national and international information network is pretty much taken for granted today, the assumption being that computers, perhaps combined with the other devices, will be linked together to retrieve and transmit information which will be stored centrally, or in local or regional centers, or both." (3)

Creation of an effective national library and information network to serve all Americans was a cornerstone of the proposed national program for library and information services described by the National Commission on Libraries and Information Science (NCLIS) in 1975. The commission writes: "America has an abundance of recorded information, not a shortage. However, this precious resource is concentrated in relatively few locations, often virtually inaccessible to millions of people, and is lying largely untapped. Thus, the challenge is to find the means for making these resources available to more people through an effective identification, location and distribution system." (4)

American libraries have a long tradition of sharing bibliographic data and of sharing books, journals and other media through

interlibrary lending. More recently, libraries have joined together to share storage facilities, specialized staff or services, to purchase materials, supplies and equipment jointly, and to realize the benefits of cooperation in many other functional and service areas. The exponential growth in the number of items published each year, the rising cost of books, periodicals and other library materials, and the development of supportive computer and telecommunications technologies have all served to stimulate library network development. Several hundred such networks are now in existence in the United States. Some are international in scope, some national, some regional; many are statewide or purely local. Some networks are governed by formal consortium or interlibrary cooperation agreements, others by contracts, still others by the full or partial merger of formerly autonomous libraries into organized library systems.

Literature Review

Before discussing, various ILL cooperative networks, let us find out what literature review reveals on the topic. In 1909, Dr. Gould, President of American Library Association addressed the librarians about interlibrary cooperation in these words: "The twentieth century has the task of evoking method and order among libraries rather than within libraries. It must discover a classification not for the volumes on the shelves (which has already been done), but for the libraries themselves, grading them as it were, and welding them into a complete system ... Such an organization, such a system of libraries, is the final term in the new series. In it the libraries of the country would stand not as independent units, but

as interdepended partners. And its ultimate attainment should, I believe, be the aim par excellence of this generation of librarians." (5)

Since then, the American library community has been on a steady course towards increased ILL cooperation. Cooperative efforts among libraries date back to the 1920s when library 'consortia' were organized. These inter-institutional alliances were first formed among academic institutions to improve administration and to achieve certain specified common bibliographic objectives such as developing union lists, and improving interlibrary loan, etc. (6)

In 1934, a study conducted by Sanford revealed no less than 113 active library consortia in the United States. (7)

Belief in the importance and value of information networks was expressed at the highest levels of government during 1967-68. President Johnson, on two occasions in 1967, urged the integration of modern communications with library and information practices. The first speech was at the Conference on World Education in Williamsburg, Virginia, where he stated the "need for providing the best library facilities in the world through exploitation of present communications technology." On November 7, in Washington, D.C., when the President signed into law the Public Broadcasting Act of 1967, he remarked on the probable effects of information networks on the individual: "I think we must consider new ways to build a great network for knowledge - not just a broadcast system, but one that employs every means of sending and storing information that the individual can use." (8)

From that point on, cooperative agreements among group of libraries of all types multiplied and became commonplace so that

today virtually thousands of 'cooperative,' 'consortia,' 'systems,' and 'networks' of all kinds exist across the United States. While cooperative agreements among libraries have existed for decades, the concept of library networks developed only within the last 23 - 25 years ... Networking is only an extension of traditional forms of interlibrary cooperation; it transforms a loose confederation of library collections or information systems into a formal, integrated organizational structure whose potential for rendering service is greater than the sum of its parts. (9)

In 1969, Overhage provided review of literature and discussed different types of networks, including interlibrary cooperation. For this purpose, the Federal Government has recognized the value of interlibrary cooperation and is providing financial assistance through the Library Services and Construction Act. (10)

Miller and Tighe, in 1974 reviewing literature regarding library and information networks wrote: "Because networks are believed to be the most viable means known now for distributing and manipulating data from diverse sources to dispersed users quickly and accurately and at a tolerable economic cost, they will probably continue to expand and multiply, and to merge and consolidate." (11)

Kraus reviewed cooperative library activities of the past seventy-five years and concluded that "American library cooperation has gone through a long period of testing, and significant projects have been accomplished. The possibilities for merging these accomplishments into a network that will serve all users of libraries seem very bright, indeed." (12)

Kraus review suggests several common elements: "a) the basic ideas of cooperation are not new and indeed had been proposed many

times before they were accepted; b) cooperating libraries must be convinced that the potential gain is worth the risk of some loss of individual achievement; c) financial assistance beyond the contributions of the individual libraries is essential; d) a carefully tested technology must be available; and e) a strong organizational structure is necessary to ensure permanance." (13)

Kaplan discussing the issue of library cooperation commented, "cooperation has brought a greater rate of improvement to readers served by public library systems in comparison to those readers serviced by college library consortia. Though cooperation has brought improved services to readers in research libraries, the rate of improvement has been less than in public library systems. Left far behind have been readers depending on cooperative services rendered by school libraries." (14)

Also, in 1975, Butler discussing different types of library networks concludes saying: "At this time, we have no single, coherent, specific document that we can take from the library community to the academic deans, county administrators, and legislators who represent our library patrons and say, "here is how a library network should grow and why it is valuable." And certainly, we don't have all the facts to support our arguments and efforts." (15)

Weber examines a century of cooperative programs available among the academic libraries in the United States. He chronologically presents selected examples of cooperative programs initiated by college and university libraries from 1876 to 1930's, and presents a highly selective list of other cooperative programs from 1942 to 1973. He states, "inter-institutional cooperation seems to be universally recognized as essential ... It is a permanent change in

the mode of library operations which should be accomplished during the period 1965 to 1990 ... There would seem to be a close parallel with the state of librarianship in this decade as it applies to cooperative programs among academic libraries." (16)

Markuson is of the view that the concept of library networks is very recent, dating essentially from 1965, and the literature is both sparse and diffuse. Markuson discussed limited number of networks, such as Ohio College Library Center (OCLC), New England Library and Information Network (NELINET), Western Library Network (WLN), Indiana Cooperative Library Services Authority (INCOLSA), Southern Library Network (SOLINET) to illustrate the variety and scope of networks. In her concluding remarks she said that "networks will rapidly become a permanent and important part of the library scene and the individual library will be able to give much more attention to user services than is possible today." (17)

Williams presented a paper on simulation and library network design. The University of Pennsylvania has designed and implemented an experimental library resource sharing network comprised of six academic institutions in western Pennsylvania. The aim of the network is to facilitate resource sharing by incorporating the major library functions, including ILL. The model was first developed to simulate the existing operations of participating libraries and this was then overlaid with a computer based system that would permit the basic library functions to be done via the network's computer system. (18)

Palmour and Roderer, in 1978, reviewed literature for the years 1974 - 1977 during which period much activity was noticed. In summary, they wrote: "Resource sharing is almost universally accepted

by librarians as the only realistic means for meeting future demands. No doubt the future will see continued growth in computer-based library networks for resource sharing ... A more realistic appraisal of the costs and payoffs resulting from networking should strengthen the future development of effective library resource sharing." (19)

Stevens takes a somewhat more analytical approach to the subject, and traces the concept of library networks from mid-1960s to the present. He addresses a number of the aspects of the network concept in an effort to suggest their origins, the extent of their acceptance, and challenges to them. Programs for the cooperative acquisitions and storage of materials, ILL, etc. have also been examined in relationship to the library networks. (20)

In 1980, Jones, discussed the Bibliographic Service Development Program (BSDP) of the Council of Library Resources (CLR) which started in 1974. The goals of BSDP were: "a) to provide effective bibliographic services for all who need them; b) to improve the nature and quality of bibliographic products; and c) to stabilize the costs of many bibliographic processes in individual libraries. To fulfill the goals, CLR is planning a nationwide bibliographic system by creating and identifying the elements of the system, beside funding library and information service network." (21)

Rouse and Rouse are of the view that "one of the motivating factors for joining resource sharing network is the rate of the rise in library operating costs. Inflation, combined with the tightening of budgets and the increasing rate of publication, has caused the cost of labor-intensive activities of libraries to rise at an average rate of 6.3% per year between 1950 and 1970." (22)

In 1981, Martin predicted further development of network competition by regional networks, as they gained computer facilities; the establishment of links among databases, with the concomitant problems of synchronizing data and dealing with royalties; and the emerging use of videodisc by libraries and networks. (23)

As networks grow and use communication technologies, they are affected by forces outside the library profession. Robinson notes that rapidly changing technologies affect the larger networks, which may lack flexibility to adapt to changes. (24)

OCLC users complained regarding the quality of service, leading to the management decision to rebuild the whole network (the Oxford Project). Martin suggested that all four North American bibliographic utilities (OCLC, RLIN, UTLAS, and WLN) are of a size and age that do not allow them to reflect the rapidly changing technological developments of this decade easily. The large online systems and their associated networks are in danger of becoming dinosaurs and of being made extinct by the widely available microcomputer and CD-ROM capacities. (25)

Gennaro, in 1983, remarked that local systems may be our "new toys," and they require much attention and more financial support. Our older "toys," the utilities, are no longer new and exciting, and we take them for granted. Should we find a need to cut costs somewhere it may well be done by cutting utility costs in favour of local system financing. Even the private sector's services compete with the utilities as "new toys;" the natural inclination is for librarians to give priority to the local systems and to look critically at the closely standards imposed by the nationwide structures. (26)

The more things change, the more they remain the same - but with a difference. The environment and issues in networking from 1975 to 1985 are very different. No single event or organization has created this change; it is cumulative effect of continual action on the part of librarians to adapt information technologies for the benefit of the library and its users. (27)

The situation has changed dramatically since the early 1980s. Librarians have shifted from the enthusiasm of total cooperation to a strong support of local systems with a more cautious embrace of the cooperative. Several factors enter the picture: (a) "microcomputers make it possible for libraries to accomplish locally what once could be achieved only by cooperating with others; (b) librarians have discovered that the autonomy of a local system is often preferable to the requirement of operating in a specified manner according to network procedures; and (c) the private sector has discovered the library market to be profitable and is offering services that may compete with network services." (28)

Martin commented that the finances of most libraries are such that librarians cannot ignore the benefits of cooperative action. In addition, for decades librarians have been oriented toward fulfilling the information needs of their users, and working with other libraries has always been a significant component of their tools. However, the previous wholehearted fascination with the notion of national bibliographic systems is no longer evident. (29)

Commenting on the future trends for library networks, Martin stated, "Libraries and library networks are dynamic. Although progress seems slow and goals not easily realized, it is almost impossible to describe the state of the art at any one moment ...

The network is likely to be permanent, and bibliographic utilities certainly are essential parts of the current library scene, but the form and function of the network will continue their evolutionary decentralizing process. Networks are tools to assist each library in meeting the service goals appropriate for its clientele; they are means rather than ends." (30)

The growth of local online public access catalogs has already forced the utilities to begin dealing with the concept of distributed systems. Some regional networks will weaken as centralized utilities change and local systems gain strength; others will prosper, especially if they are able to react swiftly to their members' changing requirements and if they are able to provide unique products or services. (31)

Commenting on the diversification of networking, Markuson has pointed out that when computer and communications technologies became accessible to librarians, new organizations were required to implement the networking; the job could not be done by people or organizations that had a specific mandate or authority. (32)

Segal states, "The most likely pattern of network development for the near future seems to be a mixture of 'centralized,' 'linked,' and 'distributed' modes. Libraries will continue to use national (or regional) databases for cataloging data and ILL. Local automation projects for online catalogs, circulation, acquisitions and serials control will be decentralized, and linking, using the OSI model, will probably be successfully achieved and applied in the near future." (33)

In 1987, Schuman concluded, "Only about 7,000 U.S. libraries do participate in networks, mainly medium to large academic and public

libraries. There is no single network funded by the US government as there is in other countries, nor do we have a national library. While the Library of Congress does engage in important national library programs, its major mandate is to be the library for the Congress of the United States." (34)

On the point of ownership to access, Schuman stated: "There's no doubt that networks have broken some barriers, but issues such as prestige, control, and funding are still sources of frustration. Fragmentation between types of libraries - academic, school, public, and private - and types of librarians is still the norm ... ILL still accounts for less than two percent of all library circulations. The concept of ownership is changing, but librarians have made little progress in the actual movement of resources to users ... Networks can supplement. They are a means, not an end. They can be a tool for bringing us together to share expertise, experience, and knowledge." (35)

Dougherty reviewed the history of library cooperation, asking the question, "Is resource sharing still a service imperative?" He concluded that "resource sharing must be based on mutual benefit; that ILL transactions account for a very small percentage of total circulation activity; that large databases stimulate greater participation; that libraries will request items they own but that are not currently available; that unique contributions are made by libraries of all sizes; that resource sharing does not produce smaller library materials budgets; that quality of output is more important than sheer growth; that both multitype and special-purpose consortia are valid; and that the interdependence of libraries is still problematic among users." (36)

In 1989, Dougherty advocated that consortia and library networks are a partial solution to the high cost of library services. However, he cited as obstacles of networking: "a) faculty opposition, based on concerns (many valid) about dependence on other libraries' collections; b) librarians' doubts about their ability to provide service to their primary clientele; and (c) administrators' reluctance to relinquish the volume-count type statistics they have grown accustomed to using as a sign of prestige." (37)

In 1990, the Coalition for Networked Information (CNI) was formed to advance scholarship and intellectual productivity by promoting access to information resources through existing networks and the proposed National Research and Education Network (NREN). CNI will address the following challenges implicit in such a network, such as "(a) the creation of a "virtual library" that would give researchers the totality of information resources literally at their fingertips; (b) the growing emphasis on access to information resources; (c) making available information resources regardless of the location of the user or the information product; and (d) integration of campus information resources." (38)

Leach described the current state of campus networks, which are being created to increase productivity; improve access, retrieval, and sharing of scholarly information; and furnish a framework for communication with off-campus networks, etc. Leach mentioned the importance of INTERNET and its possible expansion through the creation of NREN. He stressed the role of the academic library in developing campus, state, and national network, particularly in creating connections and linking services that can benefit students and faculty beyond the library. (39)

Segal commented that library networking and cooperation has not tapered off at all, despite predictions that local systems would reduce collaborative activity. Innovative projects continue to be created by libraries in consort; their major linkages remain strong at the local, state, regional, and national levels. The possibility of a national research and education network is promising. (40)

In 1991, Lenzini and Shaw asserted that "partnerships are now forming around common goals or common notions, rather than geographic location. One of the challenges that this distance independence creates is to find ways to deliver physical or electronic documents directly to users wherever they happen to be and without concern for their specific relationship with the lending library ... These new methods of information delivery can be and will be competitive in price and convenience with the traditional collection model." (41)

Jackson touched on several aspects of resource sharing. She described an ILL electronic discussion group and the significance of instantaneous debate of ILL issues. This specialized 'list server' is typical of the way in which librarians have responded to the available technology to link themselves with others having similar interests. (42)

Segal reviewed 'Library Networking and Cooperation in 1991' and concluded that libraries continued to integrate exciting new technologies. The year's activities are ample evidence that librarians are still willing to cooperate - up to a point. The full impact of the economic downturn has not yet been felt; 1992 will be crucial for cooperation on many fronts. Major networking institutions' efforts to woo end-users and nonlibrary organizations may have far-reaching consequences. (43)

Past and Present Networks

Several cooperative networks were established since 1940s by college and academic libraries, few of which are still very vital and active. A highly selective list of these programs are described below.

U.S.A.

One or two cooperative liaisons were formed every year or so in the United States from 1940 until 1970s when there was a sharp increase. The Delanoy-Cuadra directory lists the births: four in 1964, seven in 1965, eleven in 1966, sixteen in 1967, twenty-four in 1969, and at least nineteen in 1970. (44) Majority of the cooperative networks were founded during 1960s and 1970s.

In 1942, New England Deposit Library (NEDL) was established as a cooperative storage facility of Boston College, Boston University, Harvard University, Massachusetts Institute of Technology (MIT), Radcliffe College, Simmons College, Tufts University, and four non-academic libraries. (45)

In 1946, the Cooperative Acquisitions Project was initiated for wartime publications conducted by the Library of Congress which, over three years, shipped nearly a million volumes from Europe to 113 participating American libraries. (46)

In 1948, Universal Serials and Book Exchange (previously the U.S. Book Exchange) was formed to serve as a clearinghouse for the redistribution of a wide range of duplicate publications on a self-supporting basis among 1,000 libraries and institutions throughout the world. Of the initial members, 106 (76 percent) were college or university libraries; they continue to deposit about 70% of the

material exchanged, and they receive about the same percentage of the total distributed. (47)

Also, in 1948, the Farmington Plan was started with about 60 research libraries of a coordinated foreign acquisition program for current materials of research value. This major cooperative program was one of the most effective and significant over many years. With 1965 as an example, 52 libraries acquired 22,419 volumes, constituting the total research publications from 14 countries. (48)

In 1951, Midwest Inter-Library Center was opened, later to be known as the Center for Research Libraries (CRL), by ten mid-western university libraries as a cooperative akin to NEDL but with a program for joint buying and center ownership. (49)

In 1956, Foreign Newspaper Microfilm Project was initiated as a cooperatively filmed, shared-positive-copy program managed by the Association of Research Libraries (ARL), the offspring of Harvard's duplicate sale program begun in 1938. (50)

In 1965, the Medical Library Assistance Act, created, among other programs, the eleven Regional Medical Libraries providing interlibrary loan, reference, and consultation services throughout the U.S. Seven are located in universities: Harvard University, University of Washington, Wayne State University, University of California at Los Angeles (UCLA), Emory University, Texas University, and Nebraska University. (51)

In 1966, the New York State Reference and Research Library Resources Program (3Rs Program) was established to facilitate the use of research library materials. (52)

Also, in 1966, the New York State Interlibrary Loan Network (NYSILL) was established as an ILL communications network. The

network included 22 regional systems, 3 geographic referral libraries, and 9 subject referral libraries, with the state library acting as both a resource center and as a switching center. (53)

The New England Library and Information Network (NELINET) was established in 1966 as a nonprofit, multi-type, and multistate regional membership organization designed to provide a cooperative approach to library automation and resource sharing in New England. NELINET member institutions represent more than 400 libraries in New England. NELINET provides its members with access to OCLC Online Computer Library Center and commercially available databases at reduced cost and maintains a New England Union List of Serials. It also maintains a technical assistance and consulting program for member libraries. (54)

In 1967, the oldest, largest, and nonprofit example of the bibliographic networks was incorporated as the Ohio College Library Center (OCLC) establishing an online, shared cataloging system with an online union catalog to the academic and college libraries of Ohio state to increase the availability of library resources at each Ohio academic institution and at the same time reduce library costs. Since March 1973 membership has been open to nonprofit nonacademic libraries throughout the United States. In 1978, OCLC changed its name to acronym OCLC, Inc. downplaying the former regional connotation. Again, in 1981, it changed the official name to "OCLC Online Computer Library Center". OCLC is used for many purposes, such as searching, cataloging, acquisitions, interlibrary loan, serials control, and circulation control The OCLC system supports resource sharing among more than 11,000 libraries in all 50 United States and some 37 countries and territories with more than 23 million

bibliographic records. (55)

Initiated in 1968, the Five Associated University Libraries (FAUL) is a cooperative/consortium effort among five University Libraries in upstate New York, including SUNY at Buffalo and at Binghamton, Cornell University, Syracuse University, and the University of Rochester. Its function currently includes delivery service, photocopying, reciprocal borrowing, expanded interlibrary loan service. (56)

In 1969, the Minnesota Interlibrary Telecommunications Exchange (MINITEX) was established at the University of Minnesota. It offers services to libraries in Minnesota, South Dakota, and North Dakota. MINITEX has five programs: a) document delivery, b) telephone reference service, c) serials exchange, d) union list of serials, and e) online union catalog and cataloging. Document delivery comprises a communication system, together with transportation of requested items. (57)

The Illinois Library and Information Network (ILLINET) provides access to OCLC and other databases for Illinois libraries, and it coordinates cooperative programs, such as ILLs, reference services, interlibrary cooperation promotion. The linking of several mini-computer circulation systems allows patrons to borrow through an effective resource sharing arrangement. (58)

Founded in 1972, the Western Library Network (WLN) (formerly the Washington Library Network) provides more than 450 libraries in seven states and provinces with online computerized services to promote resource sharing and automated library functions in support of a full-service library network. WLN is the smallest of the bibliographic utilities. The network includes subsystems for

bibliographic, acquisitions and accounting, retrospective conversion, and interlibrary loan applications. (59)

SOLINET, the Southeastern Library Network was incorporated in 1973 as a means of providing regional library cooperative services in a ten-state area: Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia. SOLINET is a non-profit cooperative that provides library services and products to its members. SOLINET-based services include a cooperative preservation program; resource sharing and network support; subscription services; and a continuing education program of seminars and workshops. (60)

In 1974, the Research Libraries Gorup (RLG) was formed by four major American research libraries: Harvard University, Yale University libraries, Columbia University, and the New York Public Library. The consortium had the following goals: coordinated collection building, reciprocal access privileges, delivery service, etc. to enhance resource sharing. In 1978, RLG chose BALLOTS (Bilbliographic Automation of Large Library Operating using a Time-sharing System) which became the technical base for the Research Libraries Information Network (RLIN) - an online bibliographic utility of RLG. RLIN provides an online interlibrary loan system, an electronic mail system, catalog cards, acquisition products, management reports, etc. (61)

Also, in 1974, MIDLNET, the Midwest Regional Library Network was founded which includes research libraries and state networks in Michigan, Indiana, Wisconsin, Minnesota, Illinois, Iowa, and Missouri. The aim of MIDLNET was to develop faster delivery of books to users; to coordinate library planning, development, and

research in the Midwest; to attract federal funds available for regional library network development; to provide a voice in the emerging national library network, etc. (62)

Established in 1975, the Amigos Bibliographic Council (AMIGOS) is a not-for-profit library resource sharing network serving nearly 340 members in the Southwest, including academic, public, corporate, and school libraries, as well as state library agencies. AMIGOS services include brokering, training, and on-going support for users of the OCLC Online Computer Library Center system. (63)

The Cooperative Library Agency for Systems and Services (CLASS) was established in 1976 by University of California, the California State College and University system, the California State Library, the California State Community College System, the County of Santa Clara on behalf of the county public libraries and the City of Los Angeles on behalf of city libraries. CLASS is a cooperative public agency serving academic, public, and special libraries in North America. Its goal is to help libraries provide better service to users by increasing library productivity and resources and by facilitating resource sharing. (64)

Also established in 1976, the Federal Library and Information Network (FEDLINK) is a cooperative program that offers any federal library, information center, or information-related office the opportunity to enhance the information resources available to meet the requirements of its personnel. FEDLINK provides federal agencies with cost effective access to a number of automated services for online data base and CD-ROM searching as well as online cataloging, interlibrary loan, etc. (65)

Initiated in 1977, OHIONET is a nonprofit organization of more than 200 libraries of all types. Its goals are to facilitate the availability and sharing of bibliographic and other library resources for its members and the citizens of Ohio; to encourage cost-effective operational practices and procedures by its members by means of statewide library cooperation; and to work for and participate in the development of a national library network. (66)

Canada

The National Library of Canada's mission (established in 1953) is to promote the knowledge and use of the published heritage of Canada; to ensure its acquisition and preservation and to support Canadian studies; to foster library development throughout Canada; and to facilitate library and information resource sharing. Among the many services offered are: reference and referral, online literature searching, interlibrary loan, document delivery, etc. In addition, the National Library is coordinating the development of a nationwide decentralized communications network for resource sharing and the development of library application protocols for file transfer, interlibrary loan, etc. (67)

Founded in 1971, UTLAS (the University of Toronto Library Automation System) is a computer-based service organization for libraries and the information industry. More than 500 institutions, members of consortia, and government agencies - representing over 2000 libraries - maintain user-owned data bases through UTLAS facilities. UTLAS offers the following services: catalogue support system (CATSS), reference access, ILL, acquisitions, etc. (68)

Established in 1974, the Canada Institute for Scientific and Technical Information's (CISTI) chief aim is to provide library and

information services of value to Canadian research and development efforts. CISTI offers comprehensive reference services; provides loans and photocopies of documents; and locates items not in the CISTI collection. (69)

Initiated in 1984, the DOBIS Canadian Online Library System is a search service offering access to the catalog holdings of more than 550 Canadian libraries and the bibliographic information for works covered by the Canadian Union Catalogue of Books, the Canadian Union Catalogue of Serials, and the Canadian Union Catalogue of Library Materials for the Handicapped. The primary use of the system is to provide interlibrary loans and resource sharing. (70)

Europe

There is a rich history of cooperative schemes in the UK; one of the several example is that of LASER (London and South Eastern Library Region). Founded in 1928, it is a cooperative library organization providing information services to public and other types of libraries in the area. Besides offering a variety of cataloging services online or in batch mode, LASER also provides ILL and reference services, issues publications, etc. (71) LASER maintains an online minicomputer networks. Machine-readable holdings number approximately 3 million bibliographic entries representing the 60 million volumes held by member libraries. (72)

Initiated in 1973 in London, the British Library Document Supply Center (BLDSC) was established as a result of the merger between the National Central Library and the National Lending Library for Science and Technology. It provides organizations/libraries worldwide with document supply services from an extensive collection of serials,

monographs, and conference proceedings. Its services include loans, photocopies, and fulfillment of document orders placed online through the BLAISE, DIALOG, etc. (73)

OCLC/Europe is a direct branch of OCLC, offering services to libraries in Europe. Support is given for shared cataloging, ILL, acquisitions and serials control systems, etc. (74)

Established in 1940 in France, the Institute for Scientific and Technical Documentation (INIST) provides one of the world's major scientific and technical information services. It abstracts and indexes all relevant worldwide journal literature and stores the results in the computer-readable PASCAL and FRANCIS data bases. INIST offers document delivery, translation services, and consulting services. (75)

The GMD Information Center for Information Science and Information Work (GMD-IZ), established in 1977 in Germany, is an information center combining the functions of a central information and documentation agency with those of a special library covering the entire field of information science and information work. As part of its services, GMD-IZ maintains the computer-readable INFODATA data base, which provides coverage of information science literature. (76)

The Technical University Library of Norway was established in 1912. In addition to serving the University community, the Library is the central technical library of Norway and serves Norwegian industry and the general public. Among its services are reference, referrals, interlibrary loans, copying, online searching, and document delivery services. Other functions of the Library include providing training in the utilization of scientific and technical

literature, coordinating interlibrary loan work among Norwegian technical libraries. (77)

The Library Information System (LIBRIS) was established in Sweden in 1970. It is a computer-based information system which aims for a joint utilization of resources of the Swedish research libraries and a reduction in time spent cataloging these resources. Forty academic libraries have permanent access to LIBRIS and about 500 other libraries have dial-up access to the system. Online ordering and interlibrary loan capabilities for member libraries are also available. (78)

The Union Catalogue of Serials in Swiss Libraries is a computer-readable bibliographic data base which identifies and records titles of periodicals held in Swiss libraries and the names and addresses of libraries that provide photocopies of article from those publications. The Catalogue covers serials published outside of Switzerland after 1945 and is accessible online. (79)

Oceania

Established in 1960, the National Library of Australia (NLA) maintains a national collection of library materials, including a comprehensive collection relating to Australia and its people, and provides library and information services including ILL, resource sharing, etc. throughout the country. (80)

Initiated in 1977, the Australian Information Network (AUSINET) is an online information retrieval system which enables users to access data bases covering primarily Australian material. AUSINET also offers the AUSINET STATEX Service, a menu-driven service providing access to financial and share price information. AUSINET

provides access to the Australian Bibliographic Network, the National Library of Australia, and other data base services. (81)

Among its services, the National Library of New Zealand (established in 1938) produces the computer-readable FIND and INNZ data bases. The FIND data base contains citations to the serial holdings of New Zealand libraries and corresponds to the Finding List, which is available on microfiche. The INNZ corresponds to the hardcopy publication Index New Zealand. (82)

Started in 1988, KIWINET is an online information retrieval service providing users with access to data bases containing information on all aspects of New Zealand. It offers directory, bibliographic, and full text data bases. Kiwinet data bases provide ILL, document delivery, full-text searching, etc. (83)

This part focused on the literature relating to significant cooperative endeavors and networks among academic libraries in the US and Europe. It is clear that academic libraries have engaged in resource sharing since nineteenth century with a desire to serve more users. The developed countries show a tremendous growth in promoting the exchange of information.

RESOURCE SHARING IN DEVELOPING COUNTRIES

In this modern age of networking, libraries all over the world are shifting their emphasis from local collection to reliance on access to a wider scope of materials through a resource sharing environment. In an attempt to keep up with the developed nations, developing countries are increasingly employing research institutes to conduct scientific studies on methods to employ foreign technologies compatible with their own social, cultural, and economic

capabilities. It is expected that the information technologies advancement will lead developing countries libraries to form consortia through which they can achieve better services to their users.

In spite of all the difficulties, a considerable number of countries established national focal points for Universal System for Information in Science and Technology (UNISIST) following the invitation from the director general of UNESCO (United Nations Educational, Scientific, and Cultural Organization) for them to do so. The focal points that developed were few and were related not to scientific and technical information but to bibliographic activities such as the program for Universal Bibliographic Control (UBC) and the associated library programs of International Standard Book Numbers (ISBNs). (84)

Through funds provided by the United Nations Development Program (UNDP), international meetings were arranged by UNESCO to bring together representatives from many countries to consider scientific and technical information questions in connection with the UNISIST program. (85) Two such conferences were arranged: IFLA-UNESCO Pre-Session Seminar for Librarians from Developing Countries (third), Antwerp University, 1977, and the International Conference of Directors of National Libraries on Resource Sharing in Asia and Oceania, Canberra, 1979. However, most librarians and national library directors who have participated in both the Antwerp (86) and Canberra (87) conferences found that cooperation was easier to talk about than to practice.

In the conference on resource sharing in Asia aand Oceania, several papers were presented. Prakoso described the efforts to initiate resource sharing programs in Indonesia despite the weak

infrastructure under which the national information system and services had to operate (88); Begg informed the participants about the IFLA, UNESCO, and Council of National Libraries supported resource sharing programs in Pakistan (89); Gupta discussed how the National Library in India is organizing its activities in the area of international resource sharing (90); Karim described the efforts that laid the foundation of resource sharing in Bangladesh (91); Quiason mentioned the ideals and efforts being done in the Philippines for international resource sharing cooperation (92); Kishida (93) and Satoh (94) described the efforts to improve ways for a better flow of resources through the National Diet Library in Japan; Gesmankit described resource sharing activites being performed by the National Library of Thailand (95); Wicks narrated how international resource sharing takes place through the National Library of Singapore (96); Yocklunn discussed how the National Library of Papua New Guinea supports international resource sharing with its limited resources (97); and Newa described the difficulties in interlibrary cooperative schemes concerned with the sharing of library resources in Tanzania (98). Moreover, Wijasuriya (99) and Rydings (100) discussed the existing interlibrary loan systems in Malaysia and Hong Kong, respectively.

Nevertheless, experimental national programs were financed in a number of developing countries, such as Columbia, Indonesia, Korea, etc. with mixed success. (101).

The universal bibliographic control and universal access to publications concepts were translated into international initiatives by some international agencies like FID, IFLA, UNESCO, UNISIST, and UNIDO. They developed a strategy of approaching individual nations

to develop the fundamental infrastructure of library and information services. A national system of bibliographic control and access was considered nucleus in these initiatives. IFLA launched two universal campaigns of UBC (Universal Bibliographic Control) and UAP (Universal Access to Publications). The underlying theme has been the development of basic institutions at national level which would then become instrumental in the satisfaction of the ideals of creating broader basis for resource sharing. (102, 103)

It has been increasingly emphasized that any multi-nation regional network would operate through the organizational and professional apparatus available within each member nation. It is also a universally accepted consensus that resource sharing can only take place in the presence of an infrastructure at the grass-root level. These infrastructures are: "a) status of the national library; b) national bibliographic control; c) availability of union catalogues, union lists, and indexing and abstracting services; d) arrangements for interlibrary cooperation; e) connections with networks; and f) application of information technology." (104)

A questionnaire was sent to 21 member countries of the League of Arab States (LAS). The study concluded that more than half of them do not have a national library. Very few of them have any worthwhile bibliographic resources, such as union catalogue, union lists, or indexing and abstracting services. None of them has established a cooperative consortium at national level to pool its resources for lending, etc. Few countries have active documentation centres in specified areas, while such centres located in some other countries are examples of inactivity and inertia ... The library traditions are non-existent; library education programmes are naive and

ineffective; professional associations are either unfounded or they are, by and large, inactive; professional ethics are not instituted; and, service orientation is largely a missing factor ... The strengthening of the existing infrastructures and planning for resource sharing consortia are crucial to the development of library and information services in developing countries ... Sound academic programmes, dynamic professional associations, and concerted research and scholarship activities are the long-term targets intended to bring about a meaningful difference in developing the national infrastructures of library and information services in developing countries. (105)

Generally speaking, developing countries share a number of characteristics: a lack of available trained personnel and continuing education programs, limited resources, unstable governments, centralization of decision-making, constant changing of priorities, lack of scientific impact at highest levels of government and poorly developed communications systems. (106)

Additionally, there are several obstacles that hinder the establishment of library cooperation in developing countries, such as: "a) economic factors - majority of the developing countries, with few exceptions, are poor; b) political factors - governments often fail to plan for library development, thus bringing the implementation of library cooperation to a standstill; c) human and professional factors - resource sharing depends on the tools and organization and on the elimination of the ego factors; and d) social and cultural factors - such as language, population, communication, lack of social recognition of librarianship and libraries. (107)

Regional Associations

In many parts of the world, particularly in the developing countries, the regional associations are carrying forward resource sharing goals. The theme of cooperation is an essential component in their statement of objectives. Therefore, these regional professional associations must find their place while considering national network developments in developing countries.

In 1969, the Association of Caribbean University, Research, and Institutional Libraries (ACURIL) was formed. Its aims are: to facilitate development and use of libraries, archives, and information services and the identification, collection and preservation of information resources in support of the whole range of intellectual and educational endeavours throughout the Caribbean area; to strengthen the archival, library and information professions in the region; and to promote cooperative activities in pursuit of these objectives. ACURIL has made progress in the areas of cooperative acquisition, bibliography, microfilming and indexing. Besides, ACRUIL is seen to have made an indelible impression on interlibrary relations throughout the region. (108)

In 1970, the Arab League Educational, Cultural, and Scientific Organization (ALECSO) was established in Cairo. In 1979, it was moved to Tunis. ALECSO has focused its concern with library and documentation work through its Information Department. The Department has set up projects for collecting, storing, and processing, as well as evaluating, analysing and disseminating information and data gathered from the Arab States. (109)

In 1970, the Congress of Southeast Asian Libraries (CONSAL) was formed in Singapore. Its aims are: to establish, maintain and

strengthen relations among librarians, library schools, library associations and related organisations in the region; to promote cooperation in the fields of librarianship, bibliography, documentation and related activities in the region; and to cooperate with other regional or international organisations and institutions in the fields of librarianship, bibliography, documentation and related activities. (110)

Established in 1981 in Cairo, the League of Arab States Documentation and Information Center (ALDOC) has the following aims: to meet the information needs of the League and its 21 member states at every user level; to build a comprehensive documentation base for the League; to develop and coordinate the information activities of the Arab region; and to provide technical assistance to other documentation and information centers in the Arab world. (111)

Founded in 1981 in Iraq, the Arab Gulf States Information Documentation Center (AGSIDC), the basic aims of AGSIDC are: to systematize and analyze information according to current processes and techniques compatible with the specifications and characteristics of Arabic; to form ways of coordination and collaboration in the production and exchange of information programs and materials in the member states; and to support the basic structure of the existing information services, libraries, and documentation institutions in the Gulf region. (112)

The Arab Bureau of Education for the Gulf States (ABEGS) was formed in 1975 in Riyadh with Bahrain, Kuwait, Iran, Oman, Qatar, Saudi Arabia, and United Arab Emirates as members. The Cultural, Documentation, and Information Department of ABEGS is charged, with several other responsibilities, as follows: to collect documents

which are specially concerned with the region, prepare a bibliography of them, and facilitate access to them by participating states; to help supply research needs in the other specialized departments and to produce bibliographical studies on subjects with which they are concerned; etc. (113)

Networks

Information regarding very few resource sharing networks in developing countries are available in the literature which are discussed here.

GULFNET, the Gulf Network, was launched in 1985 by its founding members (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates). GULFNET is the first Middle East computer network dedicated to universities and research institutions throughout the Gulf countries. Presently, it connects several academic and research institutions in Gulf countries (Saudi Arabia - eight nodes; Kuwait - 3 nodes; and Bahrain - one node) by a high speed leased telephone line. GULFNET is a "store and forward" network. It can be used to transfer files, text, data, or programs to other nodes; to receive or send electronic mail to one or more network users; etc. Among the many applications already developed by the users are: a) access to KACST databases, and many other international databases; b) specific electronic conferences on different applications; c) subscription to many bulletin boards and electronic magazines; etc. GULFNET is also connected to BITNET (USA), EARN (Europe), NETNORTH (Canada), JANET (UK), and DFN (Germany). In addition, most of the academic networks, such as CSNET (Computer Science Network), EUNET (European UNIX Network), HEPNET (High Energy Physics

Network), NSFNET (National Science Foundation Network), etc. may also be accessed. (114)

A proposal is underway to establish SAULNET (the Southeast Asian University Library Network). This network would operate under the auspices of the Association of Southeast Asian Nations (Burma, Indonesia, Malaysia, Philippines, Singapore, and Thailand) and would take the proposed Malaysian National University Library Network as a model. The potential membership of SAULNET is extremely large. The Philippines have 40 universities, Thailand 11, Malaysia 5, Singapore 2, and Indonesia more than 100. (115)

STUDIES ON RESOURCE SHARING

In this section, related dissertations on the design of library cooperation and networking will be examined. These dissertations have been selected keeping in view their relation to the topic of resource sharing in developing countries. An attempt will be made to analyze the findings and recommendations of these dissertations.

Egypt

A study was conducted by Osman (116) to make explicit the factors responsible for the present state of the art of interlibrary loan in Cairo city and to propose a system for formal interlibrary lending which can be modified for other developing countries. The study identified several problems, such as inadequate resources, budget constraints, lack of standardization, prohibitive library regulations, lack of bibliographic tools, and non-existent formal lending agreements. The study proposed two major roles. The national library should be responsible for: a) retention of the country's

last document copy and its availability for loan; b) acquisition of foreign materials; c) international lending function; and d) coordination of the acquisition programs of the member libraries. The member libraries will be responsible for: a) cooperative acquisition program for monographs and serials based on subject specialization of the collection already in existence; and b) assumption of the responsibility for making these collections available on loan.

Iran

The study conducted by Doustdar (117) attempted to develop a method for improving the effectiveness of Iranian academic libraries through cooperation. The results of the study indicated that : a) collection of monographs and serials were not extensive enough to support full-scale research; b) operations were slow and access to the recorded knowledge was less than optimal; c) manpower resources, including professionals were lacking in number and quality; and d) lack of coordination and cooperation between universities and their libraries. As a result, an overall plan with the following features was devised: cooperative acquisitions; centralized and cooperative cataloging; expansion of library services, and cooperative use of manpower resources.

Jordan

Younis (118) based his study on the assumption that "resource sharing would allow libraries in Jordan to achieve levels of services and efficiency by working in a cooperative mode," and that "a favorable climate exists to establish a network." The study

attempted to achieve two objectives: determine the feasibility of an information network and to formulate the networks' components. Major findings of the study indicate that a wealth of cultural and historical information exists. Cooperatives among libraries are informal and limited to interlending, gift and exchange, and photocopying. Nevertheless, resource sharing, cooperation, and networking concepts are well understood. Supported by the findings, a "plan for action" was proposed. Network modules would comprise of cooperative acquisitions, and processing, interlending, storage, and delivery of services.

Nigeria

Bozimo's (119) study sought to examine the nature and extent of cooperative activities among Nigerian university libraries within the context of the historical and the educational settings. It also attempted to evaluate the role of organizations and institutions which had fostered and effected cooperative activities as well as analyze the expressed needs of the primary users of the university libraries: the academic staff members. The results of the study showed that the political and educational settings within which the universities and their libraries evolved furnished a background unfavorable to cooperative efforts because of these factors: a) the physical and environmental obstacles of the larger society; b) the personality conflicts among some of the major protagonists of cooperation; and c) problems of communication. The study also found that collections were inadequate for research as well as teaching. The study proposed a number of solutions, such as preparation of national union list of periodical holdings at the national level;

coordinated schemes for acquisition based on subject and geographical area; efficient and reliable courier services for carrying mails.

Saudi Arabia

The purposes of Hafez's (120) study were to investigate and analyze the condition of the present systems of university libraries in Saudi Arabia, to determine the perceptions of the librarians in the seven universities toward collaboration, and to design a prescriptive model for resource sharing and information network system among Saudi university libraries. The findings of the study revealed that the problems of Saudi university libraries stem from a lack of coordination among these libraries, an absence of national planning, an insufficient number of professionals, and the present state of shrinking budgets. The study designed a prescriptive model for establishing a network system among Saudi university libraries which is a multi-functional distributed network in which all seven university libraries will have a sense of equal being and will communicate directly with one another.

Saudi Arabia and Turkey

The study completed by Dhohayan (121) identified the requirements for resource sharing networks among the academic libraries in Islamic countries. He focused his study on Turkey and Saudi Arabia as representative Islamic countries. The study investigated the existing level of resource sharing among university libraries in Turkey and Saudi Arabia. The study also examined the obstacles to establishing an Islamic resource sharing network. The study recommended that Muslim university libraries hold a conference to

discuss the need for resource sharing; the need to upgrade library education in the two countries as well as in other Muslim countries; and the need to share information among university libraries in these two countries.

Thailand

The purposes of Minaikit's (122) study were to investigate the feasibility of a network of university libraries and to develop a plan for a university library network in Thailand. The study found a lack of system of libraries within each university, the number of personnel are inadequate, and insufficient collection. Although all libraries were involved in some kinds of cooperative activities, the study pointed the following steps for a successful system: a) cooperative collections development program; b) effective means of access to the collections regardless of their location; and c) development of new organization to coordinate the efforts of libraries. The plan specified the long-range goals, objectives and functions which a university library network should try to achieve during the ten-year period.

From the analysis of selected dissertations, we may conclude that all the above described studies have common purposes and characteristics in terms of objectives, methodology, and findings. Also, all the researchers attempted to develop a model network design of resource sharing which is possible only with the use of similar methodologies and data collection techniques. Literature review, questionnaires, and interviews were used to collect data in all the studies, except Bozimo, who also used an attitude scale. Another similarity among these studies is that all were completed

for different developing countries. More or less, they have similar status of librarianship, the level of education and training, and availability of budget, etc.. In their findings, all studies mentioned several common problems, such as duplication in collections, inadequate financial support, insufficient numbers of trained librarians and communication systems. One more thing common in all the studies is that they were completed for academic libraries, except Younis, whose study included special libraries as well.

However, the studies differ on few points. For example, the number of institutions surveyed were different in all the studies. Besides, some studies provided clear models for the establishment of resource sharing networks, whereas others provided a set of recommendations only or suggested further investigation.

The study is limited to only one type of library, i.e. academic libraries, but is concentrated on government university libraries. The study will attempt to propose a full-service network plan. This means that all functions are shared by member libraries. An organzational structure of a proposed university library network will also be prepared.

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CHAPTER IV

RESEARCH METHODS AND METHODOLOGY

The objective of this study is to analyse the existing situation and develop a model interlibrary loan network (ILLN) among academic libraries in Saudi Arabia. In this study, the descriptive and survey research methods will be used to identify present status of academic libraries in Saudi Arabia; to obtain current data about continuing cooperative activities of the Saudi Arabian libraries; and to develop a model ILLN for academic libraries in Saudi Arabia.

Survey research methods are used to obtain a broad array of information which is best suited for this type of study. According to Busha and Harter, survey research is the most appropriate method for the library surveys as they are "systematic, in-depth examinations of libraries, library systems, or networks of libraries. Typically, comparisons are made in these surveys among various libraries, or units thereof, and established professional standards."(1)

According to Powell, "survey research is generally considered to be more appropriate for studying personal factors and for exploratory analysis of relationahips ... Descriptive surveys are the most common type of survey, and many researchers use "survey research methods" and "descriptive surveys" synonymously ... The main purposes of descriptive surveys are to describe characteristics of the population being studied, estimate proportions in the population, make specific predictions, and test relationships." (2) This chapter describes the instrumentation, field testing, study procedure, and statistical analysis utilized in this study.

INSTRUMENTATION

According to Goldhor, "the questionnaire is probably the single most used device for securing data, both in librarianship and in social science research." (3) Generally, the use of a questionnaire is recommended when conducting research in librarianship. A questionnaire provides an opportunity for respondents to give frank, anonymous replies; facilitates the collection of large amounts of data in a short period; allows a wide range of distribution; and provides greater access to more respondents; etc. Additionally and most importantly, questionnaires are usually relatively inexpensive to administer and provide ease of preparation, distribution, and tabulation of answers.

A questionnaire was designed to obtain information on the present status of the Saudi academic libraries, their cooperative activities, and librarians view towards an interlibrary loan network. To fulfill the above objectives, the written questionnaire was administered to the seven deans of the academic libraries of Saudi Arabia to collect data related to the library collections, users, budgets, library techniques, and the extent of interaction among them. The cover letters (Appendix A) explained the objective of the study and stressed the importance of each person's responding, beside guaranteeing strict confidentiality and that the information will be used only for dissertation writing. The questionnaire (Appendix B) was designed by the researcher on the basis of questionnaires used in similar studies in other developing countries and reviewed by the supervisors of the doctoral committee. All questions were revised and modified to suit the academic library situation in Saudi Arabia. As much as possible, linguistic

ambiguities were removed from the questionnaire and clarity of the questions were emphasized.

The questionnaire comprised of three parts. Part One (Questions 1 - 14: Information on the Library) requested information on governance and administration, personnel, acquisitions, budgets, collections, devices used by the libraries, etc. Part Two (Questions 15 - 19: Information on Cooperative Activities) solicited information on type of cooperative activities, cooperation with other academic libraries, KACST, and other type of libraries. Part Three (Questions 20 - 32: Network Opinion Survey) sought data on union catalogs, union list of serials, communications used, materials borrowed and loaned, activities that could be included in an ILLN, availability of funds for ILLN, factors hindering cooperation, etc.

The questionnaire was linked with the research questions and purposes of the study, as follows:

1. Answers to questions 1 to 25 of the questionnaire provided information for research question number 1.
2. Answers to questions 26 to 27 of the questionnaire provided information for research question number 2.
3. Answer to question 28 of the questionnaire provided information for research question number 3.
4. Answer to questions 29 to 32 of the questionnaire provided information for research question number 4. The information in this section also supported the third purpose of the study: investigate the feasibility of an ILLN among academic libraries of Saudi Arabia.
5. Information on research questions 5 and 6 was obtained from the questionnaire, interviews, and the examination of planning and

design documents of library networks. This part provided information for the fourth purpose of the study: develop a model ILLN for academic libraries in Saudi Arabia.

FIELD TESTING

A pilot study was conducted to test the content validity of the questionnaire. For this purpose, a panel of four experts (professional librarians) from the King Fahd University of Petroleum & Minerals Library and King Faisal University Library (two from each library) were chosen (see Appendix C for listing). The librarians were requested to critically review the questionnaire, give their opinions and suggestions, and if needed, delete, add, or revise the questions. After necessary changes, the questionnaire was ready for airmail distribution.

STUDY PROCEDURE

Since the researcher is based in the Kingdom of Saudi Arabia, the questionnaire, with the cover letters, was airmailed in April to all the seven university libraries of Saudi Arabia (see Appendix D for addresses). In the first week of May, the researcher visited the King Faisal University Library and held a long discussion with Mr. Sibgatullah about the problems faced by the libraries and the needs of ILLN in Saudi Arabia. In the last week of May/first week of June, the researcher visited three academic libraries situated in the cities of Makkah, Jeddah, and Riyadh. A detailed discussion, about the different aspects of this study, took place between the researcher and Dr. Akram of Umm Al-Qura University Library, Makkah; Mr. Abdul Bari of King Abdulaziz University Library, Jeddah; and Mr.

Arif Bokhari of King Saud University Library in Riyadh. All participants were in agreement about the urgent need of ILLN in Saudi Arabia to streamline the resource sharing. The researcher requested them to complete the questionnaire, and assured them the confidentiality of their responses, which will only be used for writing this dissertation.

In the first week of August, the researcher visited Medina and had a fruitful discussion with Mr. Mabrook Al-Jahni of Islamic University Library. The researcher requested Mr. Al-Jahni to complete the questionnaire as soon as possible. The researcher regrets that despite sincere efforts he could not visit Imam Mohammad Islamic University Library in Riyadh; however, the questionnaire was received completely filled-in. While visiting various academic libraries, the researcher collected various reports and other useful documents, pertaining to this study, and published by each university library.

STATISTICAL ANALYSIS

The Statistical Package for the Social Sciences (SPSS) program, an integrated system of computer programs designed for the analysis of social science data, was used to process the data by frequency, percentage, mean, standard deviation, variance, and rank. The SPSS program was chosen because, "it provides a unified and comprehensive package to perform many different types of data analysis in a simple and convenient manner and allows a great deal of flexibility in the format of data ... SPSS provides the user with a comprehensive set of procedures for data transformation and file manipulation, and it offers the researcher a large number of statistical routines

commonly used in the social sciences." (4)

The researcher decided to use SPSS for the purpose of data presentation and interpretation because the availability, within SPSS, of a wide variety of data-management facilities and statistical procedures simplifies the process of data analysis. It avoids many difficult and time-consuming tasks generally involved in using a variety of single-purpose computer programs. The researcher thus spend less time as a data-preparation clerk and more time as a social scientist analyzing results. The results were obtained with only minimal understanding of computer intricacies.

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CHAPTER V

DATA PRESENTATION

INTRODUCTION

This chapter presents data and interpretation of findings derived from the survey of the seven Saudi academic libraries in regard to the purposes of the study, which are as follows: to survey and analyse the condition of present systems of university libraries; to determine the perceptions of librarians in the seven universities in the Kingdom toward collaboration; and to design a model for planning and implementing an interlibrary loan network system among academic libraries of Saudi Arabia. The following research questions formed the basis for analysis:

1. What is the current status of academic libraries in Saudi Arabia with regard to:
   a. Administration and organization
   b. Numbers and background of library staff
   c. Size of collections
   d. Available technologies
   e. Cooperative activities available between libraries
2. What are the potential sources of financial support for an ILLN?
3. What should be the functions of an ILLN for the Saudi Arabian university libraries?
4. What are the major problems relating to the establishment of an ILLN among academic libraries, and how can these be solved?

5. What controls are needed to ensure that a network will operate effectively?
6. What steps and strategies should be taken to develop an ILLN?

DATA PRESENTATION AND INTERPRETATION

The questionnaire was sent to all the seven deans of the academic libraries of Saudi Arabia. The follow-up visits by the researcher helped to remove any misunderstanding the librarians may have had with the questionnaire, resulting in a one hundred percent response. Responses to the questionnaire, included as Appendix B, are presented and interpreted by each question. For the sake of confidentiality and to preserve the identity of respondents, instead of names of academic libraries alphabetical codes A, B, C, D, E, F, and G have been used. An alphabetical list of the seven academic libraries is included as Appendix D.

QUESTION 1. WRITTEN POLICY:

The seven academic libraries were asked whether the library had a written policy stating its goals and objectives. The tabulated answer is shown in Table 3. Out of seven academic libraries, 4 or 57% libraries (B, C, D, and E) have written policy stating their library's goals and objectives, whereas 3 or 43% libraries (A, F, and G) do not have a written policy. It is really surprising that 43% libraries in the Kingdom do not have their library's written policy.

Objectives are defined as specific targets within the goals. Objectives should be concrete and measurable where possible. The establishment of goals, objectives, and priorities is the heart of the planning process. (1) A written policy of a library's goals and

objectives is a tool which very much enhances the performance of the library services and activities, in addition to helping in guiding the library in planning and development.

Table 3

Library	Yes	No
A		X
B	X	
C	X	
D	X	
E	X	
F		X
G		X
TOTAL -	4	3

QUESTION 2. GOALS & OBJECTIVES:

Table 4 shows goals and objectives of various libraries. Out of seven libraries, the majority of library's (5 or 71%) goals and

Table 4

Library	Research	Curriculum Support	Recreation	General Information	Other
A	-	-	-	-	-
B	X	X	-	X	-
C	X	X	-	-	-
D	X	X	X	X	-
E	X	X	-	X	-
F	X	X	-	-	-
G	-	-	-	-	-
TOTAL	5	5	1	3	-

objectives are of research and curriculum support. Only one library supports recreation also, whereas three libraries also support general information. This indicates that academic libraries in Saudi Arabia have been established to support and fulfill the needs of faculty, students, and researchers of that university in respect of research and curriculum support.

QUESTION 3. ORGANIZATIONAL STRUCTURES:

The academic libraries were requested to state the organizational structure of their library to find out their administrative systems. The result, shown in Table 5, indicates that five libraries (71%) have a centralized structure, and whereas only two libraries (29%) have a coordinated decentralized structure.

Table 5

Library	Centralized	Decentralized	Coordinated Decentralized	Other
A	X	-	-	-
B	X	-	-	-
C	-	-	X	-
D	X	-	-	-
E	X	-	-	-
F	-	-	X	-
G	X	-	-	-
TOTAL -	5	-	2	-

The centralized system has its own benefits over the decentralized and coordinated decentralized systems. In centralized system, the central library is responsible for almost all the activities of the system, controlling the acquisition and processing, and the distribution of the staff. A central catalog is maintained which

indicates the holdings of departmental libraries as well. In coordinated decentralized system, libraries work absolutely independently but coordinate with each library of the system.

QUESTION 4. ORGANIZATIONAL UNITS:

The responses received from the academic libraries in respect of organizational units is presented in Table 6. All seven academic libraries have all five administrative units, except library B which does not have an acquisition unit. Four libraries indicated that they have other units also beside five general administrative units. Library A has microfilm, manuscripts, registration, gifts and exchange, and audio-visual departments. Library D has Arabic, gifts and exchange, and systems analysts departments. Library F has scholarly publishing, manuscripts, audio-visual media, government publications and documents, distribution and exhibitions, technical photocopying, and library automation departments. Library G has manuscripts & non-book material, and special collections departments.

Table 6

Lib.	Acquisition	Cataloging	Serials	Circulation	Reference	Other
A	X	X	X	X	X	X
B	-	X	X	X	X	-
C	X	X	X	X	X	-
D	X	X	X	X	X	X
E	X	X	X	X	X	-
F	X	X	X	X	X	X
G	X	X	X	X	X	X
TOTAL -	6	7	7	7	7	4

Although all seven university libraries are equal in status under the supervision and control of the Ministry of Higher Education, the

administrative structure of these libraries suggest lack of similarity. Among all seven libraries, Library F has the maximum number of departments. The names of organizational units also differ from one library to another. For example, some libraries call the acquisitions departments, the collection development department. At the same time, the function of these departments also vary from one library to another. This may be due to the fact that all academic libraries in Saudi Arabia are independent, therefore, their planning and organizational structure differs from one another. It is also possible that since the scope and emphasis of each university is different, the administrative structures also differ from one another.

QUESTIONS 5 & 6: LIBRARY PERSONNEL AND QUALIFICATIONS:

The academic libraries were asked to indicate the number of library personnel (professional and non-professional) and their qualifications. The response is presented in Table 7. A total of 576 staff are working in the seven academic libraries of Saudi Arabia, out of which 249 (43%) are professional and the rest 327 (57%) are non-professional staff. The table also provides break-down of staff by degree. The largest number of professional staff (91) are available at Library F, followed by Library A, which has 54 professionals. The largest number of non-professional staff (118) are also available at Library F, followed by Library B, which has 57 non-professionals. The largest number of professional staff (139) have bachelor degrees in library and information science, followed by master degrees, which 58 staff members have, 44 staff members have a diploma. Academic libraries also employ student assistants as part-time non-professionals.

Table 7

				Ph.D.		Master		Bachelor		Diploma		
Library	Pro	Non	Total	Pro	Non	Pro	Non	Pro	Non	Pro	Non	Other
A	54	28	82	2	1	-	-	37	9	15	-	18
B	5	57	62	-	2	-	-	5	9	-	-	46
C	39	47	86	1	2	16	-	13	6	9	-	39
D	29	20	49	2	-	16	2	6	7	5	-	11
E	10	29	39	-	-	1	-	8	6	1	4	19
F	91	118	209	3	3	21	1	56	31	11	-	83
G	21	28	49	-	2	4	-	14	4	3	-	22
TOTAL-	249	327	576	8	10	58	3	139	72	44	4	238

Pro = Professional Non = Non-Professional

No academic library can be run effectively without qualified, well-trained, and efficient library staff. Isa formulated proposed standards for university libraries in Saudi Arabia to give Saudi academic libraries seeking to know the factors normally associated with quality library service. These standards are minimum and have been proposed to improve academic libraries, not to standardize them. The three standards formulated for staff are: the professional librarian shall be a college graduate with a bachelor's degree in library science, there shall be a ratio of one professional to two non-professionals, and the professional librarian shall have the status and salary of a member of the teaching staff. (2) From Table 7, it is clear that except Library B, all six libraries do not meet first standard. Except Libraries B and E, all five libraries do not meet second standard. As for third standard, no library provides teaching status and salary to its professional staff.

Most of the staff are foreigners, mostly from Pakistan, India, Egypt, and Sudan. However, the Saudi Arabian Government is trying to replace all non-Saudi staff with Saudis, but the task is unlikely to be accomplished in the near future, because of the non-availability of Saudi professional librarians. Although A, C, F, and G universities are producing quite a large number of library and information science professionals with bachelor and master degrees, it seems that Saudis do not like the profession of librarianship and opt for other professions. Another problem is that the teaching at the four departments of library science is in Arabic, which makes it quite a problem for the students to grasp modern concepts of librarianship. The present trend, of shortage of professionals, will continue until such time that sufficient Saudi professional librarians are available and are ready to work in the libraries.

QUESTIONS 7 & 8. LIBRARY BUDGETS:

Table 8

	1993					
Library	Books	Serials	Micro.	Total	1992	1991
A	-	-	-	-	-	-
B	400,000	-	-	400,000	400,000	-
C	484,264	3,562,170*	-	4,046,434	4,224,755	4,199,640
D	700,000	4,163,000*	-	4,863,000	4,416,814	4,595,593
E	250,000	450,000	-	700,000	700,000	750,000
F	7,000,000	5,000,000	-	12,000,000	-	-
G	50,000	350,000	-	400,000	400,000	200,000
TOTAL-	8,884,264	13,525,170	-	22,409,434	10,141,569	11,745,233

* - Includes Microform also. 1 U.S. $ = SR.3.75.

Table 8 provides the library budget in Saudi Riyals (SR.) for the fiscal years of 1991, 1992, and 1993. The questionnaire requested the seven libraries to supply the total budget of 1991, 1992, and 1993 with break-down by books, serials, monographs, etc. Library A did not supply any budget data. Library F did not supply 1991 and 1992 budgets, while Library B did not supply the 1991 budget. Only four libraries (C, D, E, and G) supplied the complete requested budget.

The total budget of 1991 of four libraries (C, D, E, and G) was SR.11,745,233, while the total 1992 budget of 5 libraries (B, C, D, E, and G) was SR.10,141,569. The total budget of 1993 doubled which is SR.22,409,434 against the total budget of 1992. Library F has the highest budget in 1993, followed, in order, by Library D and C. It seems that the financial grants to these three libraries are high in comparison to other four libraries (A, B, E, and G). It may be concluded that the budgets of Saudi academic libraries differ from one another, probably due to a number of complex factors.

In 1993, a total of SR.13,525,170 or 60% was spent on serials subscription, out of total of SR.22,409,434. Only 40% or SR.8,884,264 was spent on books. The academic libraries spend more money on serial subscriptions than on the purchase of books. This may be due to the fact that serials play an important role in research and teaching as the latest research information is published in serials.

The proposed standard for library budgets formulated by Isa for university libraries in Saudi Arabia, states that the library shall have an approved budget with control over its funds. (3) Generally, the academic libraries are allocated yearly budgets, but libraries do not have freedom in the payment of invoices as invoices are processed and paid by the central purchasing department of the university. Table

9 provides the 1993 acquisitions budgets in rank order.

Table 9

Library	Books	Serials	Microform	Total	Rank
F	7,000,000	5,000,000	**	12,000,000	1
D	700,000	4,163,000*	-	4,863,000	2
C	484,264	3,562,170*	-	4,046,434	3
E	250,000	450,000	**	700,000	4
G	50,000	350,000	**	400,000	5
B	400,000	-	**	400,000	5
A	-	-	-	-	6
TOTAL-	8,884,264	13,525,170	-	22,409,434	

* - Includes Microform also. ** - Not provided.

QUESTION 9. VENDORS:

Table 10 shows that all seven academic libraries use the services of book vendors to purchase books. Book vendors are appointed by the academic libraries in the USA and in different European countries to supply the books published in those countries. Although book vendors

Table 10

Library	Book Dealers (%)	Publishers (%)	Other
A	X	X	
B	X (80)	X (20)	
C	X		
D	X (90)	X (10)	
E	X		
F	X		
G	X	X	
TOTAL -	7	4	

charge for their services, utilizing book vendors is the best and most efficient method of purchasing books for this part of the world. Due to geographical distance of the Middle East from the rest of the world, a book vendor saves the library the time and expense of ordering every title directly from its publishers. Thus the library sends out fewer orders, has fewer invoices to check and pay, fewer claims to make, and less problem correspondence. A book vendor also fills the library's orders promptly, report titles which cannot be supplied, follow up on back orders, meet the library's invoicing requirements, etc.

In addition, four libraries (A, B, D, and G) also purchase books directly from the publishers. Only libraries B and D mentioned the percentage of use of book dealers and publishers which is 80% and 20% and 90% and 10%, respectively. Academic libraries also receive quite a good number of publications through gifts and exchange.

QUESTION 10. LIBRARY COLLECTIONS:

A total of 2,554,379 volumes of books are available in the seven libraries of Saudi Arabia, out of which 913,312 volumes of books are in Arabic and 1,641,067 volumes of books are in English. The maximum number of books (1,021,543) is available in Library F, followed by 499,484 books in Library C, and 400,000 books in Library G. The total number of books in these three libraries (F, C, and G) are 1,921,027 volumes. The total number of books in the remaining four libraries (A, B, D, and E) are 633,352. Non-Arabic books includes English, French, German, Spanish, Hindi, Urdu, etc.

According to the collection standard formulated by Isa for university libraries in Saudi Arabia, each university library shall

Table 11

	Books			Serials			
Library	Arabic	Non-Arabic	Total	Bound	Titles	Microforms	Other
A	114,960	14,087	129,047	-	1,150	12,005	260*
B	116,358	8,122	124,480	-	-	-	-
C	300,000	199,484	499,484	75,485	-	93,563	-
D	21,384	208,283	229,667	54,553	1,600	510,391	-
E	60,610	89,548	150,158	-	466	3,167	-
F	-	1,021,543	1,021,543	303,160	-	38,698	19,629*
G	300,000	100,000	400,000	46,972	545	13,340	4,602*
TOTAL-	913,312	1,641,067	2,554,379	480,170	3,761	671,164	24,491

* - Manuscript collection.

have a basic collection of 130,000 volumes. (4) From the table, it is clear that out of seven academic libraries, six academic libraries (A, C, D, E, F, and G) meet the minimum standard criterion. Only Library B does not meet the minimum standard.

Ashoor examined the collection of each university library in Saudi Arabia against the Association of College & Research Libraries (ACRL) Standards of 1986 on collection evaluation. The study showed that the collections of six university libraries (King Saud University being an exception) are much below the standards set out by the ACRL. The reasons are: lack of collection building plans, managerial problems, insufficient financial support, faculty participation in collection development, and absence of interlibrary loan and online searching facilities. (5)

The difference between the two above discussed standards is that Isa formulated proposed standards for university libraries in Saudi Arabia to improve the services of academic libraries nationally, not

to standardize them. On the other hand, ACRL is a comprehensive international standard established by a reputable professional organization and widely used by libraries in evaluating their collections.

The total number of bound serials in the four libraries (C, D, F, and G) are 480,170 volumes. The remaining three libraries (A, B, and E) did not supply data on their bound serials. A total of 3,761 serial titles are subscribed in the four libraries (A, D, E, and G) of Saudi Arabia. Three libraries (B, C, and F) have not mentioned their current serial titles. Library D subscribes to the maximum number of serial titles (1,600), followed by 1,150 serial titles subscribed by Library A, and 466 titles by Library E.

A total of 671,164 items of microforms are reported as available in the six academic libraries of Saudi Arabia. Library B did not provided this information. Most of the microforms (510,391) are available in Library D. There are 160,773 items of microforms in the remaining five libraries (A, C, E, F, and G). Microforms include microfilm, microfiche, films, slides, video cassettes, etc. In three libraries (A, F, and G), a total of 24,491 manuscripts are also available.

Table 12 provides ranked figures of total books with the percentage of Arabic books, percentage of non-Arabic books, and percentage of total books. It shows that two libraries (B and A) have 93% and 89% books in Arabic, respectively, while Libraries G and C have 75% and 60% of Arabic books, respectively in their collection. Non-Arabic collection in Libraries F, D, and E are 100%, 91%, and 60%, respectively. It may be seen that the total percentage of Arabic and non-Arabic books in the seven academic libraries is 36% and 64%,

respectively. However, the percentages are somewhat inaccurate since Library F has not provided the statistics on Arabic books.

Table 12

	Books						
Library	Arabic	%	Non-Arabic	%	Total	%	Rank
F	-	-	1,021,543	100	1,021,543	40	1
C	300,000	60	199,484	40	499,484	19	2
G	300,000	75	100,000	25	400,000	16	3
D	21,384	09	208,283	91	229,667	9	4
E	60,610	40	89,548	60	150,158	6	5
B	116,358	93	8,122	07	124,480	5	6
A	114,960	89	14,087	11	129,047	5	6
TOTAL-	913,312	36	1,641,067	64	2,554,379	100	

Library F has the largest number of books (1,021,543 or 40%) of the total books in the seven academic libraries. Libraries C and G's share is 19% (499,484 books) and 16% (400,000 books) of the total number. The total books in these three libraries is 75% or 1,921,027. The total number of books in four remaining libraries (A, B, C, and E) is 25% or 633,352 books.

QUESTION 11. CURRENT COLLECTION MEETING THE NEEDS:

The academic libraries were asked whether they believed that the current collection of their library meets the need of textbooks, research, and recreation. They were asked to rate their answers on a four-point scale. All libraries, except Library B, have provided the requested information. No library indicated that 'All of the Needs' in respect of textbooks, research, and recreation is being provided by their libraries. As costs of providing library services have

increased and as more and more materials have become available, it has become impossible for libraries to maintain any semblance of self-

Table 13

Library	Textbooks	Research	Recreation	Other
A	2	2	2	-
B	-	-	-	-
C	3	2	1	-
D	2	3	2	-
E	3	3	2	-
F	3	2	2	-
G	2	2	2	-

4 = All of the Need 3 = Most of the Need

2 = Some of the Need 1 = None of the Need

sufficiency. (6) Keeping in view shrinking budgets, the increases in publications, and users' demand, etc. have made it increasingly difficult for a library to fulfill its users needs.

Only three libraries (C, E, and F) indicated that they are fulfilling 'Most of the Needs' in respect of textbooks, while the other three libraries (A, D, and G) are fulfilling 'Some of the Needs.' However, we may treat that 'All of the Needs' in respect of textbooks, are being provided by the seven academic libraries as textbooks are distributed by all academic libraries free to its students.

Two libraries (D and E) indicated that they are fulfilling 'Most of the Needs' in respect of research while four libraries (A, C, F, and G) indicated that they are fulfilling only 'Some of the Needs.' In respect of recreation, five libraries (A, D, E, F, and G) indicated that they are fulfilling 'Some of the Needs.'

Table 14 is a presentation of the same above data but by a respective mean, a standard deviation (SD), a variance (Vr), and a rank order. The standard deviation of each activity helps in clarifying the distribution of network activities as perceived by academic libraries. Ranking is done by the respective mean of each activity. The higher rank shows the higher mean.

Table 14

	Mean	SD	Vr	Rank
Textbooks	2.5	.54	.3	1
Research	2.33	.76	.58	2
Recreation	1.83	.21	.04	3
Other	-	-	-	-

From the above table, it is clear that textbooks ranked the highest mean (2.5), followed by research (2.33), and recreation (1.83)

QUESTION 12. CLASSIFICATION SCHEMES:

Library of Congress, Dewey Decimal, Universal Decimal, and

Table 15

Library	Library of Congress	Dewey Decimal	Universal Decimal	National Lib. of Medicine	Other
A		X			
B		X			
C		X			
D	X				
E	X				
F		X			
G		X			
	2	5			

National Library of Medicine (NLM) classification schemes are widely used worldwide. The libraries surveyed were requested to select one of the four classification schemes being used by their library. Table 15 shows that out of seven academic libraries, five libraries or 71% are using Dewey Decimal classification scheme. Only two libraries or 29% are using the Library of Congress system. No library is using the Universal Decimal or NLM classification schemes.

QUESTION 13. EQUIPMENT:

The academic libraries were requested to mention what equipment is presently being used by their library or are planned for use, for the next 5 years. The result has been presented in Table 16. Five libraries (A, B, C, F, and G) are using minicomputers, while Library E has planned it for the next 5 years. Libraries C, D, F, and G are using microcomputers, while Libraries A and E have planned it for the next 5 years. All seven libraries are using telefacsimile, microfiche reader/printer, microfilm reader/printer, and photocopy machines.

Table 16

Library	Mini-Computer	Micro-Computer	Telefac-simile	Fiche R/P	Film R/P	Photocopy Machines	Other
A	1	2	1	1	1	1	-
B	1	-	1	1	1	1	-
C	1	1	1	1	1	1	-
D	-	1	1	1	1	1	X
E	2	2	1	1	1	1	-
F	1	1	1	1	1	1	-
G	1	1	1	1	1	1	X

1 = Now Available 2 = Next 5 Years.

Library D is also using Audio/Video Equipments, while Library G has a Closed TV Scanning System.

The availability of equipment shows that the seven academic libraries have been using modern technology for their day-to-day services and operations. Electronic equipment helps in providing better, faster, and improved services to library users. The availability of this equipment in the seven academic libraries will also help in the smooth functioning of the interlibrary loan network.

QUESTION 14. LIBRARY OPERATIONS COMPUTERIZATION:

Through this question, libraries indicated that only Library D has computerized all its library operations and services. Library C has also computerized cataloging, circulation, and reference operations, while acquisition and serials are under plan to computerize in the future. Library F has computerized only cataloging and circulation operations and the remaining functions will be computerized in the future. Library B has also computerized cataloging and reference

Table 17

Library	Acquisition	Cataloging	Circulation	Serials	Reference	Other
A	No	Yes	No	No	No	-
B	No	Yes	No	No	Yes	X
C	No	Yes	Yes	No	Yes	-
D	Yes	Yes	Yes	Yes	Yes	X
E	No	No	No	No	No	-
F	No	Yes	Yes	No	No	-
G	No	No	No	No	No	-

Yes = Computerized. No = Plan to Computerize in Future

Never = Do Not Plan to Computerize

operations, and the three remaining functions will be computerized in the future. Library A has computerized only cataloging and all other functions are under plan to computerize in the future. Two libraries (E and G) plan to automate their library's functions in the future.

In summary, cataloging is the only library operation which has been automated by five libraries (A, B, C, D, and F), followed by circulation and reference which have been automated by three libraries, each. Acquisition and serials operations have been automated by only one Library D. Library D indicated that it has also automated its Arabic collection. In addition to five standard services, Library B has also automated its Manuscripts operations. Library G plans to automate office management in the future.

Libraries, worldwide, planned and automated their libraries in the 1980s to derive the maximum benefits from the use of computers. Library automation provides easy, faster, and better services to library users, besides curtailing the number of staff. Saudi Arabian academic libraries have not lagged behind in this respect, and have either already automated their library's operations, or plan to automate in the future. Automation will definitely help ILLN as holdings may be verified through the computers.

QUESTIONS 15 & 16. COOPERATION WITH ACADEMIC LIBRARIES:

The seven libraries were requested to indicate whether they have cooperation with other academic libraries. If yes, with which of the libraries? The survey indicated that all seven academic libraries have cooperation with other academic libraries. It may, therefore, be concluded that there is extensive cooperation among all seven Saudi Arabian academic libraries. This cooperation is very significant in

view of the fact that enrollment in Saudi universities are increasing

Table 18

			Academic Libraries						
Library	Yes	No	A	B	C	D	E	F	G
A	X	-	-	X	-	X	-	X	X
B	X	-	X	-	X	-	X	X	X
C	X	-	X	X	-	X	X	X	X
D	X	-	X	X	X	-	X	X	X
E	X	-	X	-	X	X	-	X	-
F	X	-	X	X	X	X	X	-	X
G	X	-	X	X	X	X	X	X	X
	7	-							

every year; the cooperation will help in fulfilling the increasing needs of library users, thereby curtailing effort and expense.

Libraries C, D, F, and G have cooperation with all six academic libraries. Libraries B, A, and E do not have cooperation with Library D; Libraries C and E; and Libraries B and G, respectively.

QUESTION 17. TYPES OF COOPERATION:

The libraries were requested to furnish information regarding areas in which they have cooperation with other academic libraries, and whether this cooperation is formal or informal. The result is shown in Table 19. Two of the most important areas in which libraries should have agreements are interlibrary loan and resource sharing. However, only five libraries have agreements (3 formal and 2 informal) for interlibrary loan; and only one library has a formal agreement for resource sharing. Library C cooperates with other libraries the most, having six formal and one informal agreement. Library F has formal

agreements for gift and exchange, training, information and an agreement for acquisitions lists. Library B has two formal agreements

Table 19

Lib.	ILL	Acq.	Cat.	Acq. List	Gifts/ Exch.	Training	Resource Sharing	Automation Planning	Other
A	-	-	-	2	2	-	-	2	-
B	-	-	-	1	1	-	-	-	-
C	1	1	-	1	1	1	1	2	-
D	1	-	-	-	-	-	-	-	-
E	2	-	-	-	2	-	-	-	-
F	1	-	-	2	1	1	-	-	-
G	2	-	-	2	2	2	-	-	-

1 = Formal Agreement 2 = Informal Agreement

for acquisitions lists and gift and exchange. Other libraries have either informal agreements or no agreement, at all.

The mounting cost of library services to the university research community makes necessary a formal set of networks to extend the circulation services of research resources. Major elements of network are a national union catalog, ILLs and photocopy services, a program for preserving books and other materials, and a fast transmission device for sending shorter materials by telephone lines. (7)

QUESTION 18. COOPERATION WITH KING ABDULAZIZ CITY FOR SCIENCE AND TECHNOLOGY (KACST):

In this question, libraries were asked whether they have cooperative activities with KACST, and if yes, in which areas? The result is shown in Table 20. Six libraries (86%) indicated that they cooperate with KACST. Only Library B (14%) does not have any

type of cooperation with KACST. Library C has formal agreements of

Table 20

Library	Yes	No	ILL	Literature Search	Training	Automation Planning	Other
A	X	-	-	2	-	2	-
B	-	X	-	-	-	-	-
C	X	-	1	1	1	1	-
D	X	-	2	1	-	-	-
E	X	-	2	2	-	2	-
F	X	-	1	2	-	2	-
G	X	-	2	2	-	-	-
	6	1					

1 = Formal Agreement 2 = Informal Agreement

cooperation with KACST in areas of interlibrary loan, literature search, training, and automation planning. Library D has a formal agreement for literature searching, and Library F has a formal agreement for interlibrary loan.

Most of the libraries have informal agreements of cooperation with KACST, although there should be formal agreements between all seven academic libraries and KACST in all areas, as it is the prime science and technology development institution in Saudi Arabia, responsible for database production, literature search, document delivery, interlibrary loan, planning for automation, etc.

QUESTION 19. COOPERATION WITH OTHER TYPES OF LIBRARIES:

Information regarding cooperation of academic libraries with other types of libraries were sought in this question; the result is presented in Table 21. The survey showed that academic libraries have

cooperation with other types of libraries as well, but not very frequently. Libraries B, C, D, and F have cooperation frequently with

Table 21

Library	Special Libraries	Public Libraries	School Libraries	Other
A	O	O	O	-
B	F	F	F	-
C	F	O	O	-
D	F	O	-	-
E	N	N	O	N
F	F	O	N	-
G	O	O	N	-

V = Very Frequently F = Frequently

O = Occasionally N = Never

special libraries. Library B has cooperation frequently with public as well as school libraries.

The academic libraries have frequent cooperation with special libraries largely through the provision of photocopies of articles and other materials. On the other hand, the academic libraries have occasionally, or do not have contacts at all, with public and school libraries.

QUESTIONS 20 & 21. INTERLIBRARY LOAN (ILL) DEPARTMENT AND UNION CATALOG/LIST OF SERIALS:

This question asked the opinions of the academic libraries regarding interlibrary loan departments, union catalogs, and union lists of periodicals in their libraries. The result is shown in Table 22. For the most successfull ILL cooperation, it is necessary that

Table 22

	ILL Dept.		Union Catalog			Union List of Serials		
Library	Yes	No	Yes	No	Format	Yes	No	Format
A		X	-	-	-	X	-	Print
B		X	-	-	-	-	-	-
C	X		-	-	-	X	-	Comp.Printout
D	X		X	-	Online	X	-	Comp.Printout
E	X		-	-	-	X	-	Print
F		X	X	-	Online	-	-	-
G		X	X	-	Comp.Printout	X	-	Comp.Printout
	3	4	3			5		

libraries have separate ILL departments, if not, ILL should be an activity in the reference department. At the same time, union catalogs and union list of serials should also be compiled which helps in the verification of library holdings. The survey indicated that four academic libraries do not have an ILL departments in their libraries. Only three libraries have an ILL department.

Three libraries (D, F, and G) have union catalogs in online format. However, five academic libraries (A, C, D, E, and G) have union list of periodicals; three in computer printout format, and two in print format. Those libraries which do not have union catalog and/or union list of serials, should be encouraged to prepare one to help in interlibrary loan cooperation.

QUESTIONS 22 & 23. COMMUNICATION SYSTEMS FOR ILLS/MATERIAL DELIVERY:

Questions 22 and 23 requested the opinions of academic librarians in respect of communication systems available for handling interlibrary loans and delivery of materials. For interlibrary loan handling, all

Table 23

	Handling of ILLs				Delivery of Materials			
Library	Airmail	Fax	Phone	Other	Airmail	Fax	Messenger	Other
A	X	-	-	-	X	X	X	-
B	X	-	-	-	X	-	-	-
C	X	X	X	-	X	X	X	-
D	X	X	X	e-Mail	X	X	-	-
E	X	-	-	-	X	-	-	-
F	X	-	-	-	X	-	-	-
G	X	X	X	-	X	X	X	-
	7	3	3	1	7	4	3	-

seven academic libraries use airmail, the most common communication system. In addition, three libraries also use fax and telephone. Only one Library (D) indicated that they also use e-Mail service for ILL.

For delivery of materials, all seven academic libraries also use airmail service. In addition, four libraries use fax, while three libraries use messenger service, as well.

QUESTION 24. BORROWING OF MATERIALS:

Librarians were requested to respond how frequently their libraries borrow different materials from other academic libraries. The result has been tabulated in Table 24. Libraries B and F indicated that they do not borrow any type of material from any academic library. Library C indicated that they frequently borrow circulation books and periodicals from other academic libraries. Library A indicated that they frequently borrow microforms from other libraries.

The libraries which borrow occasionally or do not borrow from other libraries, indicate that their cooperating and coordinating ties

Table 24

Lib.	Ref. Books	Circ. Books	Rare Books	Period-icals	Theses	Micro-forms	Maps	Other
A	1	1	1	1	2	3	1	-
B	1	1	1	1	1	1	1	-
C	2	3	2	3	2	2	2	-
D	1	2	1	2	2	1	1	-
E	1	1	1	2	1	1	1	-
F	1	1	1	1	1	1	1	-
G	-	2	-	-	2	2	-	-

4 = Very Frequently 3 = Frequently

2 = Occasionally 1 = Does Not Borrow

between all seven academic libraries are not sufficient in the absence of an ILL policy.

Table 25 is a presentation of the same data discussed above but by a respective mean, a standard deviation (SD), a variance (Vr), and a rank order. The standard deviation of each activity helps in clarifying the distribution of network activities as perceived by

Table 25

	Mean	SD	Vr	Rank
Reference Books	1.16	.98	.97	3
Circulation Books	1.57	.54	.29	2
Rare Books	1.16	.98	.97	3
Periodicals	1.66	.43	.19	1
Theses	1.57	.54	.29	2
Microforms	1.57	.54	.29	2
Maps	1.16	.98	.97	3
Other	-	-	-	-

academic librarians. Ranking is done by the respective mean of each activity. The higher rank shows the higher mean.

From the above table, it is clear that periodicals ranked one, with mean 1.66. Circulation books, theses, and microforms ranked second with mean 1.57, and reference books, rare books, and maps ranked third with mean 1.16.

QUESTION 25. LENDING OF MATERIALS:

Table 26 presents the reply of respondents of what type of materials their libraries lend to other academic libraries on a four-point scale. The libraries indicated that mostly they do not lend materials, or if lend, only occasionally. Libraries C, D, and G indicated that they lend, very frequently, articles from periodicals. Library E also lends circulating books very frequently to other academic libraries. Library C indicated that they frequently lend circulating books and theses; while Library E indicated that they also

Table 26

Library	Ref. Books	Circ. Books	Rare Books	Period-icals	Theses	Micro-forms	Maps	Other
A	1	1	1	1	1	2	1	-
B	1	1	1	1	1	1	1	-
C	2	3	2	4	3	2	2	-
D	1	2	1	4	2	1	1	-
E	2	4	1	2	3	2	2	-
F	1	2	1	1	1	1	1	-
G	-	2	-	4	2	2	-	-

4 = Very Frequently 3 = Frequently

2 = Occasionally 1 = Does Not Borrow

lend theses frequently.

Table 27 is a presentation of the same above data but by a respective mean, a standard deviation (SD), a variance (Vr), and a rank order. The standard deviation of each activity helps to clarify the distribution of network activities as perceived by academic librarians. Ranking is done by the respective mean of each activity. The higher rank shows the higher mean.

Table 27

	Mean	SD	Vr	Rank
Reference Books	1.33	.76	.58	5
Circulation Books	2.14	.97	.94	2
Rare Books	1.16	.98	.97	6
Periodicals	2.42	.64	.42	1
Theses	1.85	.21	.04	3
Microforms	1.57	.54	.29	4
Maps	1.33	.76	.58	5
Other	-	-	-	-

The above ranked table shows that periodicals ranked highest among lending materials and received a mean of 2.42, followed by circulation books (2.14), theses (1.85), and microforms (1.57). The two lending materials which ranked the same are reference books and maps (1.33). Rare books ranked last with mean 1.16.

QUESTIONS 26 & 27. PARTICIPATION IN AN ILLN & FUNDS:

The academic libraries were asked to indicate whether they favor participation of their libraries in an ILLN. Five libraries (71%) indicated that they strongly favor their library's participation in an ILLN; while only two libraries (29%) indicated that their libraries

only favor participation in an ILLN. No library indicated that they oppose their library's participation in an ILLN.

Table 28

	Participation in Interlibrary Loan Network					Funds		
Library	Strongly Favor	Favor	Strongly Oppose	Oppose	No Opinion	Yes	No	Do Not Know
A	X						X	
B		X						X
C	X							X
D	X							X
E	X							X
F		X						X
G	X							X
	5	2					1	6

The academic libraries were also asked to indicate whether their libraries would be prepared to recommend their universities to provide necessary funds for participation in an ILLN. Six libraries (86%) indicated that they do not know whether their universities will provide funds, while only one library (14%) indicated that their university will not provide necessary funds.

QUESTION 28. AREAS OF COOPERATIVE ACTIVITIES:

For the answer of this question, The academic libraries were asked to rate the five areas of cooperative activities, i.e. reciprocal borrowing, photocopy service, rare materials, periodicals, and facsimile service, on the four-point scale. The result is presented in Table 29. All five activities were rated as highly desirable or desirable. Library A rated rare materials and periodicals as

undesirable, while Library B and F also rated rare materials as undesirable.

Table 29

Library	Reciprocal Borrowing	Photocopy Service	Rare Materials	Period-icals	Facsimile Service
A	3	4	2	2	3
B	4	3	2	3	4
C	3	4	3	4	3
D	4	4	3	3	3
E	3	4	3	4	3
F	4	4	2	4	4
G	4	4	4	4	4

4 = Highly Desirable 3 = Desirable

2 = Undesirable 1 = Highly Undesirable

Table 30 is a presentation of the same above data but by a respective mean, a standard deviation (SD), a variance (Vr), and a rank order. The standard deviation of each activity helps to clarify the distribution of network activities as perceived by academic librarians. Ranking is done by the respective mean of each activity. The higher rank shows the higher mean. From the table, it is clear that the photocopy service ranked the highest mean (3.86), followed by

Table 30

	Mean	SD	Vr	Rank
Reciprocal Borrowing	3.57	.54	.29	2
Photocopy Service	3.86	.21	.04	1
Rare Materials	2.71	.32	.10	4
Periodicals	3.42	.64	.42	3
Facsimile Service	3.42	.64	.42	3

reciprocal borrowing (3.57). Both, periodicals (3.42) and facsimile service (3.42) ranked third and rare materials (2.71) ranked fourth.

QUESTION 29. FACTORS WHICH HINDER COOPERATION:

The seven academic libraries were requested to comment on the seven most common factors which hinder cooperation among academic libraries in Saudi Arabia. The following Table 31 presents the replies of librarians for the 'Yes' and 'No' categories by frequency (F) and percentage (%).

Table 31

	Yes		No	
	F	%	F	%
Inadequate Resources	6	86	1	14
Inadequate Finances	6	86	1	14
Absence of Communication	5	71	2	29
Absence of Legislation	5	71	2	29
Absence of Planning	4	57	3	43
Shortage of Professionals	5	71	2	29
Lack of Cooperation	5	71	2	29

Table 32 provides ranked data according to the mean. The table shows that inadequate resources and inadequate finances ranked one among the factors which hinder cooperation with a mean of 1.86. On the second place are four factors: absence of communication, absence of legislation, shortage of professionals, and lack of cooperation with a mean of 1.71, each. Absence of planning is ranked third with a mean of 1.57.

Table 32

	Mean	SD	Vr	Rank
Inadequate Resources	1.86	.21	.04	1
Inadequate Finances	1.86	.21	.04	1
Absence of communication	1.71	.32	.10	2
Absence of Legislation	1.71	.32	.10	2
Absence of Planning	1.57	.54	.29	3
Shortage of Professionals	1.71	.32	.10	2
Lack of Cooperation	1.71	.32	.10	2

QUESTION 30. OVERCOMING OF SPECIFIC PROBLEMS:

Through this question, the academic libraries were requested to comment on how to overcome those specific problems listed in the above question 29. No comments were written by three academic libraries (A, B, and E). However, four remaining libraries commented as follows.

Library C: Through legislative provisions and exclusive funding.

Library D: Establish well-staffed ILL units/departments which will establish and consolidate links with ILL patrons (university libraries).

Library F: First of all, there should be legislation and an ILL policy. Once this is done, then finances and resources will automatically be available.

Library G: There is a dire need of a sense of realization and motivation to cooperate through obligatory rules of cooperation.

All these comments are meaningful in the context of problems which hinder cooperation among seven academic libraries in Saudi Arabia. All these comments relate to the absence of legislation, inadequate

finances, lack of cooperation, and unavailability of ILL policy in academic libraries.

These factors were ranked the highest among problems in question 29. Inadequate finances ranked first, whereas absence of legislation and lack of cooperation ranked second. As far as the ILL policy is concerned, except Library D, no library has so far formulated an ILL policy. This was also confirmed when the researcher met and discussed about the ILLN with the librarians during his visit to these libraries. All ILLN participants will be encouraged and helped in formulating an ILL policy.

It is expected that with the establishment of an ILLN among academic libraries of Saudi Arabia, all the factors hindering ILL cooperation will automatically be solved because ILLN by-laws will include provisions for all these factors. Additionally, librarians will be involved in planning, development, and implementation of an effective ILLN.

QUESTION 31. CURRENT COOPERATIVE ACTIVITIES:

The academic librarians were requested to respond to the current cooperative activities among academic libraries in the Kingdom on the

Table 33

	Frequency	%
Highly Adequate	-	-
Adequate	2	28.57
Highly Inadequate	1	14.29
Inadequate	4	57.14
Do Not Exist	-	-
	7	100

five-point scale: 5 = highly adequate, 4 = adequate, 3 = highly inadequate, 2 = inadequate, and 1 = do not exist.

The above Table 33 shows, of seven libraries, four academic libraries (57.14%) rate the current cooperative activities as inadequate. Only two libraries (28.57%) rate as adequate, while only one library (14.29) rated as highly inadequate.

QUESTION 32. DESIRABILITY OF AN ILLN SYSTEM:

The results of the responses regarding the desirability of an ILLN system shows that six academic libraries (85.71%) rated as 'highly desirable.' Only one library (14.29%) rated as desirable. No library responded to the 'highly undesirable,' 'undesirable,' and 'do not know' options. The result is presented in Table 34.

Table 34

	Frequency	%
Highly Desirable	6	85.71
Desirable	1	14.29
Highly Undesirable	-	-
Undesirable	-	-
Do Not Know	-	-
	7	100

The academic librarians rating the desirability of the ILLN system are well aware of the benefits which will be realised as a result of ILLN creation among Saudi academic libraries. These benefits include: cooperation and coordination will automatically be increased; holdings of other libraries will be available in all libraries; more materials will be available within Saudi Arabia to more users; time, effort, and money used will be reduced; performance of the libraries will be

increased, resulting in image building; etc.

SUMMARY

The findings of the questionnaire survey, as discussed above, may be summarized as follows:

1. Only four libraries have a written policy, stating their library's goals and objectives.
2. Five libraries goals and objectives are research and curriculum support.
3. Organizational structure of five libraries are of a centralized type.
4. Six academic libraries have all five administrative units (acquisition, cataloging, serials, circulation, and reference).
5. A total of 576 staff are available in the seven academic libraries; out of which 249 (43%) are professional and 327 (57%) are non-professionals.
6 The majority of professionals hold bachelor degree in library and information science.
7. The total budget of six academic libraries was SR.22,409,434 in 1993, whereas the 1992 budget of five libraries was SR.10,141,569, and in 1991, the budget of four libraries was SR.11,745,233.
8. All seven libraries use the services of books vendors. Four libraries also purchased books directly from the publishers.
9. The total book collection of seven academic libraries stands at 2,554,379; out of which 913,312 (36%) books are in Arabic and 1,641,067 (64%) books are non-Arabic. Six libraries meet the minimum standard proposed by Isa for Saudi academic libraries.

10. No library indicated that 'All of the Need' in respect of textbooks, research, and recreation is being provided by their libraries.
11. The majority of academic libraries, 5, are using the Dewey Decimal classification scheme.
12. Minicomputer, microcomputer, telefacsimile, microfiche reader/printer, microfilm reader/printer, photocopy machines are being used by all libraries, or are planned to be used sometime within the next 5 years.
13. Library D has automated all its functions. Four other libraries have automated some of their functions.
14. There is extensive cooperation among all seven academic libraries.
15. Library C has all types of formal cooperation with other academic libraries. Few other libraries have either formal or informal cooperations.
16. All academic libraries, except Library B, have cooperation with KACST, and mostly they are informal contacts.
17. All libraries have either occasional or frequent contacts with special, public, and school libraries.
18. Interlibrary Loan department is a must for ILL cooperation. But, only three libraries have ILL departments.
19. Only three libraries have union catalog and five libraries have union list of serials, mostly in print or computer printout format.
20. All academic libraries use airmail communication system for ILL handling and delivery of materials. Libraries also use fax, telephone, and messengers.
21. All academic libraries borrow materials from other libraries either occasionally or do not borrow at all. Same practice is

being followed for lending of materials to other libraries.

22. Five libraries (71%) strongly favor for ILL participation; only two libraries (29%) favor less strongly.
23. Six libraries indicated that they do not know whether their university will provide necessary funds for participation in ILLN.
24. Photocopy service has been ranked one as areas of cooperative activities, followed by reciprocal borrowing, periodicals/ facsimile service, and rare materials.
25. Inadequate finances and resources have been ranked one as factors hindering cooperation. Other factors are: absence of communication, absence of legislation, shortage of professionals, lack of cooperation, and absence of planning.
26. Current cooperative activities among academic libraries are inadequate.
27. Majority of academic libraries (6 or 85.71%) rated ILLN as highly desirable.

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CHAPTER VI

AN INTERLIBRARY LOAN NETWORK MODEL PLAN

RATIONALE

The questionnaire survey was conducted to survey and analyze the condition of present systems of academic libraries in Saudi Arabia as well as to determine the perceptions of librarians in the seven universities in the Kingdom of Saudi Arabia towards collaboration. The findings of the questionnaire survey and analysis of data was presented in Chapter V. Responses through the questionnaire reflected the present condition of seven academic libraries in respect of organizational structure, personnel, budgets, collections, operations, cooperative activities, network opinion, etc.

The survey findings revealed that the academic libraries in Saudi Arabia lacked several things, such as there is virtually no coordination and cooperation among them; there is no communication, legislation, and planning; there is a shortage of professionals; and, above all, inadequate resources and finances due to shrinking budget. Increasing cost of books and journals have forced academic libraries of Saudi Arabia to severely reduce monograph acquisitions and reduce periodicals subscriptions, which has directly affected collections of these libraries. The result is that collections are unable to fulfill the research requirements of faculty and students.

The library budget is considered the most important element in the administration of the library. In preparing the budget, the librarian must keep in mind the increase of the college enrollment; the impact of inflation on the cost of books, periodicals, A/V materials, dissertations, binding, and supplies; the quality of library services which could assist in realizing these objectives.

Also, the effect of the implementation of new technology on the library economy and efficiency must be considered. (1)

According to the Standards of the Association of College and Research Libraries (ACRL), the total amount that should be expended on the library university is 5 percent of the total university expenditure, or $30 per student. (2) It is expected that the trends toward inflation in publication costs and inadequate financial support from the government, promise to continue and that no single library or institution can hope to solve these problems by itself. These problems are national in scope, and the solutions must come from new concepts, new attitudes, and new organizations.

The findings of this survey also revealed that interest in library cooperation among the Saudi Arabian academic libraries appears to be increasing. It is, therefore, essential that a new system is developed to allow the seven academic libraries to join together to solve their common problems, and serve the needs of their users by upgrading library services. The new system would also minimize unnecessary duplication of personnel, materials, facilities, and time. The purpose of establishing many interlibrary loan networks (ILLNs) in the United States, focuses particularly on cooperation that uses automation as the major tool for providing the services of the cooperative.

To establish a new network, several factors must co-exist to convert the ideas into a reality. One of the factors is a positive attitude on the part of the library administrators and staff. The academic libraries of Saudi Arabia already participate in some kind of informal, cooperative interlibrary loan activity. The most prevailing type of cooperation is the supply of journal articles.

Although there is little cooperation among academic libraries now, all the librarians, when asked by the researcher, expressed an eagerness for participating in an ILLN. Most of them indicated that their institutions may provide financial assistance to support the system. Some librarians indicated that a well planned ILL will entail considerable savings in the purchase of less used and expensive materials.

A system can only be successful, if a positive and affirmative atmosphere is prevalent in the country. Fortunately, Saudi Arabia has the essentials needed to establish an ILLN, as its pace of technology application has been up-to-date. The King Fahd University of Petroleum & Minerals (KFUPM) Library started planning library automation as early as in 1976. After a careful study, the DOBIS/LIBIS system was installed in 1981 and the project was completed by 1983. DOBIS/LIBIS is an online, integrated, interactive automated system and has network capabilities. (3) KFUPM has been designated as a testing-training site for other libraries of the region under a contractual agreement with IBM. The KFUPM Library also is a pioneer in its commitment to install an Arabic version of DOBIS/LIBIS. King Saud University Library and the Institute of Public Administration Libraries, both in Riyadh city, are also using DOBIS/LIBIS. Two other academic libraries, King Abdulaziz University (KAAU) Library and Umm Al-Qura University (UQU) Library have also adopted DOBIS/LIBIS. Saudi Aramco has also installed DOBIS. (4)

Among other automation projects in Saudi Arabia, two are worth mentioning. The Information Center for King Faisal Center for Research and Islamic Studies in Riyadh has installed the MINISIS System. The Information Center of the Ministry of Finance and

Economic Affairs is the only institution subscribing to OCLC for cataloguing input to its automated system of Virginia-Tech. It has the telecommunication capability to converse with microcomputers via telephone lines. They are offering SDI services to the user community throughout Saudi Arabia backed-up by document delivery services. The trend of automating in Saudi Arabia is obviously pervasive, but resource sharing is not. (5)

King Abdulaziz City for Science & Technology (KACST) was established in 1977 to formulate national science and technology policies and for the promotion and coordination of applied scientific research in the Kingdom. Besides, it provides a wide variety of information support services to scientists and researchers in Saudi Arabia. (6) KACST has produced 14 national databases, out of which it has produced a unique bibliographic database in the Arab world containing 45,000 records of scientific and technological literature in Saudi Arabia, S&T Bibliographic Database (English and Arabic). The database provides all types of documents written by Saudi nationals, published in Saudi Arabia and/or of interest to Saudi Arabia. Each record includes an abstract with the title, author name, source, place and date of publication, etc. (7)

Another significant development that has taken place in recent years was that a computer-to-computer communication network, GULFNET, became operational in 1985. GULFNET is currently being used by 8 member institutions in Saudi Arabia. The network's objective is to speed up the transfer of information for research and development. It has been instrumental in sharing bibliographic information for interlending. This system has the potential for the transmission of interlibrary loan requests, or exchange of other bibliographic or

non-bibliographic information among the libraries and information centres of the region. (8) GULFNET is a store-and-forward network. It is used to transfer files, text, data, or programs to other nodes; to receive or send electronic mail to one or more network users; and to query remote computerised databases in the system. GULFNET is used to send requests to KACST for online searching and for ordering copies of documents. GULFNET is connected to BITNET (USA), NETNORTH (Canada); EARN (European Academic and Research Network) and other international networks. (9)

Additional significant progress has been made in Saudi Arabia by the compilation of union lists of periodical holdings, which is an essential element for the success of any cooperative program. KACST has compiled the union list of periodical holdings of all the seven university libraries and the Library of King Faisal Specialist Hospital, and it is available online through the GULFNET. The list is available from more than 17 remote stations by using the network connections. (10) Several academic libraries have produced their own documents to facilitate verification of library holdings. For example, KFUPM has produced periodicals printouts (English as well as Arabic), accession list, KFUPM thesis guide, etc. KAAU has produced a list of non-Arabic journals in the KAAU Library. King Saud University (KSU) Library has brought out a union list of periodicals (non-Arabic), catalogs of government documents, etc. Umm Al-Qura (UQU) Library has published a list of serials and accession list in Arabic. Imam Mohammad Islamic University (IMU) Library has published an Index of the university periodicals (Arabic).

Various efforts were made to solve the inadequacy of bibliographic tools, but, unfortunately, the result was not very encouraging.

Many efforts have been made to standardize the Arabic application of DDC, Anglo-American Cataloging Rules (AACR 2), and entry rules for oriental names, but without much success. Many subject headings lists are in use in libraries, such as the lists of Arabic subject headings, prepared by Nasser M. Swaydan, Ibrahim A. El-Khazindar, the Institute of Public Administration, Riyadh, etc. Some of these headings have not been updated for the last 10 years. (11)

An overview of interlibrary loan cooperation among academic libraries of Saudi Arabia has led to the conclusion that there is no formal system of interlibrary loan cooperation, although several efforts were made. In 1983, the Council of Deans of university libraries was formed consisting seven deans of university libraries. Since there is no professional association in Saudi Arabia, it was expected that the council would fill the vacuum. Several important proposals, including the interlibrary loan cooperation, were discussed and agreed, but only a few of them have been implemented. (12) A formal agreement of interlibrary lending was finalised in 1987 by the Deans of university libraries under the auspices of the Arab Bureau of Education for the Gulf States (ABEGS). But, its effectiveness is still questionable as the agreement does not present prospects for ILL cooperation among Saudi academic libraries. (13)

The Saudi government is very keen to keep itself up to date with global scientific and technological developments. Saudi Arabia has recognized the importance of information and technology networks, and has supported and established several centers. The Fifth Development Plan 1990-1995 will continue to place emphasis on science and technology infrastructure. As the influence of technology permeates society, an improved infrastructure becomes vitally

important for better information services. In this regard, a National Commission for Libraries and Information Services will be established during the fifth plan, to plan, coordinate, follow-up, and supervise the libraries. (14)

In conclusion, it is hoped that with the active participation and financial support of Saudi government, it would be feasible and desirable to establish an interlibrary loan network among Saudi academic libraries for cooperation and greater efficiency. An interlibrary loan network model plan is discussed below.

MODEL PLAN

In this part of the study, an attempt will be made to investigate the pre-requisites of an ILLN and to develop an ILLN among Saudi academic libraries in light of the responses to research questions number 2, 3, 4, 5, and 6:

2. What are the potential sources of financial support for an ILLN?
3. What should be the functions of an ILLN for the Saudi Arabian university libraries?
4. What are the major problems relating to the establishment of an ILLN among academic libraries, and how can these be solved?
5. What controls are needed to ensure that a network will operate effectively?
6. What steps and strategies should be taken to develop an ILLN?

The model plan discussed in this part is based on the response to questionnaires, interviews with the librarians, and analysis of

documents, reports, and materials dealing with the design and development of network systems in the US, and other developing countries. In addition, the literature surveyed was also helpful. The model plan discussed here provides a rationale for development only. No attempt has been made to devise a technical blueprint or to estimate its cost, as these factors are out of purview of this study. Technical design should be prepared only by technical experts. Robinson emphasized that in addition to librarians and information scientists, network design should capitalize on engineering, systems analysis, computer science, operations research, economics, sociology, and psychology, to name a few. (15)

Discussing the libraries of Saudi Arabia, Line commented that interlending does occur, but there is no organized network. He proposed that an ideal system will be one that was designed for real Saudi Arabian needs and that borrowed as appropriate from experience and practice elsewhere. (16) The proposed model plan will provide each academic library equal power and responsibility and several functions will be shared by all network members. According to Kent, multiple function networks are preferred over single function network. Many networks limit their activities to a single function, interlibrary loan, frequently providing photocopies from journals rather than loaning the physical item. If all of the costs were to be considered, it is likely that the criterion established could not be met by any library or network. So it becomes useful to consider whether multiple function networks can provide service cost-effectively, since it becomes possible to amortize costs over a number of interrelated functions. (17)

An interlibrary loan network model plan will be discussed under the following headings: goals and objectives, organizational structure, governance, operational requirements, financial resources, and connection with other international networks.

Goals and Objectives

To meet the challenges produced by limited resources, increased costs, technological developments, and changing staff expectations, increased emphasis is placed on the development and utilization of goals and objectives. Goals are defined as a long-term mission or policy statement describing the direction in which the organization is moving. Objectives are defined as a set of specific aims, results, or targets, established as desirable, that a given service or system should achieve within a stated period of time. (18) According to Kent, objectives in respect of networking denotes "on the library user in terms of access to more materials or services, and/or on the library budget in terms of providing level service at less cost, increased service at level cost, or much more service at less cost than if undertaken individually." (19) In essence, goals are the ends towards which an interlibrary loan network is striving over the period. Objectives, however, are targets to be achieved during the planning period, usually measurable activities, contributing to the fulfillment of the goal.

Clearly defined objectives helps in planning and implementing the networks. Patrick summarised the benefits of clearly defined objectives as follows: "... serve as a framework to guide consortium planning, development, and implementation; act as a communication vehicle for explaining to others what the consortium is to do; and

help in defining the appropriate measures of consortium performance." (20)

From the above discussion, it is clear that the success of planning, development, and implementation of a network largely depends on the clearly defined goals and objectives of the planned network. Keeping in view this fact, the following goals and objectives of the ILLN model plan are suggested:

Goals

TO PROVIDE RESEARCH RESOURCES ACCESS TO FACULTY, STUDENTS, RESEARCHERS, AND STAFF OF THE SEVEN SAUDI ARABIAN ACADEMIC LIBRARIES THROUGH THE INTERLIBRARY LOAN NETWORK.

Objectives

1. To explore a beneficial access method to research resources available to faculty, students, researchers, and staff.
2. To make available bibliographic tools to facilitate verification and identification of holdings.
3. To encourage users of academic libraries to use the ILLN.
4. To establish an effective, fast, and reliable communication system for rapid delivery of materials.
5. To reduce ILLN costs by adapting computer and communication technology.
6. To cooperate with other interlibrary loan systems in the Arab region as well as other countries of the world to provide access to a wider range of resources.

Organizational Structure

To facilitate the availability of material on a systematic basis, a definitive organizational structure is needed. According to Line, a national interlending system is a planned and explicit set of mechanisms, procedures, and practices that covers the actual mechanics of fulfilling the interlending policy. (21) He emphasized that most countries do not have an interlending system, but mechanisms, procedures, and practices may or may not form a system.

Several types of network structures are available for the purpose of sharing of library resources consisting of seven interdependent academic libraries of Saudi Arabia. According to Kent, there are three basic network structure configurations: star, hierarchial, and distributed. The star network entails one network member holding substantially all resources, with all other members utilizing these resources. The hierarchial network entails members sharing resources, locally; passing unsatisfied needs along to the next greater resource center. The distributed network is composed of members with equal, but different sources, with all members able to call directly on the resources of all other members. He further analyzed resource sharing networks, currently in operation or in planning, in terms of three factors: the type of network, the type of source material (serials, monographes, non-print), and the operations performed (ILL, document delivery, cataloging, etc.). (22)

Rouse and Rouse discussed the same three configurations as Kent, but added a fourth type of network called ring. The ring is similar to the distributed network, but it has no control processing node. (23) Throughout the literature, the configuration of networks can be classified by using four major categories, as follows: centralized

- star, decentralized - distributed, hierarchial, and composed-centralized (ring) structures. Network configurations are shown in Figure 2.

After considering different types of networks, we have to determine an interlending network suitable for the academic libraries of Saudi Arabia. However, we must keep in mind that the objective of interlending may be achieved in several ways while the efficiency of one system may differ from another. Arms categorized and compared three different interlending systems (Figure 3), as follows: direct interlending, lending through union catalogues, and lending from a central collection. (24)

Line introduced four types of interlending models. The first model, based on centralization, is that a single library with a comprehensive collection would act as the main pool. In this system, the main library will be dedicated solely to the interlending function, with other functions, such as reference. In the second model, all libraries of the system will provide materials from their collection to other libraries of the system, in addition to its own clients. The third model is based on direct approach and called planned decentralization system. This model is composed of a number of specialized libraries. The good feature of this model is that the specialized libraries will satisfy more requests, thus ensuring a high probability of completed transactions. The fourth model is the most common system based on informal agreement and called unplanned decentralized system. In this model, libraries of any country will supply materials through the use of union catalogs without any attempt for planned subject specialization. (25)

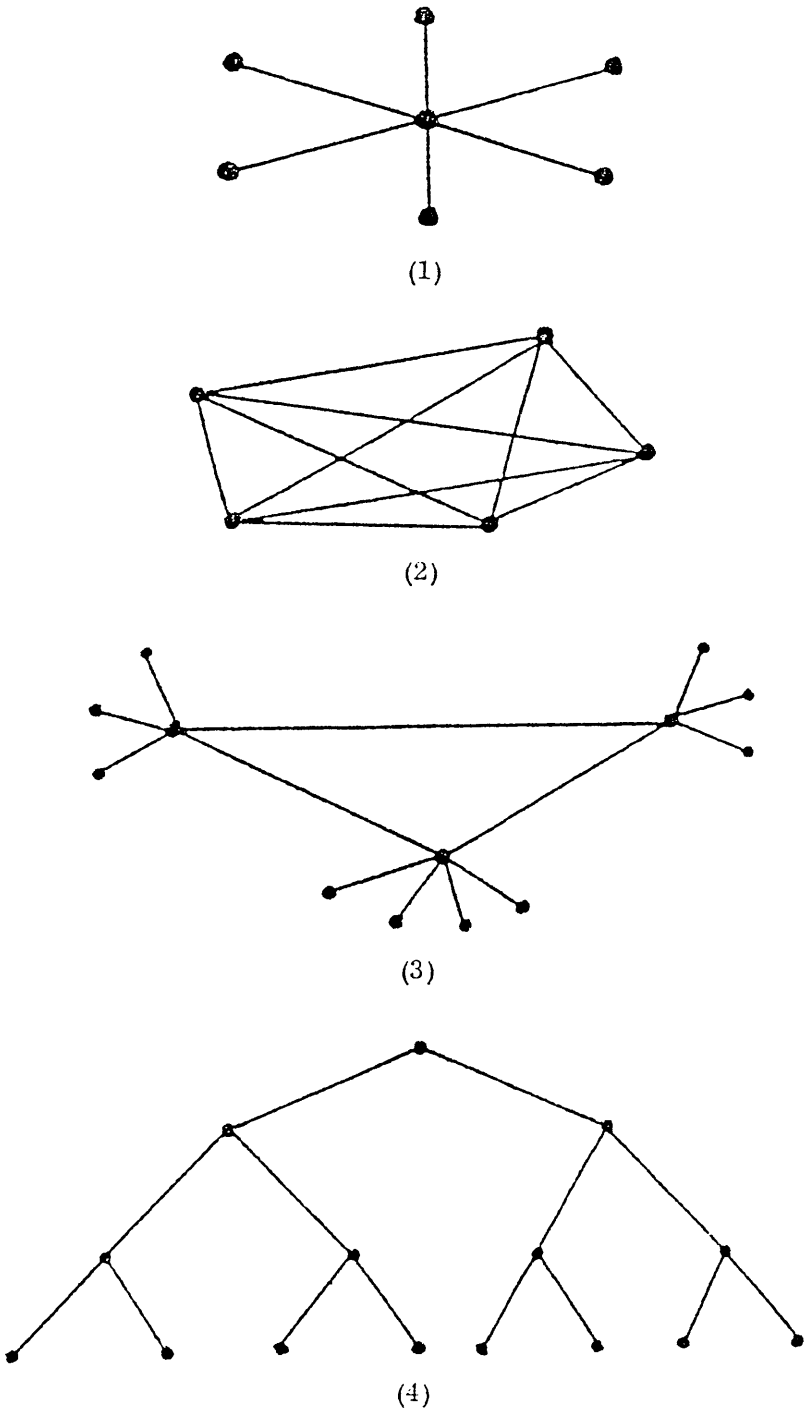


Figure 2. Network structures: (1) totally centralized (star) network; (2) totally decentralized network; (3) distributed centralized network; (4) hierarchical network.

Source. The Structure and Governance of Library Networks, (Ed. Allen Kent & Thomas J. Galvin), 1979, p. 55.

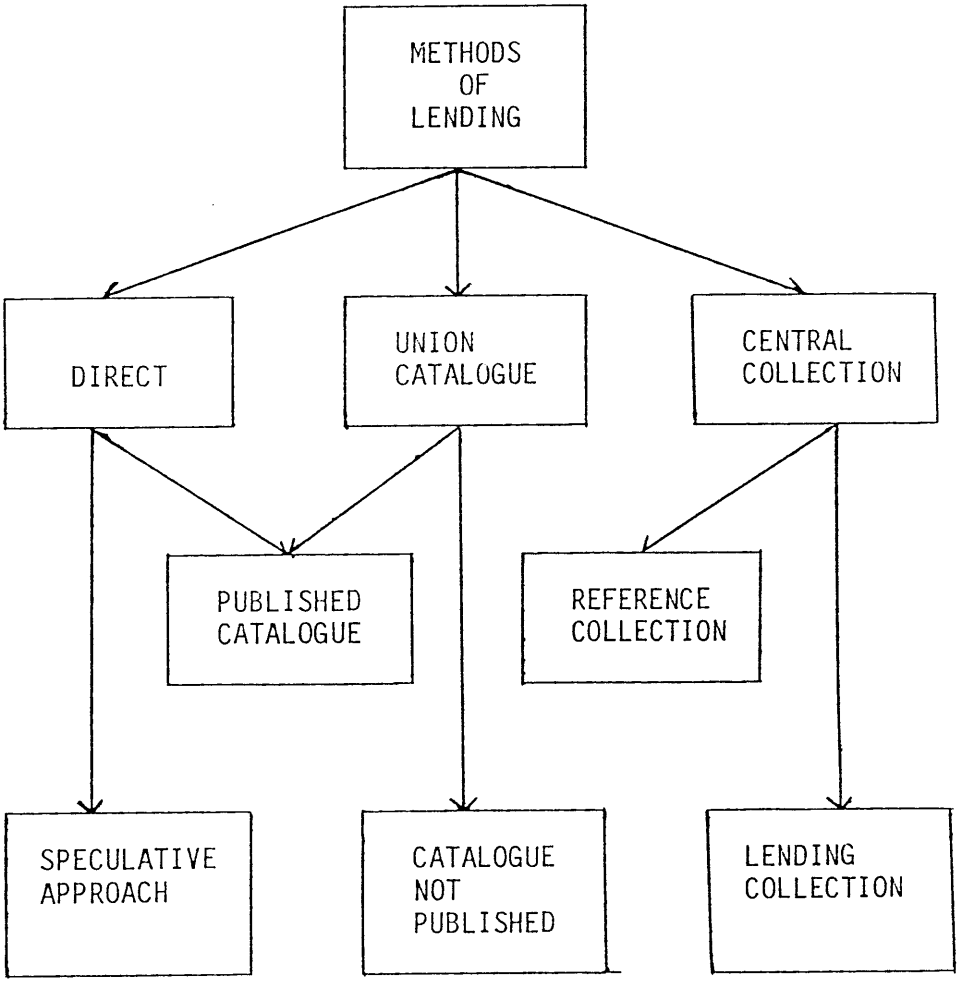


Figure 3. Different Types of Interlending Systems

Two of the most used networks for the purposes of interlending are: centralized and decentralized. Centralized systems have had a considerable influence on the organization and disposition of services of libraries. But, centralized networks are not adequate by themselves, because of several reasons, such as it would not be possible to purchase every publication, therefore, it would be impossible to have a comprehensive collection. This situation will lead in delays in satisfying the needs of member libraries. The survey of interlibrary loan services conducted in the UK supported this view. The result showed that the British Library Lending Division was able to fill only 57 percent of the monograph requests from its own collection. (26) However, Biggs indicated that libraries have to rely on a more decentralized system of resource sharing because it promotes the idea of interconnection among individual libraries and library cooperatives. (27)

This study proposes a combination of a centralized and decentralized network model plan for the ILLN among Saudi Arabian academic libraries in which all network members hold different resources and share with one another. The ILLN would be composed of seven academic libraries of Saudi Arabia, as shown in Figure 4. All academic libraries will share equal responsibility, power, and functions. However, besides sharing its responsibilities in ILLN, the KFUPM Library will also function as a centralized library and the remaining six libraries will support it in a planned decentralized system. The KFUPM Library has been selected as a centralized library because it is the only academic library in Saudi Arabia which has prepared its own ILL policy to facilitate ILL cooperation. It has also opened its collection free to any library

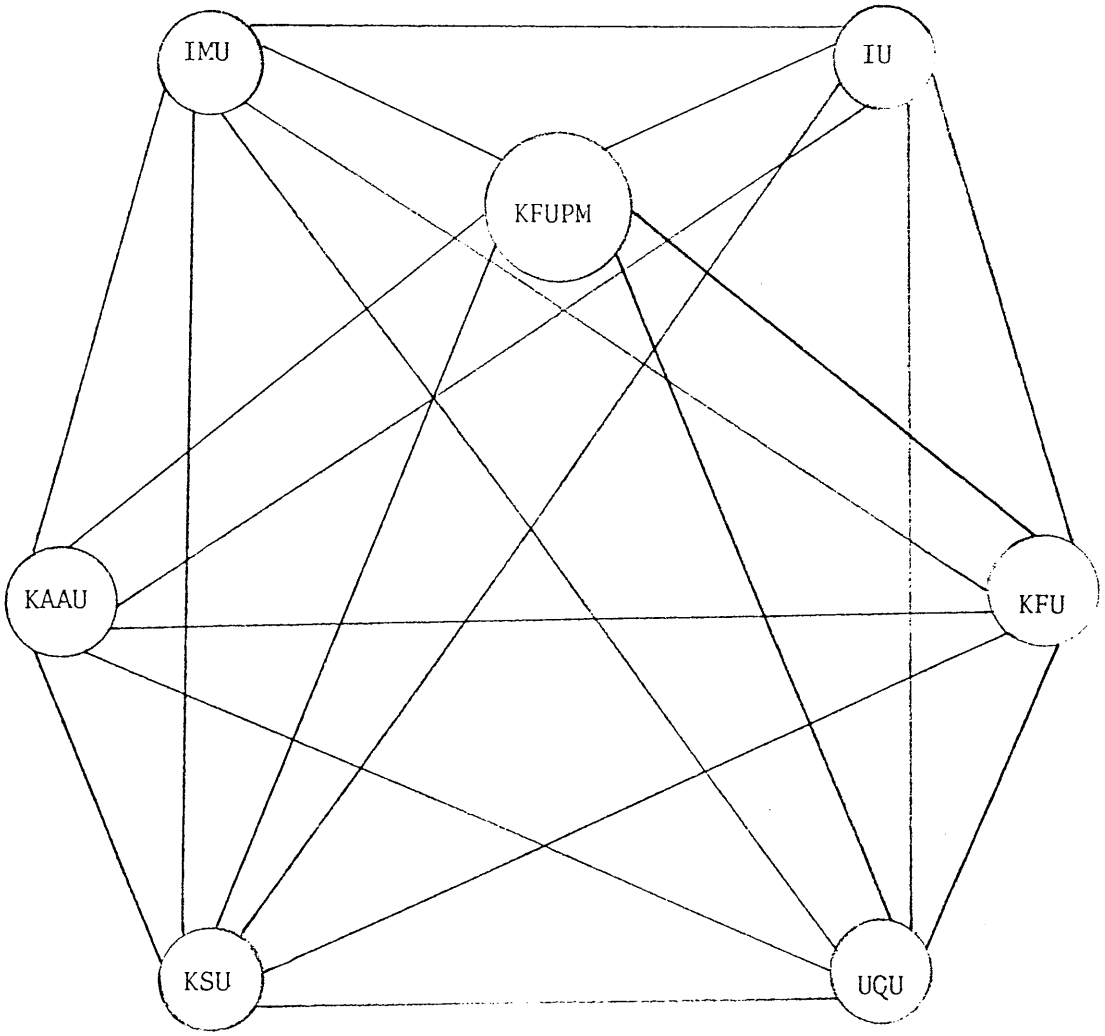


Figure 4. The Organizational Structure of the Interlibrary Loan Network (ILLN) Model Plan.

requiring materials. It is the only academic library on the forefront of ILL cooperation, not only in Saudi Arabia, but also in the Middle East. The KFUPM Library has always endeavored to fulfill ILL requests received from other institutions, provided the material is available.

The responsibilities of the KFUPM Library, as a centralized library, will include: serve as a model for other academic libraries; provide an information service for interlending to other academic libraries; help other academic libraries in developing their ILL policy; develop a cooperative acquisitions policy; have responsibility for planning, developing, and supervising an efficient ILLN, etc.

This model plan will best suit the academic libraries of Saudi Arabia, because it will provide equal status to all seven libraries, thereby providing equal decision-making. It is also hoped that equality will provide a strong commitment on the part of all participants of the ILLN. Every academic library will have equal opportunity to participate in governance of the ILLN. Every participant will communicate directly with the other, saving much effort and time. The model plan will provide complete sharing of resources among all the seven academic libraries.

All participating libraries will continue acquisition of resources on the basis of a coordinated purchasing plan. The libraries, as far as possible, will suggest possible purchases to each other and discuss major purchases in advance. When materials are being considered for discard, areas of specialization will be given primary consideration. Interlibrary loan of non-reference materials will be facilitated as much as possible. The plan

emphasises coordination and cooperation among participating libraries fulfilling its share.

It is hoped that the ILLN model plan will be one of the most successful and well established resource sharing network in the Middle East. The network will accomplish not only the increased sharing of resources and equal information access, it will also generate professional dependence. It is also hoped that, in the future, the network will continue resource sharing and expand its cooperative efforts in ways such as extending the geographic boundaries of its service area, taking advantage of specialized materials available at individual academic libraries and formulating an area union list of serials.

Governance

Stevens identifies the purposes of governance for library networks as: to set a direction for action, to establish basic procedures for activity, to give stability in an orderly progression towards established goals and objects, to protect the participants, to establish an operating entity that can be recognized by others, and to establish the standard by which library network effectiveness should be measured. (28) He explains these purposes as follows. Setting a direction for action means the establishment of written goals (and objectives) which can then be periodically reviewed to incorporate changing needs, constraints, and resources. By establishing the basic procedures, governance delimits the paths to be followed. Administrators deal with the day-to-day decisions. Governance provides stability to making a network an organization controlled by principle and not by persons. Governance protects the participants by establishing and upholding rights and privileges

while limiting legal liabilities. Establishing an operating entity provides a mechanism for working with other organizations, for receiving grants, etc. Based on goals and objectives, network effectiveness can be determined. (29)

In summary, the purposes of governance are to provide a mechanism for identifying goals and objectives of the library network; for the establishment of policies by which the library will operate; and for the resolution of conflict. In particular, governance is also the mechanism for overcoming the barriers to networking. In a broader sense, the purpose of governance is to provide a mechanism for overcoming the barriers to any new organization such as a library network. (30)

Perhaps the most important lessons to learn from the experience of other networks are: every institution should have an equal opportunity to participate in governance; that organizational development should be a continuing evolutionary process; there should be a clear distinction, with clear reporting lines between policy making and operational administration; and any governance model that is to be applied must be flexible, and must be applied within the historical context of the traditional interactions of the members of the consortium. (31)

It is proposed that the ILLN be established under the supervision of the Saudi Arabian Ministry of Higher Education as all the seven universities are directly supervised and controlled by the Ministry. The supervision and control by the government will provide support, leadership, stability, and necessary funds. The Minister of Higher Education will facilitate communication with other ministries to receive their commitment in respect of ILLN.

A Board of Directors should be constituted under the Ministry of Higher Education to provide direction and policy review in respect of ILLN plans, programs, and services. The Board of Directors would be composed of the deans of seven university libraries, and meetings should be held atleast 4 times a year. The governance of the interlibrary loan network model plan is shown in Figure 5.

The Dean of Library Affairs of academic libraries are the chief executive officers of the university library. By virtue of their position, they are the members of the university board, the decision making body of the university. The dean of library affairs, in this capacity, will be briefing their university board, from time to time, about the policy and progress of ILLN. The dean will also be responsible to obtain university board commitment and approval in respect of funds, material support, cooperation with other academic libraries, etc.

A Network Coordinator will be appointed for a period of two years by the Board of Directors to implement its policies. The post of network coordinator will be rotated among all seven academic libraries. The network coordinator should have the following qualifications: academic library experience; administrative talent and experience; ability to work with and listen to people; ability to use the power of suggestion and persuation to get things done; ability to tolerate human frailties; (32) leadership skills; diplomacy; skill in the art of compromise; imaginative and innovative solutions; ability to tolerate ambiguity; and technical and professional competence. (33)

The duties of network coordinator should include the following: to implement specific programs under the overall policy direction of

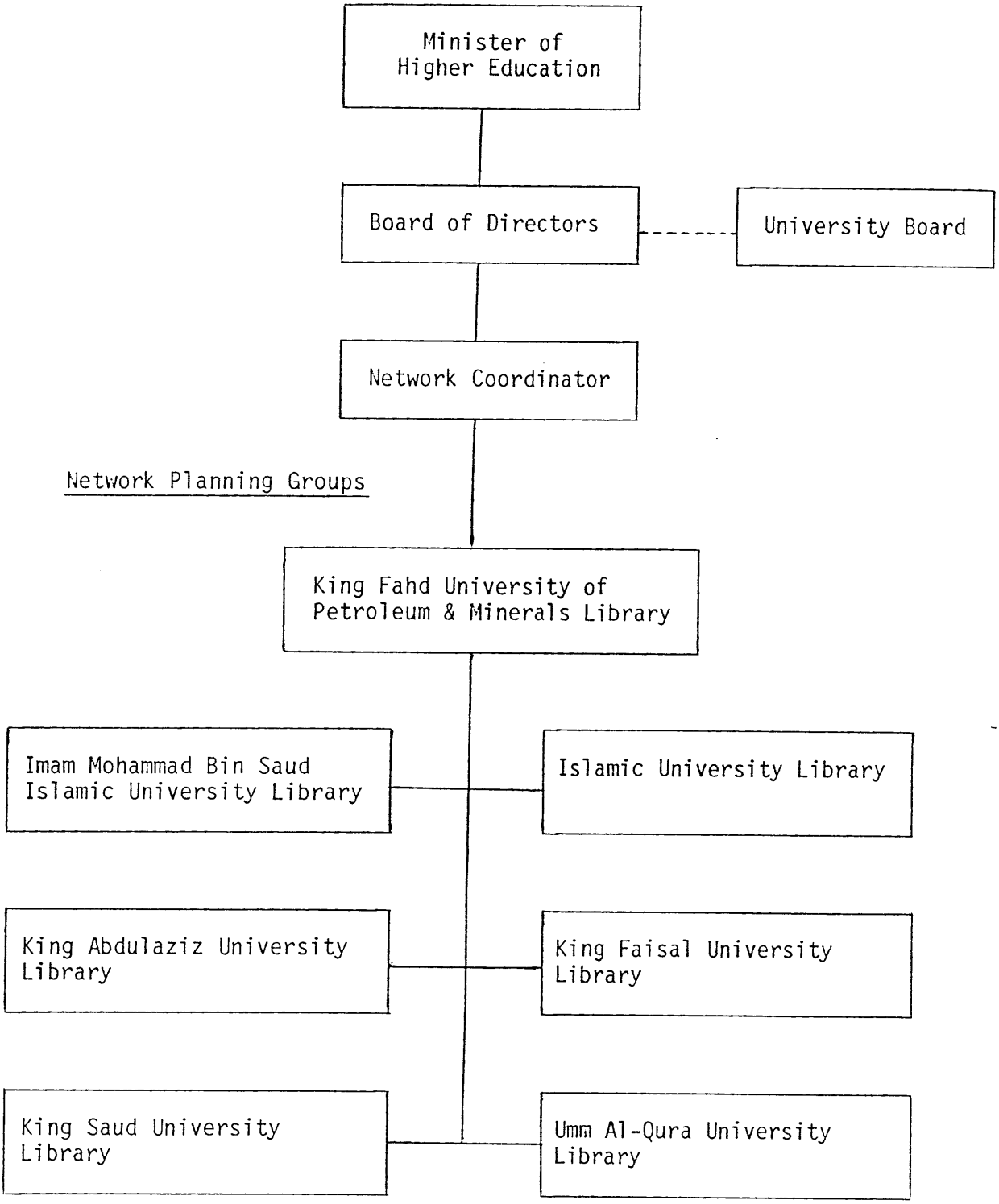


Figure 5. The Governance of the Interlibrary Loan Network Model Plan

the Board of Directors; to develop and represent the Board recommendations, when appropriate, to those in operation; to maintain adequate communications with the members of the network; to represent the network to the professional community; and to prepare statistics, annual reports and budgets. (34, 35)

This study proposes establishment of a Network Planning Group (NPG) within each of the seven academic libraries. The Group should be formed with a broad representation from the departments within each library, such as systems analyst, technical services head, reference and information services head, reference librarians, etc. Additionally, librarians from the faculty libraries, where applicable, should also be represented in the Group. The NPG will be responsible for the internal library policies, such as planning, development, communication system, hardware requirements (computers, printers, peripherals, etc.), software requirements, including display, ease of use, upgrading, etc. The Groups should meet atleast once a month, and if required, twice a month.

The study proposes that written 'by-laws' should be prepared and signed by the deans of the seven academic libraries and approved by the Minister of Higher Education. 'By-laws' are the agreements between all the member libraries, which lists activities in which they have agreed to cooperate. It contains more detail, stating the purpose of the network and enumerating the roles and functions of the officers and rules for membership. (36) 'By-laws' describing the ILLN name, purpose, membership, objectives, duties, etc. has been prepared and appended as Appendix E.

Becker and Hayes pointed out that creation of a network will be an evolutionary task; it is a slow and gradual process requiring

considerable management task and careful planning. Thus, the creation of a strong network office from the very beginning is essential. (37) The study hopes that the model plan will lead, control, and coordinate the interlibrary loan activities and programs among the seven academic libraries of Saudi Arabia.

Operational Requirements

An effective and workable ILLN at the national level requires a few important elements to make the ILLN model plan a success. These elements are: telecommunication systems, bibliographic tools, interlibrary loan policy, and interlibrary loan forms.

Telecommunication Systems

One of the important requirements of any ILLN to be successful is the availability of telecommunication systems. An ILLN may only be treated effectively if the materials are received and supplied within a minimim period of time. Computers, satellites, telexes, facsimile, telephones, postal routes, and airways are all part of national communication networks.

The environment to establish a network for resource-sharing in Saudi Arabia is more conducive than ever before. Several developments which will have a direct impact on information and resource sharing have taken place in the recent past. The developments include: improvements in telecommunication and data communication; the introduction of automation in libraries; the establishment of GULFNET, etc. (38)

The transmission of ILL requests requires good and uninterrupted facilities in all academic libraries. To ensure that the message is

accurately conveyed and interpreted precisely at the other end, fax installations are more practical. The urgency of fax communications should not be underestimated, since it is one of the fastest growing methods of transmitting documents. As the use of fax has grown for commercial purposes so its use in libraries has also grown. In the long term, ILL departments may avail the benefits of a PC fax server set up, which will automatically create a faxable archieve of ILL requested materials.

Fax, modem, and communications technology software and hardware have revolutionized communication. The use of e-Mail for transmitting requests is nearly as common as using fax but its use is restricted to a limited number of countries. e-Mail, connected with the bibliographic utilities, makes the messaging process almost instantaneous. The facility of e-Mail is already available in all the seven academic libraries of Saudi Arabia and the librarians are using this service to request articles on interlibrary loan.

Online searching is available in Saudi Arabia, but is not being used for ILL purposes. However, CD-ROM searching is also available in Saudi Arabia and has potential for use in ILL and has replaced online searching. As technology develops, CD-ROM may be connected with the telecommunication systems, and after search, the ILL will be transmitted. The connection of CD-ROM with fax will help in transmitting request electronically and the document will be sent by fax within half an hour.

To despatch documents destined for another academic library located at a considerable distance, very reliable postal services are also desirable. Airmail is still the most common method of sending ILLs in Saudi Arabia; this has been indicated by the

questionnaire survey. Telex, although now old technology is also available in Saudi Arabia and some libraries are still using it for ILL transmission. Fax, e-Mail, online and CD-ROM searching, telex, airmail, airways services, all are available in Saudi Arabia which will, hopefully, provide rapid turn-around time.

The computer has had the greatest impact on interlending activity. Saudi Arabian universities are not far behind in their ambitious targets for the acquisition and utilization of computer technology, as is evident from the fact that out of seven universities in the Kingdom, four major universities (KFUPM, KSU, KAAU, and UQU) have automated their libraries. Remaining three universities are also expected to proceed for automation of their libraries soon. Automation helps in verifying the holdings of other libraries online. The online searching facilities at the KFUPM, through DIALOG and ORBIT, both of California, has accelerated the interlending activity. (39) GULFNET, a communication network, is instrumental in sharing bibliographic information for interlending. ILL requests are also transmitted through GULFNET. (40)

Recently, Saudi Arabia joined the rapidly expanding world of cyberspace and has become a part of the world-wide Internet computer system that is sparking a revolution in communications. Faculty, researchers, students, and journalists can now find detailed information on Saudi Arabia's history, culture, government, architecture, and economy by accessing the Saudi Arabia file in the Internet system. Internet users can access the Saudi Arabia file on the world wide web by the code word "http"//www/kiosk.net/ infosaudi." (41)

From the above discussion, it may be concluded that communication systems are already well developed and placed in Saudi Arabia which will definitely help in the success of the ILLN proposal.

Bibliographic Tools

Other important tools needed for the successful implementation of an ILLN are bibliographic tools. ILLNs are universally accepted as a means of augmenting the usefulness of library resources and extending lending privileges to those who do not have physical access to the centre of learning. But, no ILLN can be successfully created without up-to-date bibliographic information about the holdings of participating libraries. Union lists, union catalogs, indexing and abstracting publications, subject bibliographies, and national bibliographies renders the operations of cooperative networks both easy and practical. A union list of periodical holdings of the seven university libraries are already available online through the telecommunication network of GULFNET. The union list is available from more than 17 remote stations by using the network connections. (42)

The KFUPM Library has produced several bibliographical works, including Bibliography on Management, Bibliography on Sulphur, KFUPM Library Accessions List, KFUPM Theses: A Guide with Abstracts, Periodicals Printout in English and Arabic, etc. The KSU Library has produced a Union List of Periodicals (Non-Arabic), Accession List, Catalogue of the Library of Omar Bin Hassan El-Sheikh, Catalogue of Manuscripts in the University of Riyadh, Catalogue of Government Publications: Central Library Collection, Directory of Libraries in Saudi Arabia, and Guide to Conferences and Symposia

held in Saudi Arabia. KFU Library has also produced computerized book catalogue listing complete holdings and is updated quarterly. IMU has produced Index of the University Periodicals. KAAU has published Researches in Science and Curriculum and Teacher Education in Islamic Countries. UQU has produced Accession List of Central Library and Directory of Universities and their Libraries of the Muslim World. Almost all academic libraries have lists of serials, some of them computer produced. (43) These bibliographic tools, certainly, can be very useful in fulfilling the objectives of ILLN.

Union catalogs are an essential part of the interlending process. They can be highly effective tools if they are comprehensive, up-to-date, and widely accessible. Those libraries which do not have a union catalog should be encouraged to plan one with current acquisition holdings because the majority of demand for interlending is for new materials. Four academic libraries (KFUPM, KSU, KAAU, and UQU) have already automated their libraries, so their union catalogs are available online.

Most of the interlibrary loan activity among science and engineering collections involves the search for and provision of serial publications and copies of articles from serials. Serials make up from two-thirds to three-fourths of the normal science or engineering library's collections. (44) Therefore, union list of serials have always been more useful than union catalogs for the cooperative interlending networks.

As a matter of fact, union catalogs and union list of serials have long been one of the most useful of all forms of interlending cooperation. The questionnaire survey has revealed that three academic libraries (KFUM, KSU, and UQU) have union catalogs, while

five libraries (IMU, KAAU, KFUPM, KFU, and UQU) have union list of serials. The remaining two libraries (IU and KSU), which do not have union list of serials, should be encouraged and necessary help provided to produce a union list of periodicals. The union list of serials is easy to maintain as it requires less effort for frequent updating. Besides, union list of serials are produced in the form of book and distributed to any library. Materials may be easily searched in the union list of serials and their location identified.

Describing the use of modern technology in the improvement of information resources and services in developing countries, Munn stated that the one area in which computer can make a major contribution at relatively little cost is the operation of union list of periodicals ... The development of a computer-based union list is neither expensive nor difficult. No new computer programs need be written. Additional information can be added easily, so that current list can be produced as often as desired. The expense is suprisingly modest. (45)

The cost of serials are increasing every year due to inflation. Exorbitant prices for serials has forced libraries to coordinate and cooperate with other libraries in the purchase of serials. Available serials must be shared among all the academic libraries, and that is only possible with the availability of union list of serials which provides holdings and location of materials. ILLN will provide necessary impetus to coordination and cooperation between academic libraries of Saudi Arabia, resulting in resource sharing of materials, thus, the basic objective of the ILLN will be fulfilled.

Interlibrary Loan Policy

Another operational requirement of ILLN is that the member libraries participating in network should have an ILL policy. Interlibrary loan is the process through which library material, or a copy of material, is made available by one library to another upon request. Generally, ILL is made between libraries on behalf of library users. To regulate ILL transactions, it is necessary that every library has its own ILL policy. Thus, an ILL policy is a must for sharing resources which should be consulted closely to facilitate interlending.

An interlibrary loan policy is described as a code that prescribes policies and procedures to be followed in interlibrary loan transactions. (46) The ILL policy covers proecedures for borrowing, procedure for lending, conditions of supply, which materials may or may not be loaned, period of loan, procedure for returning the material, responsibility for loss or damage, charges, violation of ILL rules, etc.

Almost all libraries have their own ILL policy. If not, they employ a standard form and follow rules and regulations set forth in the ALA National Interlibrary Loan Code of 1980. (47) But, it is desirable that libraries engaging in ILL business should have their own ILL policies. It is necessary because some libraries will loan theses and dissertations, and others will not. Certain kinds of resources, such as manuscript material, rare books, audiovisual materials are usually not available for loan. Instead, photocopies or microfilm of the restricted materials are supplied. ILL policy describes that what type of materials will be loaned and what type of materials will not be loaned.

In 1976, the Arab Bureau of Education for the Gulf States (ABEGS) formulated an ILL policy for academic libraries. But, its effectiveness is still questionable as the agreement does not present prospects for ILL cooperation among Saudi academic libraries.

The KFUPM Library's ILL services have long been in existence. But, it was only in 1987, on the basis of ABEGS ILL policy, the KFUPM Library prepared and formalised its own national ILL policy. The purpose of the ILL policy was to improve and streamline the ILL network among libraries of Saudi Arabia. (48) It is unfortunate that remaining six libraries have so far not formulated their ILL policies.

This study proposes that the KFUPM Library will function as a centralized library, besides performing its functions as a member participant of the network. One of the functions of the centralized library proposed by the study is that the KFUPM Library will help and encourage all six academic libraries to prepare their ILL policies based on the ILL policy of ABEGS. The researcher is of the view that all six libraries will prepare their ILL policies and streamline resource sharing among Saudi academic libraries.

It is expected that member libraries of ILLN will make available their materials to other members, if the material is not required by their patrons. The lending of materials will be done according to the provisions of ILL policy of the libraries. ILL policies of the libraries will govern the transactions among Saudi academic libraries. Faculty, graduate and undergraduate students, staff, and researchers of all the seven academic libraries will be entitled to obtain ILL service through the network. Both, photocopies as well as originals will be borrowed and loaned.

ILL requests received from the international borrowers will also be fulfilled by the members of the network. Lending to international users will be guided by the International Lending: Principles and Guidelines for Procedures of 1978 (Revised 1983), which is appended as Appendix F. (49)

Interlibrary Loan Forms

For smooth functioning of the ILLN, it is necessary that ILL forms are developed. Properly developed forms prevent wastage of staff time in verifying the details of ILLs. Any ILL form should include user name, status, department, telephone and box number. The form should also provide space to include the complete bibliographic information, including title of journal/book, year, volume, part, page no., author and title of article, source in which article was found, etc. The borrowing library's address should be printed on the top of the form, whereas the lending library's address should be given on the bottom of the form.

The KFUPM Library, The KAAU Library, and the KSU Library have already developed their ILL forms. These libraries may use their own forms to request the materials from other libraries. Those libraries which have not prepared their own ILL forms, may use the ABEGS ILL form until the ILL policy and form is developed. These ILL forms are appended in Appendix G.

International borrowers should submit their requests either on the IFLA international loan/photocopy request form or on the ALA request form. These forms are also available in Appendix G.

Financial Resources

Networks are a marvelous tool for library service, but they do impose added costs. It is certain that the costs of creating and maintaining networks cannot be met from currently available local sources of support, and that more federal and state aid will be required. (50)

Networking funding requirements usually fall into the following four categories: design costs, including systems analyses and feasibility studies to determine the most appropriate configuration for network organization and services; implementation costs, including the cost of starting up; operational costs, including annual cost of staff, overhead, and hardware; and expansion of service costs, including software development, production of bibliographic tools (e.g. union lists), acquiring new hardware, software, and training costs. (51)

However, Patrick identified only two types of budget as follows: an expenditure budget which takes into account all activities in terms of personnel salaries, travel, and miscellaneous expenses; and a program budget which specifies the expenditures of specific activities. (52)

These are the budgets which are needed for the successful development and implementation of the networks. Due to high inflation worldwide, the costs of library materials and staff have risen manifold. The governments are unable to commit extra money for the purpose of networking. The libraries could no longer hope for funds from governments but may fund networks by cooperative arrangements and the costs may be distributed among many institutions. "If proper use is to be made of increased access to

external resources, libraries must be prepared to transfer funds intended to support the acquisition of materials, sufficient money to support increased ILL and resource sharing." (53)

Kent also supported the above concept and indicated that " ... there perhaps should be a resource sharing budget instead, devoted specifically to not buying materials, but rather for developing the mechanisms for getting them from somewhere." (54)

From the questionnaire survey, it is clear that although six libraries indicated that they do not know whether their universities will provide funds to support ILLN, but they rated the desirability of ILLN as 'highly desirable,' due to several benefits of ILLN, such as cooperation and coordination will automatically be increased; holdings of other libraries will be available in all libraries; more materials will be available to more users; time, efforts, and money will be reduced; etc. Therefore, academic librarians indicated that their libraries will recommend their universities to provide financial support for participating in an ILLN.

Keeping in view that the ILLN will be based on reciprocal borrowing among academic libraries, and also, the operational area of the ILLN will be limited within Saudi Arabia, not much funding will be required. Therefore, the study proposes that the small budget of the ILLN should be financed by the Ministry of Higher Education. Additionally, since academic libraries of Saudi Arabia are already engaging in resource sharing and paying whatever cost is incurred on behalf of library users, they should continue this practice. In this way, the cost will be shared by all academic libraries.

The study also proposes that no fees should be charged to library patrons, and ILL service should be extended free. The KFUPM Library has accepted ILL as a constituent part of reference service, because ILL is a service that supports the goals and objectives of the library which meant primarily to support the university's curriculum and research. Hence, the KFUPM Library pays all costs, including airmailing and/or online ordering charges incurred for ILL, from the budget of the university. (55)

Connection with other International Networks

Once the ILLN among Saudi academic libraries is formally established, the collection of one library will be open for the other six libraries and the vice versa. The benefits availed by one library will be available to all other libraries, thereby improving the service and image of the academic libraries. On the other hand, the libraries are free to enter into cooperative agreements for resource sharing through ILL with other international networks to derive maximum benefit from the available resources in other countries. Such contact helps very much to the research and scholarly communities of the universities, besides cutting down the cost of material provided on ILL.

Unesco and IFLA cooperate in a program for the Universal Availability of Publications (UAP) of which interlibrary lending is one important aspect. The earliest formal recognition of the need for UAP was as recent as November 1974, when the IFLA Committee on International Lending and Union Catalogues put before the general council meeting a resolution in the following terms: "As an essential element in any programme of national and international

library planning, and as a natural concomitant of Universal Bibliographic Control, efforts should be made both within each country and between countries to improve access to publications, by increasing the availability and speed of interlending services and by developing simple and efficient procedures. The ultimate aim should be to ensure that all individuals throughout the world should be able to obtain for personal use any publication, wherever or whenever published, either in original or copy." (56)

To fulfill the functions of UAP, the IFLA Office for International Lending at the British Library Document Supply Center was established in 1975. One of its functions is to provide guidance to individual countries in developing their systems. (57)

This study also proposes that all academic libraries of Saudi Arabia should have connections with international networks as well. In this connection, necessary help of the BLDSC may be obtained. If libraries have cooperative arrangements with libraries of other countries, it helps to provide more materials to more users, thus further improving the lending and borrowing opportunities. The KFUPM Library has adopted a very liberal policy of opening its collection and services to any library/institution needed lending/ borrowing facilities. The result was that the number of participating libraries have increased, and all libraries have benefitted from this gesture.

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CHAPTER VII

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

At present, no library can be self-sufficient. The survival of many library's has been threatened by constraints, such as worldwide inflation, explosion of publications, budgetary limitations, the increasing cost of library materials, serials deselection, and declining acquisitions activity, etc. To meet the challenges posed by the economic constraints, libraries have accepted and developed resource sharing arrangements. In fact, resource sharing through interlibrary loan network (ILLN) is the most common and oldest type of resource sharing system, in which libraries agree to extend borrowing and lending facilities to one another.

The situation of libraries in developing countries are worse than those in developed countries. The developing country libraries have very limited collections, services, professional librarians, and of course, a bad financial situation, therefore, the libraries are just surviving. The libraries do not have sufficient resources to support the teaching and research programs of their parent organizations. Since there is no organized system of resource sharing, the materials available in one library are not made available to other libraries.

Being a developing country, the academic libraries of Saudi Arabia also face the same problems. The researcher has been associated with the KFUPM Library for the last fifteen years dealing with interlibrary loan. The interlibrary loan cooperation among academic libraries of Saudi Arabia are minimal. There is no

organized resource sharing system, although opportunities are present. ABEGS ILL policy is not being followed, only a few libraries (particularly the KFUPM Library) follow its guidelines. The researcher has determined that if a formal, obligatory, and regular ILLN is established among academic libraries of Saudi Arabia, it will lead to cooperation and coordination. The result will be that the availability of research resources will be maximized, and at the same time, the expenses will be reduced.

An important and effective means by which academic libraries in Saudi Arabia can satisfy their users' needs is the establishment of an ILLN which offers numerous advantages. The advantages include greater efficiency, economy, and availability of resources. An effective ILLN reduces the expenses of unnecessary duplication of materials, services, equipments, personnel, etc. An ILLN provides a framework within which libraries can share materials and ensure ILLN participants have equal access to the materials. However, the cooperation should be formal and based on mutual benefits, so that each library in the network has equal access to the materials.

Keeping in view the numerous benefits of an ILLN, the purpose of this study was to survey and analyse the condition of present systems of university libraries in Saudi Arabia; determine the perceptions of librarians in the seven universities in the Kingdom toward collaboration; and design an interlibrary loan network model plan for planning and implementing a network system among academic libraries of Saudi Arabia.

The following research questions were set up to guide this study:

1. What is the current status of academic libraries of Saudi Arabia with regard to:

a. Administration and organization

b. Numbers and background of library staff

c. Size of collections

d. Available technologies

e. Cooperative activities available between libraries

2. What are the potential sources of financial support for an ILLN?

3. What should be the functions of an ILLN for the Saudi Arabian university libraries?

4. What are the major problems relating to the establishment of an ILLN among academic libraries, and how can these be solved?

5. What controls are needed to ensure that a network will operate effectively?

6. What steps and strategies should be taken to develop an ILLN?

The following three methods - literature review, questionnaire survey, and interview - were used for data collection. An extensive analysis of international literature related to ILL developments in developed as well as developing countries was conducted. Additionally, an extensive analysis of international literature related to resource sharing networks, in developed as well as in developing countries, was also conducted. A written questionnaire survey was administered to the seven Deans of the academic libraries in Saudi Arabia to obtain data related to library collections, users, budgets, library techniques, and the extent of cooperative interaction among the libraries, etc. Interviews of the librarians of the subject academic libraries were also conducted in order to identify problems affecting the current ILL situation and the

proposed ILLN.

A hundred percent completed questionnaire survey was obtained. The data presentation and interpretation of the questionnaire survey was presented in Chapter V. The questionnaire survey findings are summarized below under the headings of present status of academic libraries, cooperation among academic libraries, and network opinion.

Present Status of Academic Libraries

Out of seven academic libraries, only four libraries have a written policy, stating their library's goals and objectives. The goals and objectives of five libraries are research and curriculum support. Few academic libraries also support recreation and general information. The organizational structure of five academic libraries are of a centralized type, and all the seven academic libraries have all the five administrative units (circulation, acquisitions, cataloging, serials, and reference) in their libraries. A total of 576 staff are working in the seven academic libraries, out of which 249 or 43% are professional librarians, whereas 327 or 57% are non-professionals. The majority of professionals (139 or 56%) hold bachelor degree, followed by the master degree (58 or 23%) in library and information science.

The total budget of six academic libraries was SR.22,409,439 in 1993, whereas the 1992 budget of five libraries was SR.10,141,569, and in 1991, the budget of four libraries was SR.11,745,233. The budget of academic libraries in 1993 doubled from the previous year (1992) budget. Academic libraries do not receive their annual budgets in Saudi Arabia so they do not have direct control over it. All seven academic libraries avail the services of book dealers in

the USA and European countries to purchase books. Four academic libraries also purchase books directly from the publishers. Academic libraries also receive quite a large number of titles on gifts and exchange.

The total book collection of seven academic libraries stands at 2,554,379, out of which 913,312 or 26% books are in Arabic, and 1,641,067 or 64% books are non-Arabic. Non-Arabic books include English, Spanish, French, Urdu, Hindi, etc. language books. Six academic libraries meet the minimum standard proposed for Saudi academic libraries by Isa (1), while the study conducted by Ashoor (2) shows that, except for the King Saud University Library, all six libraries do not meet the ACRL standards in respect of collections. No library indicated that 'All of the Needs' in respect of textbooks, research, and recreation is being provided by their respective libraries. Therefore, there is an urgent need of resource sharing arrangement among academic libraries of Saudi Arabia. Five academic libraries use Dewey Decimal classification scheme to catalog their books, while two libraries use Library of Congress subject headings classification to catalog books.

Minicomputer, microcomputer, telefacsimile, microfiche reader/printer, microfilm reader/printer, photocopy machines are already being used by all of the academic libraries, if not, they have been planned for purchase during the next five years. The KFUPM Library is the only academic library which has automated all its functions. Four other academic libraries have also automated some of their functions. However, all libraries who have not already done so indicated that they have future plans to fully automate their libraries.

Cooperation among Academic Libraries

All seven academic libraries indicated that they have cooperation with all other academic libraries; it means there is a hundred percent cooperation among all the seven academic libraries, whether formal or informal. Only the King Abdulaziz University Library has all types of formal cooperation with other academic libraries. All academic libraries, except the Islamic University Library, have informal cooperation with KACST. All seven academic libraries have either occasional or frequent contacts with special, public, and school libraries.

Although an interlibrary loan department is a must for ILL cooperation, only three academic libraries have ILL departments in their libraries. It is desirable that the remaining libraries should open an ILL department in their libraries, if not, ILL should be made an activity in the reference department. Only three academic libraries have a union catalog and five academic libraries have union list of serials; mostly in print or computer printout format. For handling ILL requests and delivery of materials, all academic libraries usually use airmail. Academic libraries also use fax, telephone, and messengers for ILL activities. All seven academic libraries borrow materials from other academic libraries either occasionally or do not borrow, at all. The same practice is being followed for the lending of materials to other libraries. It is expected that with the establishment of an ILLN system among academic libraries, borrowing and lending of materials will get a boost. All academic libraries will be utilizing borrowing facilities of other libraries and at the same time lending their materials to other libraries. Thus, all academic libraries will

benefit equally.

Network Opinion Survey

The results of survey revealed that five, or 71%, of the libraries strongly favor participation in an ILLN, while only two academic libraries indicated that they only favor participation. This shows that an ILLN will be feasible as all libraries have shown a quite favourable interest in forming an ILLN. Six academic libraries indicated that they do not know whether their universities will provide the necessary funds for participation in an ILLN. However, librarians indicated that their libraries will recommend that their universities provide necessary financial support so that they may join the network. The photocopy service has been ranked number one as an area of cooperative activities by all academic libraries, followed, in order, by reciprocal borrowing, periodicals, facsimile service, and rare materials. These results underline the urgent need for establishing an ILLN among academic libraries so that libraries may more efficiently receive photocopies of articles from one another.

Inadequate finances and inadequate resources have been ranked number one as factors hindering cooperation among academic libraries by all academic libraries. Other factors which hinder cooperation are: absence of communication, absence of legislation, shortage of professionals, lack of cooperation, and absence of planning. The librarians interviewed indicated that the major problem with the academic libraries is that the university administrators did not not recognize the importance of academic libraries in education and research. One way to solve this problem is that the university

administrators must be convinced of the important role libraries play in research and education. A major factor in creating a strong country is providing the necessary facilities for the support of research. Effective research requires a library which is rich in collections, services, facilities, etc.

Through the questionnaire survey, all seven academic libraries agreed that current cooperative activities among academic libraries are inadequate. Therefore, majority of academic libraries (6 or 86%) rate ILLN as highly desirable. Only the establishment of an ILLN will provide necessary cooperation and coordination among all seven academic libraries, resulting in saving of time, effort, and money. If the efforts of librarians are coordinated, many common, simple problems of academic libraries will be solved, and at the same time, library services will be improved and upgraded as more and more materials will be available to more and more library users.

CONCLUSIONS

The questionnaire survey, literature review and studies (3) have all concluded that the collections of seven academic libraries of Saudi Arabia are small and not up to standard, therefore, they are unable to fulfill the needs of their faculty, students, researchers, and staff, and must borrow materials from overseas lending institutions at considerable expense. To overcome these problems, it is suggested that a cooperative and coordinated collection development policy of monographs and serials among seven academic libraries must be developed and immediately initiated. This is probably the only viable solution, as inflation and the explosion of publications will most likely continue, and there is no immediate

promise that the financial support by the government to the academic libraries will improve.

Another way to fulfill the library patrons needs is that an effective means of access among the seven academic libraries should be developed. To accomplish this objective, it is necessary that a new system is evolved in which all academic libraries will join together to solve their common problems on the basis of mutual respect and benefit. Therefore, this study has proposed an ILLN model plan among the seven academic libraries of Saudi Arabia.

The ILLN model plan has been developed to increase cooperation and coordination among all academic libraries. The model plan suggested by this study will both be a distributed and a centralized network. A distributed network in the sense that all academic libraries will coordinate and communicate directly with one another. A centralized network in the sense that the KFUPM Library will also function as a centralized library and perform several duties of a centralized library, besides performing its normal duties as a member participant in the network. Goals and objectives of the ILLN has been developed on which the network will be based. The success of any network is dependent on the solid organizational structure, therefore, a suitable organizational structure of the ILLN has been devised which included the board of directors, university board, network coordinator, and network planning groups, to be established at each library.

Any network can only be successful if all its operational requirements have been met. Operational requirements of the ILLN model plan, such as telecommunication systems, bibliographic tools, interlibrary loan policy and forms, have been fully discussed.

Fax, e-Mail, telex, CD-ROM and online searching, telex, airmail, etc. all telecommunication systems are available in Saudi Arabia to provide necessary support to the ILLN. Union catalogs, union list of serials, subject bibliographies, indexing and abstracting publications, etc. bibliographic tools are also available to promote the easy functioning of the ILLN. A formal ILL policy is a must for efficient resource sharing. Arab Bureau of Education for the Gulf States (ABEGS) ILL policy is available to fulfill the immediate requirements of ILLN; however, all libraries should develop their own ILL policies. In this regard, the KFUPM Library, centralized library in the network, will help and encourage all academic libraries to produce their own ILL policies. Several libraries have already produced their own ILL forms to facilitate interlending; those libraries which have not, will develop ILL forms in order to facilitate the smooth functioning of the ILLN.

Potential financial sources to support the ILLN have also been suggested. Since the initial expenditure will not be large, the study recommends that the Ministry of Higher Education should provide the necessary funds. Operational costs should be borned by all the academic libraries. The ILLN model plan suggests that all seven academic libraries should actively cooperate and coordinate with other national, regional, and international libraries to further widen the scope of available materials.

In conclusion, it is hoped that with the active participation and financial support of the government, it would be feasible and desirable to establish an ILLN among seven academic libraries which will provide greater cooperation, coordination, and efficiency. Faculty, students, researchers, and staff of all seven universities

will benefit with the establishment of ILLN. The ILLN will be formal, regular, and obligatory on all the academic libraries. All member participants of the ILLN will share equal responsibilities, power, and functions.

The ILLN model plan will provide a hundred percent sharing of resources of all the seven academic libraries, thus, the individual library strength will be increased; and it will be easier to fulfill the library users needs nationally. The ILLN will accomplish not only the increased sharing of resources and equal information access, it will also increase professional competence, because the librarians will learn to work with new technologies, verification and identification of materials and, above all, a spirit of coordination and cooperation. Academic libraries should organize seminars, workshops, etc. to provide an opportunity to librarians engaged in ILLN to learn new technologies.

It is also hoped that, in the future, the ILLN will continue resource sharing and expand its cooperative efforts in ways, such as extending the geographic boundries (for example, Gulf countries) of its service area, taking advantage of specialized materials available at individual libraries and formulating an area union list of serials. Thus, a regional ILLN may be realised at a later date.

RECOMMENDATIONS

General Recommendations

The following are the general recommendations which, the researcher feels, should be accepted by the respective organizations for the betterment of the library and information science profession. These recommendations are the result of researcher's fifteen years

experience as a professional librarian and association with the KFUPM Library, one of the premier libraries in the Arab world.

1. Saudi Arabian government officials, administrators, and librarians should help in developing an attitude and philosophy of true, unbridled, and unselfish cooperation between the university libraries.
2. There is no professional association in Saudi Arabia. It is recommended that an association of librarianship should be established in Saudi Arabia. Library associations help in fostering the profession of librarianship and the development of libraries.
3. Saudi Arabian governmental authorities should recognize the important role library and information science play today in economic and social progress of the country, therefore, adequate financial support to academic libraries should be allocated to upgrade their collections, services, etc.
4. Professional librarians should be allowed to attend national and international library and information science conferences, workshops, seminars, etc.
5. Chairmen of Departments of Library and Information Science at King Abdulaziz University at Jeddah, Imam Mohammed Ibn Saud Islamic University and King Saud University, both at Riyadh, and Umm Al-Qura University at Mekkah, responsible for library and information science education in Saudi Arabia, should modify and enrich their curricula to reflect new and modern concepts of librarianship and new technology.
6. The Council of Deans of Library Affairs of Saudi academic libraries were formed to accelerate the resource sharing

cooperation among all the seven academic libraries. Although numerous recommendations have been made in this regard by the Council, no effective action has been taken. It is recommended that all academic libraries should implement these recommendations immediately.

7. The researcher airmailed the questionnaire survey to the seven Deans of Library Affairs in the first week of April 1994. After follow-up visits and several contacts, the completed surveys were received only in September 1994, after a lapse of six months. It is recommended that academic libraries should not delay in completing questionnaires and providing research data.
8. Union catalogs and union lists of periodicals are two sources through which the verification and identification of materials available at other libraries, are possible. Those academic libraries which have so far not been able to produce these two valuable sources, should put maximum efforts in producing these sources. These sources should be made available to all academic libraries. By this, delay in supply of articles will be minimized.
9. Interlibrary loan cooperation may be further achieved by arranging periodic meetings between academic libraries to discuss common problems and find their solutions.
10. The ILL policy for university libraries in the member countries of the ABEGS needs to be revised as no library is following it completely. A meeting of all member libraries should be convened to give an impetus to the ABEGS ILL policy.

11. Most academic libraries have not prepared their own formal ILL policies. It is recommended that they should prepare one and the same should be made available to all academic libraries to facilitate interlending.
12. Only the KFUPM Library has automated all of its operations. Few libraries have automated some of their functions. It is recommended that the government should provide necessary financial support to the six academic libraries so that they may fully automate their operations.
13. Once the automation is complete, it will also help in verification of holdings of other libraries through GULFNET. It will also help in determining the materials to be requested on ILL by other libraries.
14. Although a national library has been established, it is working more as a public library and is not discharging the duties and responsibilities of a national library. It is recommended that the national library should function fully as a national library.
15. Developing countries that are interested in developing resource sharing arrangements, should learn from the experiences of other developing countries. It would be easier and more useful to establish ILLN system on the same lines as those established in similar developing countries than to follow unmodified first world models.

Recommendations for Future Research

The findings and conclusions of this study suggest a number of issues which are worthy of further investigation but do not fall

within the parameters of the present study.

1. The ILLN, as discussed in this study, is a model plan and theoretical in nature. Technical experts should be engaged to develop a detailed technical design and suitable lay out of the network according to the requirements of the Saudi Arabian academic libraries.
2. Experts should also be engaged to determine the actual financial requirements of ILLN as well as the operational costs required for the implementation of the ILLN.
3. The success of any new organization is very dependent on the staff working in it. A study should be conducted to assess the present and future needs of the ILLN in respect of staff. The study should also determine the best method of relocating the present staff for smooth functioning of the ILLN. Attitudes of staff towards the ILLN should also be studied.
4. Further research is needed to assess the actual number of library users (faculty, students, researchers, and staff) who will be served by ILLN.
5. Further research is also needed to determine the attitudes of faculty, students, researchers, and staff towards the ILLN.
6. A study should also be conducted to identify failed ILL requests, and to determine why they failed.
7. A study should also be conducted to determine the benefits of the ILLN and its effect on the participating academic libraries of the ILLN.

8. On the basis of the ILLN, further research should be conducted to develop resource sharing networks in respect of cataloging, collection development, and acquisitions among all academic libraries in Saudi Arabia.

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APPENDIX A

Cover Letters

02 April 1994

University of Na

Information S

P.O. Box 375 Pietermaritzburg 3200 Sout
Telephone (0331) 2605007 Fax (0331)
Telegrams University Tele
E.Mail Secretary @ infs.u

Dear Dr.

I am an Assistant Manager in the Reference & Information Services Division of the King Fahd University of Petroleum & Minerals (KFUPM) Library, Dhahran, and a Doctor of Philosophy student at the University of Natal.

A thorough review of the literature on the problems occuring within academic libraries of Saudi Arabia confirmed that a growing awareness for the need of greater cooperation among them was emerging. Because of the potential for improved cooperation among the Saudi Arabian academic libraries, I have chosen my dissertation topic as follows: A COMPARATIVE STUDY OF INTERLIBRARY LOAN FUNCTIONS AND THE DEVELOPMENT OF A MODEL INTERLIBRARY LOAN NETWORK AMONG ACADEMIC LIBRARIES IN SAUDI ARABIA.

The study will survey and analyze the condition of present systems of university libraries; determine the perceptions of librarians in the seven universities in the Kingdom toward collaboration; and design a model for planning and implementing a network system among academic libraries of Saudi Arabia.

I would appreciate your assistance by completing the enclosed questionnaire. Please be assured that your response and the additional information (organizational chart, interlibrary loan form and policy, etc.) that you may provide, will be kept in strict confidentiality, and will solely be used for the purposes of writing this dissertation without reference to you or your library.

Kindly airmail the completed questionnaire on the following address:

KFUPM Mail Box 1552
Dhahran - 31261
SAUDI ARABIA

I look forward to receiving your response at your earliest convenience. Thank you very much for your cooperation and assistance.

Sincerely yours,

MOID A. SIDDIQUI

Encl: As above.

The University of Natal reject
It is an equal opp



University of Natal

Information Studie

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18 February 1994

Dear Colleague:

This letter is to certify that Mr. Moid Siddiqui is a Doctor of Philosophy student of the Department of Information Studies, Faculty of Social Science at the University of Natal. Your cooperation in completing Mr. Siddiqui's questionnaire will not only assist in the completion of his dissertation, but will also benefit the profession by creating a body of knowledge that will be of immediate practical value.

It is only through the cooperation of practising professionals that proper academic research can be conducted, and we appreciate you taking the time from your busy schedule to assist in this research.

Sincerely,

Prof. Weldon J. Horton, Head
Department of Information Studies
University of Natal

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APPENDIX B

The Questionnaire

A QUESTIONNAIRE ON A PLAN FOR INTERLIBRARY LOAN NETWORK
AMONG UNIVERSITY LIBRARIES IN SAUDI ARABIA

PART ONE - INFORMATION ON THE LIBRARY

Name of University Library _____

1. Does your library have a written policy stating its goals and objectives?

   Yes _____ No _____

2. If the answer is "Yes," please check ( ) as many of the following as are applicable to your library's goals and objectives?

   Research _____ Curriculum Support _____ Recreation _____

   General Information _____ Other (please specify) _____

3. What is the organizational structure of your library?

   Centralized _____ Decentralized _____ Coordinated Decentralized _____

   Other (please specify) _____

4. Which organizational units does your library have?

   Acquisitions _____ Cataloging _____ Serials _____ Circulation _____

   Reference _____ Other (please specify) _____

5. What is the total number of personnel in your library?

   Professional _____ Non-Professional _____ Total _____

6. What type of degree do your library personnel have? (Please indicate the total number of each.)

Degree	Professional	Non-Professional
Ph.D.	_____	_____
Master	_____	_____
Bachelor	_____	_____
Diploma	_____	_____
Other (please specify)	_____	_____

7. What was the total budget of your library in Saudi Riyals (SR.) for the fiscal year of:

   1993 SR._____ 1992 SR._____

   1991 SR._____

8. What was the total budget for acquisition for the fiscal year of 1993 for:

   Books SR. _____ Serials SR. _____

   Microforms SR. _____ Other (please specify) _____

9. From whom does your library purchase books? (If more than one source, please give percentage of each.)

   Book dealers _____ Publishers _____ Other (please specify) _____

10. What is the size of your library collection as of December 1993?

	In Arabic	In English	Other	Total
Books	_____	_____	_____	_____
Serials	_____	_____	_____	_____
Microforms	_____	_____	_____	_____
Other (please specify)	_____	_____	_____	_____

11. In general, do you believe that the current collection in each of the following categories of your library meets the need of:

	All of the Need	Most of the Need	Some of the Need	None of the Need
Textbooks	_____	_____	_____	_____
Research	_____	_____	_____	_____
Recreation	_____	_____	_____	_____
Other (Please specify)	_____	_____	_____	_____

12. What classification scheme does your library use?

   Library of Congress _____ Dewey Decimal _____ Universal Decimal _____

   National Library of Medicine _____ Other (please specify) _____

13. What equipment is used by your library or is planned for the next 5 years?

	Now Available	Next 5 years
Minicomputer		
Microcomputer		
Telefacsimile		
Microfiche Reader/Printers		
Microfilm Reader/Printers		
Photocopy Machines		
Other (please specify)		

14. Are the following library operations computerized or do you plan to computerize them in the future?

	Computerized	Do Not Plan to Computerize	Plan to Computer-ize in the Future
Acquisitions			
Cataloging			
Circulation			
Serials			
Reference			
Other (please specify)			

PART TWO - INFORMATION ON COOPERATIVE ACTIVITIES

15. Does your library engage in any type of cooperative activities with other university libraries in the Kingdom?

Yes _____ No _____. If "Yes," please answer the following two questions (16 and 17).

16. Which university libraries does your library cooperate with?

Islamic University _____ King Abdulaziz University _____

King Faisal University _____ King Saud University _____

Mohammad Ibn Saud University _____ Umm Ul-Qura University _____

King Fahd University of Petroleum & Minerals _____

17. What type of cooperation does your library have with other university libraries in the Kingdom?

	Formal Agreement	Informal Agreement
Interlibrary Loan	_____	_____
Cooperative Acquisition	_____	_____
Cooperative Cataloging	_____	_____
Exchange of Acquisition Lists	_____	_____
Gifts & Exchange	_____	_____
Training	_____	_____
Resource Sharing	_____	_____
Planning for Automation	_____	_____
Other (please specify)	_____	_____

18. Does your library cooperate with the King Abdulaziz City for Science and Technology (KACST)?

Yes _____ No _____. If "Yes," what type of cooperation does your library have with KACST?

	Formal Agreement	Informal Agreement
Interlibrary Loan	_____	_____
Literature Search	_____	_____
Training	_____	_____
Planning for Automation	_____	_____
Other (please specify)	_____	_____

19. How frequently does your library cooperate with other types of libraries within the Kingdom?

	Very Frequently	Frequently	Occasionally	Never
Special Libraries	_____	_____	_____	_____
Public Libraries	_____	_____	_____	_____
School Libraries	_____	_____	_____	_____
Other (please specify)	_____	_____	_____	_____

PART THREE - NETWORK OPINION SURVEY

20. Does your library have an Interlibrary Loan Department?

    Yes _____ No _____

21. Does your library have a union catalog and/or a union list of serials? If "Yes," in which physical format?

	Yes	No	Format
Union Catalog	___	___	_____
Union List of Serials	___	___	_____

22. What type of communication does your library use in handling ILLs?

    Airmail _____ Telefacsimile _____ Telephone _____

    Other (please specify) _____

23. What type of delivery services does your library use?

    Airmail _____ Telefacsimile _____ Messenger _____

    Courier _____ Other (please specify) _____

24. How frequently does your library borrow the following materials from other academic libraries?

	Very Frequently	Frequently	Occasionally	Does Not Borrow
Reference Books	_____	_____	_____	_____
Circulating Books	_____	_____	_____	_____
Rare Books	_____	_____	_____	_____
Periodicals	_____	_____	_____	_____
Theses	_____	_____	_____	_____
Microforms	_____	_____	_____	_____
Maps	_____	_____	_____	_____
Other (please specify)	_____	_____	_____	_____

25. In general, how frequently does your library lend the following materials?

	Very Frequently	Frequently	Occasionally	Does Not Lend
Reference Books				
Circulating Books				
Rare books				
Periodicals				
Theses				
Microforms				
Maps				
Other (please specify)				

26. Does your library favor participation in an Interlibrary Loan Network (ILLN)?

Strongly Favor _____ Favor _____ Strongly Oppose _____

Oppose _____ No Opinion _____

27. Would your university provide funds for your library's participation in an Interlibrary Loan Network?

Yes _____ No _____ Do Not Know _____

28. Please identify areas of cooperative activities that you think an Interlibrary Loan Network should include:

	Highly Desirable	Desirable	Undesirable	Highly Undesirable
Reciprocal Borrowing				
Photocopy Services				
Rare Materials				
Periodicals				
Facsimile Service				
Other (please specify)				

29. Do you consider the following factors as problems which hinder cooperation between university libraries in Saudi Arabia?

	Yes	No
Inadequate Resources	___	___
Inadequate Finances	___	___
Absence of Communication	___	___
Absence of Legislation	___	___
Absence of Planning	___	___
Shortage of Professionals	___	___
Lack of Cooperation	___	___
Other (please specify)	___	___

30. Would you please comment on how to overcome those specific problems listed in above question?.

_____

_____

_____

_____

_____

31. Please rate the current cooperative activities among university libraries in the Kingdom.

Highly Adequate _____ Adequate _____ Highly Inadequate _____

Inadequate _____ Do Not Exist _____

32. In your opinion, how desirable is the ILLN system among university libraries in Saudi Arabia?

Highly Desirable _____ Desirable _____ Highly Undesirable _____

Undesirable _____ Do not know _____

.....

APPENDIX C

The List of Panel Experts

List of Panel Experts

King Fahd University of Petroleum & Minerals Library

1. Mr. Zahiruddin Khurshid, Senior Manager
   Cataloging Operations

2. Mr. Rafiuddin Siddiqui, Senior Librarian
   Serials Department

King Faisal University Library

1. Mr. Sibgatullah Khan, Librarian
   Circulation Department

2. Mr. Sadiq Ali Kasim, Librarian
   Serials Department

APPENDIX D

Addresses of Saudi University Libraries

Addresses of Saudi University Libraries (Alphabetical List)

A. Dean of Library Affairs
Imam Mohammad Bin Saud Islamic University (IMU) Library
P.O. Box 87910
Riyadh - 11652
Tel: 966-1-258 1200/Ext. 300
Fax: 966-1-259 0187

B. Dean of Library Affairs
Islamic University (IU) Library
P.O. Box 170
Madina Munawwarah
Tel: 966-4-822 4080
Fax: 966-4-847 0803

C. Dean of Library Affairs
King Abdulaziz University (KAAU) Library
P.O. Box 3711
Jeddah - 21481
Tel: 966-2-695 2068/640 0000
Fax: 966-2-640 0169

D. Dean of Library Affairs
King Fahd University of Petroleum & Minerals (KFUPM) Library
Dhahran - 31261
Tel: 966-3-860 3000
Fax: 966-3-860 3018

E. Dean of Library Affairs
King Faisal University (KFU) Library
P.O. Box 400
Al-Hasa 31982
Tel: 966-3-580 1247
Fax: 966-3-580 1243/587 8048

F. Dean of Library Affairs
King Saud University (KSU) Library
P.O. Box 22480
Riyadh - 11495
Tel: 966-1-467 6148
Fax: 966-1-467 6162

G. Dean of Library Affairs
Umm Al-Qura University (UQU) Library
P.O. Box 715
Makkah Mukarramah
Tel: 966-2-557 4644/10 Lines
Fax: 966-2-556 4560

APPENDIX E

Interlibrary Loan Network By-Laws

INTERLIBRARY LOAN NETWORK AMONG ACADEMIC LIBRARIES OF SAUDI ARABIA

BY-LAWS

ARTICLE I: NAME

The name of this organization shall be the Interlibrary Loan Network (ILLN) among academic libraries of Saudi Arabia.

ARTICLE II: STATEMENT OF PURPOSE

1. The ILLN among academic libraries of Saudi Arabia consists of seven academic libraries in Saudi Arabia. They have joined together to improve access to research resources within the country.

2. This policy statement extends the on-going cooperation and coordination between the academic libraries into the field of resource sharing through interlibrary loan. The purpose is to better serve faculty, students, researchers, and staff of all the seven academic libraries by providing more materials to more users.

3. Each library is free to concentrate their resources for acquisitions in the areas most closely related to their missions, knowing that other libraries are filling gaps in other areas.

4. This policy is voluntary and is not intended to prevent participating libraries from cooperating and coordinating with other national, regional, or international libraries for the purpose of resource sharing through interlibrary loan.

ARTICLE III: MEMBERSHIP

1. Founding members shall be the Imam Mohammad Bin Saud Islamic University Library, Riyadh; Islamic University Library, Medina; King Abdulaziz University Library, Jeddah; King Fahd University of Petroleum & Minerals Library, Dhahran; King Faisal University Library, Al-Hassa; and Umm Al-Qura University Library, Makkah Mukarramah.

2. New members must be approved by all the participating members of the ILLN before their admittance.

ARTICLE IV: OBJECTIVE

The purposes of the ILLN are to:

1. To explore a beneficial access method to research resources available to faculty, students, researchers, and staff.

2. To make available bibliographic tools to facilitate verification and identification of holdings.

3. To encourage users of seven academic libraries to use the ILLN.

4. To establish an effective, fast, and reliable communication system for rapid delivery of materials.

5. To reduce ILLN costs by adapting computer and communication technology.

6. To cooperate with other interlibrary loan networks in the Arab region as well as other countries of the world to provide access to a wider range of resources.

ARTICLE V: BOARD OF DIRECTORS

1. The Minister of Higher Education will directly supervise and control the ILLN and act as Chairman of the Board of Directors to provide support, leadership, stability, and necessary funds.

2. The Board of Directors also consists of all seven deans of academic libraries, and a network coordinator, as members.

3. The Board of Directors shall direct the affairs of the ILLN and shall decide all matters of official policy subject to the concurrence of the University Board.

4. The Board of Directors will meet at least four times a year. The Board may also meet as necessary on the call of the Chairman or at the request of four members of the Board.

ARTICLE VI: UNIVERSITY BOARD

1. The University Board will function as an advisory committee of the ILLN.

2. The Dean of Library Affairs will inform and discuss policies related to the ILLN with the University Board.

3. All matters that involve commitments of finance, material support, etc. must be approved by the University Board.

4. University Boards may suggest changes in policies which will be discussed and approved by the Board of Directors for implementation.

ARTICLE VII: NETWORK COORDINATOR

1. There shall be a Network Coordinator who reports to and shall implement the policies and programs of the Board of Directors.

2. The post of Network Coordinator will be rotated after every two years among all the seven academic libraries to provide a sense of equal responsibility, decision-making, power, and commitment.

3. The selection of the Network Coordinator by the Board of Directors shall be carried out within the framework of the policies and procedures of appointment in force at the institution to which the position is assigned.

4. The Network Coordinator should have academic library, technical, and professional experience, competence, and leadership skills.

5. The Network Coordinator shall attend meetings of the Board of Directors.

6. The Network Coordinator shall represent the Board of Directors and represent the network to the professional community.

7. The Network Coordinator shall prepare statistics, annual reports, and budgets.

ARTICLE VIII: NETWORK PLANNING GROUPS

1. Network Planning Groups (NPGs) shall be established within each of the seven academic libraries.

2. NPGs will advise, report to, and make recommendations to the Network Coordinator. They may decide procedural matters, but changes or additions to established ILLN policy shall be referred to the Board of Directors for further action.

3. NPGs will include at least four members, such as systems analyst, technical services head, reference and information services head, and a reference librarian responsible for ILL activitiy in his library. Other members may be included, as needed.

4. NPGs shall be responsible for the internal library policies, such as planning, development, communication system, hardware and software requirements, etc.

5. NPGs will meet at least once a month, if required, twice a month.

ARTICLE IX: CHANGES

1. These By-laws will be reviewed annually.

2. Changes to the By-laws must be approved by unanimous vote of the Board of Directors.

APPROVED AND SIGNED
ILLN BOARD OF DIRECTORS

APPENDIX F

International Lending: Principles and Guidelines for Procedure

INTERNATIONAL LENDING*: PRINCIPLES AND GUIDELINES FOR PROCEDURE (1978) (REVISED 1983)

The mutual use of individual collections is a necessary element of international cooperation by libraries. Just as no library can be self-sufficient in meeting all the information needs of its clientele, so no country can be self-sufficient. If the library service of a country is to be effective methods must be devised to obtain access to material held in other collections in other countries. International lending has as its aim the supply by one country to another, in the surest and fastest way, of documents that are not available in the country where they are needed.

The following Guidelines, agreed by the Standing Committee of IFLA's Section on Interlending in 1978, represent a major revision of the Rules agreed by IFLA in 1954. While they have no mandatory force, and while every country must determine the ways in which it conducts interlending, the Guidelines are strongly urged on individual countries and libraries as a basis for the conduct of international lending. They are preceded by a statement of Principles of international lending agreed in 1976 by National Libraries and by the Standing Committee of IFLA's Section on Interlending, and are accompanied by a commentary which seeks to elucidate and amplify certain aspects of the Guidelines.

PRINCIPLES OF INTERNATIONAL LENDING

1. Every country should accept responsibility to supply to any other country, by loan or photocopy, copies of its own publications, certainly those published from the present date, and as far as possible retrospectively. This responsibility may be discharged in various ways, among which national loan/photocopy collections appear to have particular advantages.

2. Each country should have a national centre or centres, to serve as a channel both for outgoing and incoming requests, though there may be circumstances in which requests may by-pass this channel. Such centres should be closely linked with, if not part of, the national library.

3. Each country should aim to develop an efficient national lending system, since national lending systems are the essential infrastructure of international lending.

4. As far as possible, photocopies or microfilms should be supplied in the place of loans of original copies.

5. Fast methods should be used for requesting, and, where long distances are involved, air mail should be used for supplying and returning items.

6. All requests should be dealt with expeditiously at all points: the requesting library, the national centre or centres, and the supplying library.

7. Standard and simple procedures should be developed and adopted, particularly procedures for requesting items and for reclaiming any payment.

---

* 'Lending' is held to include the sending of photographic and other reproductions in place of the original.

GUIDELINES FOR PROCEDURE

1. National Centre for International Lending

1.1 Each country (or in some federal countries, each state or province) should have a centre for international lending. Its main functions are:

a. to serve as a focus for the receipt of requests from abroad;
b. to serve as a focus for the transmission to foreign countries of requests from libraries in its own country;
c. to gather, with the assistance of libraries in the country, statistics of international loan transactions and to send these figures each year to the IFLA Office for International Lending.

1.2 Centres for international lending may, and should where possible, also perform the following functions:

a. serve as the centre for national interlending;
b. be the main national centre for union catalogue construction and maintenance;
c. have direct access to significant library collections in the country;
d. provide an information service for interlending;
e. have responsibility for planning, developing and supervising an efficient national system of interlending where this function is not adequately performed by another agency.

Commentary

National centres are recommended as being in most cases the simplest and most effective way of carrying out the functions enumerated in 1.1 and 1.2, and also of ensuring that other recommendations (eg 2.4) are observed. They also facilitate both requesting and lending by other countries. It is however recognized that alternative solutions may be found in some countries. In such countries, and countries which have as yet no national centre, the following recommendations are made:

1.1a Published guides, as comprehensive as possible, should be provided to facilitate the direction of requests by other countries. All libraries within the country should make strenuous efforts to observe the same procedures for handling and when necessary circulating requests received from other countries.

1.1b Individual libraries should accept responsibility for ensuring that no loanable copy of a required work exists in another library within the country before sending requests abroad.

1.1c The collection of statistics, which is vital for monitoring trends and efficiency, must still be carried out on a national basis.

1.2 Strong co-ordination is essential if the international requirements and responsibilities of a country without a national centre are to be fulfilled efficiently. A co-ordinating body may be in a position to fulfil some of the functions of a national centre.

2. Procedure for Requesting

2.1 All requests shall be made on the forms authorized by IFLA, unless otherwise stipulated by the library to which requests are sent.

2.2 To ensure that inadequate or inaccurate requests are not sent abroad the borrowing library shall verify, and where necessary complete, the bibliographic details of items requested to the best of its ability, giving the source of reference where possible. Where necessary the details shall be checked or completed by the national centre.

2.3 Requesting libraries should keep a record of all requests, each of which should bear a serial number.

2.4 All reasonable efforts shall be made to ensure that no loanable copy is available in its own country before a request is sent abroad. Documents that are available in a country but are temporarily in use should not be requested on international loan.

2.5 Requests should be sent by the fastest means available.

Commentary

Requests for loans should normally go through national centres, since otherwise it is very difficult to ensure that there is no other loanable copy in the country, and loans are expensive. It may be decided that it is easier, cheaper and faster to apply direct abroad (for example, when the only known location is outside the country); however, a record of all such requests should be sent to the national centre for information. Requests for photocopies may however in appropriate cases be made direct to foreign libraries, not necessarily in the country of publication.

2.1 At present there are two authorized forms: the older version with tear-off sections, and the three-part form introduced in 1975.

Forms should wherever possible be completed in typescript.

2.2 Inadequate requests cause delays, and may have to be returned for further checking.

Where a request is inadequate because the requesting library has insufficient bibliographical resources to check it, it should be checked by the national centre or centres before it is despatched.

2.4 Where there is more than one centre in a country, this is the task of the appropriate centre in each case.

2.5 Fast methods include telex, air mail and computer.

3. Procedure for Supplying

3.1 Every country has a special responsibility to supply its own national imprints on international loan. No country or library is under an obligation to supply a work that has been requested, but adequate effort should be made to satisfy international requests.

3.2 Items shall be sent direct to the requesting library except where, for administrative reasons, it is specifically required that they should be sent to the national centre.

3.3 All documents lent should be clearly marked with the name of the owning library.

3.4 Packages containing items sent in response to requests shall be clearly marked: 'INTERNATIONAL LOANS BETWEEN LIBRARIES. (International Agreement of 1978)'.

3.5 No library receiving a request should normally retain it for longer than one week (two weeks in the case of difficult requests) before supplying the item or returning the request to the national centre or the requesting library.

3.6 When a request cannot be satisfied, the requesting library should be notified at once.

3.7 When the satisfaction of a request is likely to be seriously delayed, the requesting library should be notified at once.

Commentary

3.1 The responsibility of each country to supply its own national imprints is emphasized without such a responsibility, both availability and speed of supply are seriousl jeopardized. This responsibility is an essential element in Universal Availability o Publications.

3.4 Clear statements on the outside of packages are necessary to avoid problems wit Customs.

3.5 Difficult requests include requests that require extensive bibliographic checking an requests that are satisfied by making copies of the items in question.

3.6 & 3.7 Failure to notify inability to supply or delays in supplying causes further delays and uncertainty in the requesting library.

In countries with no national centre, fast procedures should be devised to transmi requests that cannot be satisfied to other libraries. If such procedures are no possible, the requests should be returned at once to the requesting library.

4. Conditions of Supply

4.1 Where photocopies are supplied, libraries supplying and receiving them must abide by any provisions needed to satisfy relevant copyright regulations.

4.2 Original documents when received by the borrowing library shall be used in accordance with its normal regulations, unless the supplying library stipulates certain conditions.

4.3 Items should be sent by the fastest postal service available.

Commentary

4.3 It is recognized that in some cases the use of air mail, although desirable, may not be possible because the cost cannot be borne by either the borrowing or the supplying library. The use of fast methods of transmission is nevertheless very strongly urged, since slower methods may make libraries reluctant to lend and inconvenience the individual user.

5. Period of Loan

5.1 The loan period, which shall in all cases be specifically and clearly stated, shall normally be one month, excluding the time required for despatch and return of the documents. The supplying library may extend or curtail this time limit.

5.2 Application for extension of the loan period shall be made in time to reach the supplying library before the loan period has expired.

6. Procedure for Returning

6.1 Documents lent should be returned by the fastest postal service available. Packages shall be marked 'INTERNATIONAL LOANS BETWEEN LIBRARIES. (International Agreement of 1978)'.

6.2 Libraries returning documents shall observe any special stipulation by supplying libraries with regard to packaging, registration etc.

6.3 Documents shall be returned direct to the supplying library except where return to the national centre is specifically stipulated.

Commentary

6.2 Special stipulations may relate to special packaging in the case of fragile documents or registration in the case of rare items.

7. Receipts

No receipts shall be made either for the supply of an item or its return to the supplying library, unless specifically requested.

8. Responsibility for Loss or Damage

From the moment a library despatches an item to a requesting library until it returns, the requesting library shall normally be responsible for any loss or damage incurred, and pay the supplying library the full estimated cost of such loss or damage, including where requested any administrative costs involved.

Commentary

It is in the interests of all concerned to ensure that all items are adequately packaged. Claims from supplying libraries for loss or damage cannot be seriously entertained if packaging by them has been inadequate.

Supplying libraries are expected to help where necessary with postal inquiries in case of loss or damage.

9. Payment

Accounting and payment procedures should be minimized. Payment shall be made or waived according to agreements between the two countries involved. Payment between national centres or individual libraries receiving and providing a similar number of satisfied requests should be waived. Payment may be waived when the number of items supplied to a particular country or library is so small as not to justify the accounting procedures involved.

Commentary

Simplified methods of payment include:

a) prepaid systems, whereby national centres or libraries buy numbers of coupons in advance, and send an appropriate number of coupons with each request;

b) deposit accounts, whereby the supplying library holds a sum deposited by requesting library and deducts amounts from it according to each item supplied;

c) flat-rate payments, whereby average rather than individual costs are recovered; or unit payments, whereby charges are made in a limited number of units. Either of these methods may be combined with pre-payment or deposit accounts.

Payment may be made by national centres, which may recover it from requesting libraries in their countries, or direct by requesting libraries, according to the system in operation in the requesting country. The requirements of the supplying library or country, which should be as simple and clear as possible, must in all cases be observed.

Different practices may be applied to loans and to photocopies or other reproductions sent in place of loans: for example, two countries, or a group of countries, may agree to waive charges for loans but not for photocopies.

10. Statistics

Libraries participating in international lending shall keep statistics of requests received from and sent to other countries, and those satisfied in each case. These statistics shall be sent each year to the national centre or national association for forwarding to the IFLA Office for International Lending.

Commentary

The statistics to be collected should include:

1. The total number of requests sent abroad and the total satisfied a) by loan, b) by photocopy.

2. The total number of requests received from abroad and the total satisfied a) by loan, b) by photocopy.

The above statistics should preferably be kept in rank order by country.

Where it is not possible to collect figures for satisfaction rates over all requests, they may be estimated from sample surveys.

A fuller statement of recommended statistics is given in IFLA Journal, volume 3 number 2 1977, page 117-126: International lending statistics.

APPENDIX G

Interlibrary Loan Forms

PLEASE PRINT CLEARLY

KFUPM - LIBRARY
REFERENCE & INFORMATION SERVICES DIVISION
INTERLIBRARY LOAN/PHOTOCOPY REQUEST FORM

Date _____ Reg. No. _____

Name Dr./Mr. ..... Dept. ..... Mail Box ..... Phone. .....

Check One: ☐ Faculty ☐ Staff ☐ Res.Asst. ☐ Graduate ☐ Undergraduate
Check One: ☐ Journal ☐ Book ☐ Proceedings ☐ Thesis ☐ Other

Name of Publication .....

Vol. ..... No./ Part ..... Month ..... Year ..... Pages: From ..... To .....

Author of Article / Book .....

Title of Article .....

.....

Where did you find out about this article ? Please give specific information (Name of journal, index book,etc.)

.....

..... Date ..... Vol. ..... Page .....

Not needed after ..... FOR QUESTIONS, CONSULT A LIBRARIAN ON TELEPHONE NO.(3016).

DEPARTMENT HEAD APPROVAL : _____ _____ _____
Name Signature Date

KINGDOM OF SAUDI ARABIA
Ministry of Higher Educaiton
KING ABDULAZIZ UNIVERSITY
Deanship of Library Affairs
USER SERVICES
Ref. Dept. – Interlibrary Loan
P.O Box 3711, Jeddah 21481

المملكة العربية السعودية
وزارة التعليم العالي
جامعة الملك عبد العزيز
عمادة شؤون المكتبات
خدمات المستفيدين
قسم المراجع - الاعارة بين المكتبات
ص ب ٣٧١١ ، جدة ٢١٤٨١

Photocopy Request طلب تصوير

Title of book / or periodical : عنوان الكتاب / أو المجلة :				Request No. : رقم الطلب :
Year : السنة :	Volume : المجلد :	Part : الجزء :	الصفحات المطلوبة : Pages required :	Date : التاريخ :
Author and title of article : المؤلف و عنوان المقالة :				Researcher Name : اسم الباحث :
Address of supplying library : عنوان المكتبة المعيرة :				Department : القسم :
				Faculty : الكلية :
Director of User Services: مدير خدمات المستفيدين :	Remarks : ملاحظات :			Tel. No. : الهاتف :

بسم الله الرحمن الرحيم

KINGDOM OF SAUDI ARABIA
KING SAUD UNIVERSITY
UNIVERSITY LIBRARIES
SERIALS DEPARTMENT
P.O.BOX 22480
RIYADH 11495
TEL: 4676118
FAX: 966-01-4676162
TELEX: 401019 KSU SJ

المملكة العربية السعودية
جامعة الملك سعود
عمادة شؤون المكتبات
ص.ب: ٢٢٤٨٠ - الرياض ١١٤٩٥
تليفون: ٤٦٧٦١١٨ تلكس: ٤٠١٠١٩
فاكس: ٤٦٧٦١٦٢ - ٠١ - ٩٦٦

طلب اعارة خارجية

INTERNATIONAL LOAN REQUEST

TITLE OF BOOK OR PERIODICAL اسم كتاب او الدورية				REQUEST NO.: DATE: RESEARCHER NAME: ADDRESS: TEL.NO.:
YEAR السنة	VOLUME المجلد	PART العدد	PAGES REQUIRED الصفحات	
AUTHOR AND/OR TITLE OF ARTICLE مؤلف المقال أو عنوانه				

RECEIVER NAME:

SIGNATURE:

DATE:

PLEASE FILL THIS REQUEST CLEARLY

INTERLIBRARY LOAN PROCEDURE FOR UNIVERSITY LIBRARIES IN THE ARAB GULF STATES

LOAN REQUEST

TO: (Name & Address of the Library).....
.....

Request No.:..... Date.....

Material Requested: Book ☐ Article ☐ Thesis ☐ Other Materials(Indicate).....

BOOKS

Author :.....

Title :.....

Place of Publication :.....

Publisher :.....

Date:.....

PERIODICALS

Author :.....

Title of Article:.....

Name of Periodical :.....

Date :.....

Vol. & No. :.....

No. of Pages :.....

Other Information :.....

Source of Reference :.....

Type of Request : Loan

Copy

Microform

Other (Indicate).....

For Use of: ..... Status: .....

Address : .....

(To be filled by the lending library)

Dispatch Date:.....Authorised by:..... Signature :.....

NAME AND ADDRESS OF THE BORROWING LIBRARY

I.F.L.A. INTERNATIONAL LOAN/PHOTOCOPY REQUEST FORM
FORMULAIRE DE DEMANDE DE PRET/PHOTOCOPIE INTERNATIONAL

COPY B EXEMPLAIRE B

Request ref. no/Patron identifier
No. de Commande/identité de lecteur

Borrowing library's address
Adresse de la bibliothèque emprunteuse

Needed by
Demande avant

Quote if cost exceeds
Prix si plus que

Shelfmark
Cot de placement

Request for: ☐ Loan Pret ☐ Photocopy Photocopie ☐ Microform

Report/Response

Books: Author, title - Livres: Auteur, titre / Serials: Title, article title, author - Périodiques: Titre, titre de l'article, auteur

Place of Publication
Lieu de publication

Publisher
Editeur

Year-Annee	Volume-Tome	Part-No.	Pages	ISBN/ISSN

Edition

Source of verification/reference
Référence bibliographique/Verification

Lending library's address/adresse de la bibliothèque prêteuse

☐ Part not held/Volume/fascicule non détenu

☐ Title not held/nous n'avons pas ce titre

☐ Not traced/Ne figure pas dans cette bibl.

☐ Not for loan/Exclu de prêt

☐ Copyright restrictions

☐ Not immediately available. Reapply in ..... weeks
Non disponible actuellement. Renouvelez la demande dans ..... semaines

☐ Lent until/Prêté jusqu'au .....

☐ Use in library only/A consulter sur place uniquement

I declare that this publication is required only for the purpose of research or private study.
Je déclare que cette publication n'est demandé qu'à des fins de recherche ou d'étude privée

Signature .....

Date .....

Send copies B, C and D to the supplying library keep the Yellow A copy for your own records.

This is a Multipart Set Please use a Ball Point Pen



American Library Association (ALA) Request Form

Please send by Second Class Airmail

Requester's order no.:

Date of request:

A

REQUEST

☐ Borrowing Library

Fill in left half of form including both library addresses in full

Call No.

Fold here

Book author: OR: periodical title, vol. and date

Send sheets A, B and C to lending library, and enclose shipping label

Book title, edition, place, year, series: OR: periodical article author, title, pages. ☐ This edition only.

Verified in: OR: item cited in

ISBN, or ISSN, or LC card, or OCLC, or other number if known _____

If non-circulating, & cost does not exceed $.15.00, please supply ☐ Microfilm ☐ Hard copy

Lending Library

Fill in pertinent items under REPORTS return sheets B and C to borrowing library

Request complies with *copyright law (CCL)*

AUTHORIZED BY

Request for ☐ LOAN or ☐ PHOTOCOPY
According to the A.L.A. Interlibrary Loan Code

REPORTS: Checked by

SENT BY: ☐ Library rate ☐ _____

Charges $ _____ Insured for $ _____

Date Sent _____

DUE _____

RESTRICTIONS: ☐ For use in library only

☐ Copying not permitted ☐ _____

NOT SENT BECAUSE: ☐ In use ☐ Not Owned

☐ Non Circulating

☐ Request of _____

Estimated Cost of: ☐ Microfilm _____

☐ Hard copy _____

BORROWING LIBRARY RECORD:

Date received _____

Date returned _____

By ☐ Library rate ☐ _____

Postage enclosed $ _____ Insured for $ _____

RENEWALS: ☐ No renewals

Requested on _____

Renewed to _____

(or period of renewal)

Note: the receiving library assumes responsibility for notification of non-receipt.

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