Availability and Use of Electronic Databases at Arab Universities

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Abstract

Latest developments in information technology resulted in a revolution in library and information sciences. Acquiring electronic searching skills together with the availability of electronic resources will enable researchers to access a plethora of up-to-date information and will lead to productivity in research. This study tried to investigate the availability of electronic databases at Arab university libraries, whether faculty members can search electronic databases, and the frequency of database usage. The homepages of 202 Arab universities were browsed and a sample of faculty was interviewed. It was found that 80.7% of Arab university libraries are still traditional and lack electronic databases, including some open universities, virtual universities and universities of science and technology. All university libraries in the Gulf States except Shari'aa universities contain electronic databases. It was also found that most databases are in English; Arabic databases are lacking. Foreign universities, such as the University of Columbia in the Sudan and the American Universities of Cairo and Beirut host many more databases than Arabic universities. It was found that all electronic databases at Um Al-Qura University were used 3686 times a year only. On average, a student or faculty member uses all databases once a year. Taking into consideration that the subscription fee for a single database per year can be as high as US$ 24,000, it can be said that database usage at Arab universities with database access is not cost-effective. In addition, 94% of female faculty members and 97% of female graduate students and none of the library employees at King Saud University can search electronic databases. On the basis of these findings, the study recommends that all Arab universities and research centers have a network of electronic resources, and that Arabic specialized electronic databases be created and new documents be indexed and stored on a regular basis. Researchers should be allowed to access available databases on and off-campus. Electronic publishing in Arabic should be also encouraged.

Keywords: electronic databases, electronic resources, Arab universities, electronic searching, database utilization, database cost.

1. Introduction

Latest developments in technology have revolutionized libraries and information sources and have enriched scientific research quantitatively and qualitatively. Electronic libraries, electronic databases, electronic publishing, electronic books and periodicals are now available. Nowadays libraries provide researchers with information in electronic form via computer networks, and electronic catalogs that enable them to access electronic databases in various specializations and enable them to connect to information sources in any library anywhere in the world. In most countries, the amount of money that universities spend on electronic information sources has increased. In a study by Kilpatrick (1998) on 15 academic libraries, the researcher found that these universities spend between 6.25% and 16% of the budget allocated to educational resources on electronic information sources. The number of universities that provide electronic information sources to their students is constantly increasing. For example, the number of electronic journals has increased from 27 in 1991 to 2,459 in 1995 (Shontz and Wright, 1995).

Electronic information is characterized by being very modern, covering the largest possible number of periodicals, reports or statistics in a specific specialty, and it is updated and added to constantly and quickly. While traditional print information sources are outdated and the library is provided with only a limited amount of them, they do not cover the required subject widely. Electronic research is characterized by being fast. The

researcher can connect to any electronic database anywhere in the world from home day and night, seven days a week, and during holidays, instead of going to the library building. He can obtain in hours an amount of information that he could obtain in weeks or months. He/she can obtain the required articles and documents immediately by printing them, downloading them directly from the screen, or sending them by e-mail to another person instead of requesting them from abroad and waiting for long months for them to arrive by mail.

The huge amount of electronic and digital information provides great benefits to university professors, students and researchers because of the ability of searching for a large amount of information much faster than manually searching printed information sources. It also enables them to discover information through electronic means that cannot be discovered through traditional search methods in library catalogs or printed references. In the field of teaching, the information available electronically helps to constantly update course content, facilitate the learning process, and improve classroom activities. In the case of universities with multiple branches, electronic educational materials help provide similar sources of educational information in all branches. In the field of scientific research, electronic references encourage rapid progress in research, immediate communication between researchers, and access to new discoveries.

With the political, social, economic, cultural and technological developments that have occurred in the world in the present time, information technology has become an indispensable necessity for the Arab world. It is the most important means of transferring developing societies in Arab countries to advanced societies. Information systems are the basis on which this technology is based because they combine three main components: computers, software, and communication networks. It contributes directly to building a new Arab society that relies on electronic information services directly related to communication, production, and education.

2. Purpose and Questions of the study
This study aimed to identify the extent to which Arab university libraries keep pace with latest technological developments in electronic information sources, and the extent to which faculty members and students benefit from and actually use them.

This study attempted to answer the following questions:
- What percentage of Arab universities contain foreign and Arabic electronic databases?
- Which Arab universities contain foreign and Arabic electronic databases in their libraries?
- What is the average use of electronic databases by faculty members and students at Arab universities?
- Which databases are mostly used, and which are least used?

3. Limitation of the study
The current study is limited to listing the universities that have foreign and Arab electronic databases as shown on their libraries' websites. Whether the university has established a list of databases arranged alphabetically, thematically, or according to the company publishing the databases only, whether the databases are for summaries or full texts, and whether it is stated on the site that the library contains databases without mentioning their names and providing links to them. The study did not limit the universities that have electronic catalogs (OPAC), electronic periodicals, electronic books, information databases on CD-ROMs, links to educational sites, and so on. The study is limited to enumerating the total number of specialized databases under the names of the publishing companies, if mentioned, and is limited to mentioning the number of publishing companies if the names of the databases in each specialty were not specified under them. The study is also limited to inventorying the databases in university libraries and higher education institutions with multiple specializations and colleges in all Arab countries, whether governmental or private, Arab or non-Arab. The study population did not include college libraries, teachers' institutions, community colleges, technical and technical institutions, language institutions, and others.

4. Definition of terms

4.1 Specialized electronic databases

It is an organized list of published information sources (mostly periodical articles) that gives the researcher guidance. It is a reference citation for the article that enables him to find complete information about the article or provides him with its full text in the case of information databases that contain full-text texts. databases. Each information source has one record, consisting of a set of fields, each of which contains specific information about the source. The database searches for information in these fields.

4.2 Virtual electronic libraries (virtual): Virtual libraries

Libraries use computers and telecommunications to connect to a wide variety of information sources. Tochtermann (1996) added that the holdings of the virtual electronic library consist of digital documents and Internet resources that are links that lead to other documents stored elsewhere on the Internet. Thus, the virtual electronic library controls the links, not the documents linked to them. The virtual electronic library provides the researcher with digital indexes consisting of information about the collection of documents. The digital library provides all the services provided by traditional libraries and uses technology to its advantage.

5. Literature Review

5.1 Arabic studies

A number of Arab studies were conducted on samples of faculty members and students to identify the nature of the beneficiaries of the CD-ROM service, the beneficiaries' attitudes towards using databases on CD-ROMs, the extent to which they use them, and the obstacles they face while using them, such as the study by Rajeh (2003) and Mashali (1999), and Ulayyan and Ali (1999). A study conducted by Al-Shuwish (2002) on 18 university libraries, institutions and information centers in Riyadh to determine the extent to which their patrons use bibliographic databases. The researcher found that the total number of databases available in the eighteen libraries is 62 databases without repetition, and 89 databases with repetition, of which 39 databases are online, and 50 databases are on CDs. The researcher found that the most commonly used databases were ABI and Medline. They are used between 450-540 times a month. It was also found that the average use of the 15 databases is 30-90 times per month, and that the average use of 61% of the databases is between 1-12 times per month. It should be noted that the researcher did not find any study that limited the electronic databases in universities at the level of Arab countries.

5.2 Foreign Studies

A group of studies were conducted to find out the availability of electronic databases in Western school and university libraries, including a survey conducted by the Canadian Association of College and Technical Libraries on 135 libraries in Canada. Kemp & Waterton (1997) found that 85% of Canadian libraries provide Internet services to students and faculty. Tenopir and Neufang (1995) found that all member universities of the Association of Research Universities have databases on CD-ROMs; 33% of them have more than 100 databases; more than half of them have more than 60 databases; 35.4% of them have more than 30 databases, and 75% of libraries have local networks of databases on CD-ROMs. Similarly, Kinnersley (2000) found that the vast majority of high schools in Kentucky provide students with access to electronic information resources and to the Internet. Students can connect to electronic information sources from computer laboratories or the classroom, in addition to some teachers who train students to use them outside the library.

Regarding the services provided by Western libraries to their patrons, the results of Schiller's study (1992) showed that most of the member libraries of the association have electronic services and systems that include providing researchers with electronic documents, enabling them to connect to full-text information databases, and integrating their information sources into the electronic index. Intended for the Public (OPAC) Online Public Access Catalog. It provides information systems at the university level. Tenopir and Neufang (1995) found that the number of libraries providing remote communication services jumped from 6 libraries in 1991 to 21 libraries in 1994 (i.e., an increase of 22%). Library staff in all of these libraries conducted electronic searches for patrons.

In 66% of them, pioneers conduct the electronic search themselves. 23% of them contain full-text databases, and 17.7% of them contain evidence databases. 86% of these libraries use the Internet to provide reference services such as sending references by e-mail, connecting to remote databases, research inquiries, and how to contact other library catalogues. 51% of them provide remote technical support.

These studies show the extent of interest of university libraries in Western countries in electronic information sources and the extent to which faculty members keep abreast with technological progress in the field of library sciences, and their ability to use and benefit from electronic sources.

6. Research Methodology

6.1 The University Population

The researcher obtained the names of Arab universities from the Association of Arab Universities website, searching "Google" and some Arabic websites such as "Al-Raddadi website." The university population consists of 202 public and private universities in all Arab countries, as follows:

1) **Jordan**: Irbid National University, Al al-Bayt University, Jordan University of Science and Technology, University of Jordan, Al-Isra University, Princess Sumaya University for Technology, Petra University, Al-Balqa Applied University, Al-Hussein bin Talal University, Zarqa University, Al-Zaytoonah University, University of Applied Sciences, The Hashemite University, Yarmouk University, Jerash National University, Al-Ahliyya Amman University, Philadelphia University, Mu'tah University.

2) **UAE**: Ajman University of Science and Technology, American Intercontinental University, American University in Dubai, American University of Sharjah, University of Sharjah, Higher Colleges of Technology, United Arab Emirates University, University of Wollongong, Zayed University, Etihad University.

3) **Bahrain**: University of Bahrain, Gulf University.

4) **Tunisia**: University of Zitouna, University of Manouba, University of Tunis, University of Tunis El Manar, University of November 7 in Carthage, University of the Center, University of Sfax of the South, Virtual University, University of Jendouba, University of Gabes.

5) **Algeria**: University of Jijel, Central University of Tiaret, Abu Bakr Belkaid University, Ammar Teledji University, University of Algiers, University of Annaba, Oran Sunni University, University of Batna, University of Bejaia, University of Blida, University of Mostaganem, University of Warjala, University of Sidi Bel Abbes, University Mohamed Bouqira, Mentouri Constantine University, Houari Boumediene University of Science and Technology, Badji Mokhtar University, Mohamed Boumdiaf University of Science and Technology, Prince Abdelkader University.

6) **Saudi Arabia**: Imam University, Islamic University, King Abdul Aziz University, King Fahd University, King Faisal University, King Khalid University, King Saud University, Umm Al-Qura University, Prince Sultan University, Naif Arab University for Security Sciences

7) **Sudan**: Africa International University, Ahfad University, Imam Mahdi University, Red Sea University, University of Khartoum, Al-Zaim Al-Azhari University, Sudan University of Science and Technology, Al-Ghadarif University, Al-Fasher University, University of the Qur'an and Islamic Sciences, Al-Nilein University, Al-Walanji University, Omdurman Islamic University , University of Juba, University of Gezira, University of Dongola, University of Sennar, University of Shendi, University of West Kordofan, Columbia University, University of Nyala, Nile Valley University,

8) **Syria**: Damascus University, Aleppo University, Tishreen University, Al-Baath University, Virtual University, Al-Ittihad University.

9) **Somalia**: University of Mogadishu, Somali National University.

10) **Iraq**: University of Baghdad, Al-Mustansiriya University, University of Mosul, Saladin University, University of Technology, Al-Qadisiyah University, Tikrit University, University of Kufa, Anbar University, University of Babylon, Al-Nahrain University, Diyala University, Islamic University.

11) **Oman**: Sultan Qaboos.

12) **Palestine**: Al-Quds Open University, Al-Quds University, An-Najah National University, Bethlehem University, Birzeit University, Hebron University, Islamic University of Gaza, Al-Aqsa University, Al-Azhar University in Gaza, Arab American University, American World University in Gaza.

13) **Qatar**: Qatar University.

14) **Kuwait**: Kuwait University, Arab Open University.

15) **Lebanon**: American University of Beirut, Balamand University, Beirut Arab University, Haigazian University, Jinan University, Lebanese American University, Lebanese University, Matn University, Notre Dame University, Holy Spirit University, Ouzai University, Lebanon Islamic University, American University of Technology.

16) **Libya**: Al-Arabi Medical University, Al-Fateh University, Bright Star University of Technology, Nasser University, Omar Al-Mukhtar University, Challenge University, Derna University, Al-Fateh University of Medical Sciences, Western Mountain University, Sebha University, April 7 University, Garyounis University, Nasser University.

17) **Egypt**: Arab Academy for Science and Technology, Sadat Academy for Administrative Sciences, Assiut University, October 6 University, October University for Science and Modern Arts, Al-Azhar University, Alexandria University, American University in Cairo, Banha University, Zagazig University, Cairo University, Mansoura University, Menoufia University, Minya University, South Valley University, Helwan University, Senghor University in Alexandria, Tanta University, Ain Shams University, Suez Canal University, Misr International University, Misr University for Science and Technology, Arab Academy for Science and Technology in Alexandria.

18) **Morocco**: Al Akhawayn University, Hassan I University, Hassan II Mohammedia University, Mohammed I University of Oujda, Agdal Mohammed V University, Mohammed V Souissi University, Cadi Ayyad University, Choueib Doukkali University, Al-Qarawiyyin University.

19) **Mauritania**: University of Nouakchott.

20) **Yemen**: Sana'a University, University of Aden, Al-Iman University, Queen Arwa University, University of Science and Technology, Taiz University, Al-Ahqaf University, National University, Hodeidah University, Ibb University, Hadhramaut University, Yemeni University, University of Social Sciences and Applied Sciences, Dhamar University.

6.2 Data collection

The researcher entered the websites of Arab universities and searched for everything that would indicate the presence of electronic databases in their libraries. I reviewed the list of databases that the university subscribed to and listed their total number. I prepared a list of the names of the universities that have information databases and the total number of databases that are available in them. I also obtained statistics on the amount of use of electronic databases at King Saud, King Abdulaziz and Umm Al-Qura Universities, the Institute of Public Administration in the Kingdom, and the American University of Beirut from the agent of the companies publishing databases in the Arab countries, which is the "Arab Company for Advanced Systems." I obtained the total number of faculty members and students in the aforementioned universities for the year 1422-1423 from the Saudi Ministry of Higher Education website and obtained similar statistics directly from the American University of Beirut.

7. Results

7.1 The percentage of universities that have databases

The results of the study showed that about 19.3% of Arab university libraries have specialized electronic databases, which are shown in Table No. (1). It was found that 46% of these universities have less than 25 databases, and that 12.8% of them contain between 26-50 databases, and 12.8% whose libraries contain between 86-414 databases, and that about 29% did not specify the number of databases they contain or their names. It did not place links to it on the library's website, or it only has databases on CDs or other electronic information sources. It is clear from Table 1 that all university libraries in the Gulf States have electronic databases. The number of electronic databases in the libraries of foreign universities, such as Columbia

University in Sudan (414 databases), the University of Wollongong in Dubai (254 databases), the American University of Beirut (120 databases), the American University in Cairo (86 databases), and the American University of Sharjah (44 databases), and the American University in Dubai (27 databases) far exceeds the number of information databases in the libraries of Arab universities.

As for Arab universities whose libraries do not contain electronic databases, the results of the study showed that the libraries of Islamic universities such as Al-Azhar University in Cairo and Gaza, Al-Iman University in Yemen, Al-Awza'i University in Lebanon, the Islamic University of Lebanon, and Christian religious universities such as Saint Joseph's University and the University of the Holy Spirit in Lebanon and elsewhere have no electronic databases. The results also revealed that the libraries of open universities, such as the Arab Open University and Al-Quds Open University, and the libraries of virtual universities, such as the Virtual University in Tunisia, the Syrian Virtual University, and the University of Hodeidah, do not contain electronic databases on their websites, as well as the libraries of some universities of science and technology, such as the University of Science and Technology in Yemen, and the Institute. High Tech University on the 10th of Ramadan in Egypt, and the University of Science and Technology in Jordan does not have electronic databases.

In addition, the results of the current study revealed that all universities in some Arab countries, such as Libya, Tunisia, Somalia, Mauritania, and Iraq, do not contain electronic databases or any type of other electronic information sources in their libraries. There are some Arab universities that do not have a website, including:
- Jordan: Irbid National University, Al-Isra University, Al-Hussein University, Jerash National University.
- Tunisia: University of Tunis, University of Jendouba.
- Algeria: University of Oran, Houari Boumediene University of Science and Technology, Prince Abdelkader University.
- Sudan: Al-Nilein University, Omdurman University, Juba University, Gezira University, Africa International University, Nile Valley University, Al-Zaim University, Al-Azhari University, Red Sea University, Zalingi University, Nyala University, West Kordofan University, Sinnar University, Imam Mahdi University , Dongola University.
- Syria: Al-Baath University.
- Somalia: Somali National University.
- Iraq: University of Baghdad, Al-Mustansiriya University, University of Mosul, Saladin University, University of Technology, Al-Qadisiyah University, Tikrit University, University of Kufa, Anbar University, University of Babylon, Al-Nahrain University, Diyala University, Islamic University.
- Libya: Al-Fateh University, Sebha University, Nasser University, April 7th University.
- Egypt: Zagazig University, South Valley University, Sadat Academy for Administrative Sciences.
- Morocco: University of Al-Qarawiyyin.
- Mauritania: University of Nouakchott.
- Yemen: Taiz University, Al-Ahqaf University, Yemeni University, University of Social Sciences and Applied Sciences, Dhamar University.

7.2 The quality of available databases
The results of the study showed that all electronic databases available in Arab university libraries are foreign databases (in English). They all lack Arabic databases specialized in medicine, engineering, pharmacy, economics, law, agriculture, computer science, library and information sciences, education, Arabic literature, and Islamic religion, and lack comprehensive databases for all Arabic doctoral dissertations. However, some small databases exist such as the information base of the Arab Bureau of Education for the Gulf States for Educational Research, and the King Abdulaziz City for Science and Technology. There are some local databases for some newspapers, doctoral dissertations, research papers, and some electronic references and peer-reviewed journals in some Arab universities, such as:
- The Saudi government documents database from the Institute of Administration includes the following documents (royal decrees, decisions of the Council of Ministers, the Civil Service Council,

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the Supreme Committee for Administrative Reform, decisions and executive circulars of government agencies, in addition to Saudi agreements, treaties and regulations.

- King Faisal University Dissertations Database which is a bibliographic database containing 70,000 doctoral and master's theses from Arab universities and institutions.
- An-Najah Electronic Searchlight index provides free electronic indexing information for the majority of Arabic periodicals, research papers, and master's theses available in An-Najah University's libraries.
- Information databases of the King Faisal Center for Research and Islamic Studies.
- Lawyers in the Arab World (Yarmouk University).
- Directory of Saudi Universities Publications.
- Saudi research guide from King Abdulaziz City.
- Lawyers of the Kingdom of Saudi Arabia (Institute of Public Administration).
- Adala database (Zarqa University).
- Encyclopedia of Jordanian Legislation.
- Lebanese "legislation" database.
- Lebanon Scouts.

7.3 The extent to which faculty members and students use electronic databases

Although some specialized electronic databases are available at some universities in the Gulf States, Jordan, Lebanon, Egypt, Sudan, Morocco, and Algeria, the average use of specialized electronic databases by faculty members and students at those universities that have is not proportional to the total number of faculty members and students in those universities, and it is not commensurate with the high cost of subscribing to those databases. By comparing the total number of faculty members and graduate and bachelor's degree students in five Arab universities, which are King Saud University, King Abdulaziz University, Umm Al-Qura University, the Institute of Public Administration, and the American University of Beirut, shown in Table 2, and the statistics that the researcher obtained from the Arab Company for Advanced Systems, in the frequencies of use of full-text information databases and abstract databases for those universities over a full year for King Saud University, King Abdulaziz University, and the Institute of Management, over a period of 14 months for Umm Al-Qura University, and 24 months for the American University of Beirut (until March 2004), which appear in Table 3, it appears that the average number of users in the time periods specified above is very small compared to their high cost, and the high uses of electronic databases in other countries, especially developed countries. The average number of times the databases are used together is once a year for one person at King Saud University, once a year for every eight people at King Abdulaziz University, once during 14 months for every two people at Umm Al-Qura University, and three times a year. per person at the Institute of Management, and once every two years per person at the American University of Beirut (see Tables 2 and 3).

It appears from Table 4 that the most widely used electronic database is Academic Search Premier. The highest average usage was at King Saud University (3406 times per month). Followed by the ABI commercial and administrative information base. The highest average use was at the Institute of Management (890 times per month), then King Saud University (566 times per month). Medical and scientific information databases came in third place, as they were used an average of 603 times a month at King Saud University. The psychological database, PsycInfo, came in fourth place, then the educational database ERIC with an average use between 310 and 159 times per month respectively at King Saud University. The databases that are rarely used are those for law, sociology, economics, geology, media, computers, and agriculture. The American Humanities Index and Dissertation Abstracts databases were not used at all.

The reason for the high use of the Academic Search Premier database in most universities may be because it is the largest database in the world. It is specially designed for colleges and universities. It contains the largest number of full-text peer-reviewed scientific journals in the humanities, social sciences, education, computer science, engineering, language and linguistics, art, literature, medical sciences, and ethnic studies. It contains full texts of more than 3,260 scientific publications, in addition to page-sized images and color images within

the texts. It also contains indexes and abstracts of more than 4,250 scientific periodicals, covering the issues of these periodicals from 1984 until now (2004).

The reason for the high average use of the ABI database may be due to its close connection to the areas of specialization of the Institute of Public Administration. As for the high use of medical and scientific databases, it is attributed to the fact that English is the language of medical and scientific courses, references, and research in scientific colleges. The users of these databases are professors and students who are fluent in English. Specialists in these fields are also keener to keep up with the latest medical and scientific research and developments.

The reason for the lack of use of databases for law, sociology, economics, geology, media, agriculture, and others may be due to the fact that the language of instruction, courses, references, assignments, research, and university dissertations in these specializations is Arabic, and a significant percentage of professors and the vast majority of students in these specializations are not proficient in English. The teaching methods used are based on writing, memorization and recall.

The results of this study are consistent with the results of Al-Shuwish's study (2002), which he conducted on 18 university libraries, institutions, and information centers in Riyadh, in which he found that the most widely used databases were ABI, Medline, as they were used between 450-540 times a month, and that the average use of 15 databases was 30 to 90 times, and the average use of 61% of the databases of those universities and centers is between 1-12 times per month. The researcher found that the average use of the ERIC database is ten times a month, and that the average use of the Dissertation Abstracts database is less than six times a month, contrary to what was expected.

In fact, the lack of use of electronic databases is not proportionate to the amount spent on subscribing to them. This is a waste of university money. If we know that the cost of subscribing to one OCLC First Search database for four users is $4,470 per year, and that the cost of subscribing to the World Cat database is $5,480 for a year, and that the cost of subscribing to the Academic Search Premier database, which is one of the company's databases EBSCO Host is 24,000 US dollars, and the cost of subscribing to the Academic Search Elite database from the same company is 23,546 US dollars (a total of 56,580 US dollars per year for the these four databases).

According to Umm Al-Qura University subscriptions for the year 2002, the actual use of the available databases in Arab universities is not commensurate with its cost, and these databases are not optimally exploited in scientific research, teaching, and human and social development.

The lack of use by faculty members and students of databases in Arab universities in general can be attributed to several reasons - in addition to what was previously mentioned - the first of which is that the use of the Internet and electronic databases in the Arab world is relatively new, compared to other countries of the world, and the lack of knowledge of faculty members and students. Graduate and bachelor's studies: The presence of such databases in university libraries, and how to access them from the university and home, and the lack of knowledge of many faculty members and graduate students how to use them, especially since all the databases are in English and the lack of knowledge of many faculty members and graduate and bachelor's students in colleges. The humanism of the English language may prevent it from being used and benefited from. In addition, universities and libraries do not offer courses to train faculty members and students on the use of electronic databases. The researcher found that only two universities had placed an advertisement on the university website for training courses in the use of electronic databases. No library website contained instructions showing how to use databases, whether in English or Arabic, as is the case in Western university libraries. Also, adopting traditional methods of teaching, which rely on the book only, memorization and

memorization, instead of searching for diverse and modern information in various information sources, whether paper or electronic.

In this regard, the results of Al-Jarf's study (2003), which she conducted on a sample of 75 female graduate students in the Faculties of Arts, Education, and Administrative Sciences at King Saud University, and a sample of 152 faculty members in the Faculties of Languages, Translation, Education, and Arts at King Saud University, and 106 faculty members in the departments of Islamic studies, Arabic, and English at the College of Education for Girls in Mecca, and all female library employees affiliated with the humanities departments at King Saud University, and all female library employees at the College of Education for Girls in Mecca, only 4% are female graduate students and only 6% are male students. Faculty members can use specialized databases such as ERIC. Some female graduate students specializing in computers, and many female graduate students specializing in educational technology, cannot locate research on the Internet, and some female students in the same department cannot use computers at all. The results of the study also showed that all female library employees affiliated with the humanities departments at King Saud University and the College of Education for Girls in Mecca cannot locate research on the Internet, nor are they able to use any of the specialized electronic databases. Female students who are able to use specialized databases reported that they rarely use. They indicated that they had not received any training in electronic searching anywhere, and that a few professors of graduate courses ask female students to locate research in databases. Postgraduate professors do not train female students to use any electronic sources. The department does not require electronic searching skills for admission to postgraduate studies.

A number of factors affect the inability to search electronic databases, which include poor English, the inability to access the databases from the university campus, lack of knowledge of the existence of these databases in the Main library, not knowing how to use them, and the inability to obtain a password to log into the databases from home.

It should be noted that the reality of faculty members and students using electronic databases in the Arab world completely contradicts the reality of faculty members and students using electronic databases in developed countries. Henderson and MacEwan (1997) found a noticeable increase in the number of users of electronic information sources. In just six months, the electronic Encyclopedia Britannica at the University of Pennsylvania was used 140,000 times, and in one month the full texts of electronic journals were used 7,500 times. Bush & Others (1993/1994) found that faculty members, students, and employees of the University of Knoxville in Tennessee have excellent knowledge of library services and collections, have a great interest in electronic services, and use educational library services to a minimal extent. Zhang (1999) found that 46.1% of professors have between 5-9 years of experience in using the Internet, 27.3% have between 10-14 years of experience in using the Internet, and 14.3% have less than five years of experience in using the Internet. 12.3% have more than 15 years of experience using the Internet. That is, the average years of experience using the Internet is 8.9 years. 95.6% considered their level of Internet use to be either average or above average, while 4.4% considered their level to be below average. Regarding the use of electronic databases, the researcher found that 82.7% use electronic databases from the workplace, and 46.2% use them from home. The researcher found that 31.4% use it daily, 21.8% use it two or three times a week, 10.9% use it once a week, 12.8% use it two or three times a month, and 14.1% use it once a month. Vander Meer and Others (1997) found that 62.9% of faculty members at Western Michigan University used electronic databases, 61.2% used electronic catalogs within the university library, 59.7% used electronic catalogs at other universities, and 45. 2% use databases on CD-ROMs. At State University of New York (SUNY), 70% of faculty use electronic databases, and 90% use electronic library catalogues. Curtis, Weller, and Hurd (1997) found that 68% of faculty members at the University of Illinois College of Medicine used the electronic medical database Medline, while 30.5% still use the print Index Medicus. The sample members reported that they prefer to use electronic databases from their offices rather than going to the library, and they also use many electronic databases in addition to Medline.

7. Recommendations

Since the use of electronic databases saves the users' time and effort and enables faculty members, students and researchers to obtain a huge amount of up-to-date information in all disciplines and from all sources in short period of time, and since obtaining such information will lead to a quantitative and qualitative shift in research, scientific, social, economic and cultural development in the Arab world, the current study recommends the following:

1) The need for one responsible body, such as the Arab League for Education, Culture and Science, the Association of Arab Universities, the Arab Federation of Libraries, the King Abdulaziz City for Science and Technology, or the Arab Education Bureau for the Gulf States, to serve as a liaison among universities and research centers in the Arab countries together and create a unified network linking university libraries and information centers. Arab research and public libraries caan follow the example of Ohiolink, which provides services to 35 libraries in the state of Ohio, which provide researchers with documents, share in sources, develop what they have, and facilitate communication, in order to save the money of Arab universities, instead of subscribing to the same database several times. So that each Arab country pays a percentage of the total subscription to the databases. The network has one portal with one design through which the researcher can access the databases. It is preferable to provide a simultaneous translation service for some of the terms used in research, and to provide an instant automated translation of the general topic of the abstract, so that researchers and students who are not proficient in the English language can easily search the databases and understand the documents they obtain.

2) The need for Arab universities, information and research centers, and Arab public libraries to integrate their small local databases into one large, shared portal that Arab researchers can access from anywhere and at any time, provided that one body, such as the Arab Organization for Education, Culture and Science or the King Abdulaziz City for Science and Technology supervises and follow-ups, unifies the catalogs of Arab libraries, subject headings, authors' entries, and the input mechanism, facilitates the process of importing and exporting information, unifying search terms, and Arabizing what is not Arabized, and unifies search screens and search strategies, and enabling all researchers to access the portal from one interface quickly through the Public Sharing System.

3) The need for faculty members and specialists at Arab universities to create unified databases for Arab research in various disciplines such as medicine, engineering, pharmacy, economics, psychology, sociology, history, geography, Arabic literature, religion, university theses, and others, similar to the ERIC, MEDLINE, AGRICOLA, ECONOLIT, ABI database. Such databases should be supervised by one entity that follows up on the updating, indexing, addition, storage and retrieval processes according to effective electronic systems.

4) Offering courses to train all faculty members and students in Arab universities in searching electronic databases and making electronic researching skills part of promotion.

5) The need to establish an Arab union to prepare a society qualified to deal with electronic services and contribute to building the cities of the future and preserving the Arab identity.

6) Developing Arab educational systems, including school curricula, teacher preparation, the educational environment, and school and university administration, so that they accommodate advanced information and communication technologies in theory and practice.

7) Encouraging the private sector to invest in the field of information systems, technologies and software, considering information as a service and an investment at the same time, and paying attention to

effective policies and strategies to develop and modernize information systems, services and technologies in Arab countries.

8) Supporting new projects in the field of Arab information technology, such as the "Ask Zad" project, which seeks to provide an integrated digital library via the Internet that provides its users with electronic publishing services and digital content for publications and educational media of all kinds. "Ask Zad" is characterized by being an electronic container for preserving information and books in digital form. It is a new concept of how to benefit from methods of searching for information, structural and cross-linking between information entries, correct application of reference citation lists, optimal use of indexes and bibliographies, and making available books, encyclopedias and references that are converted. From printed or film form to electronic form, while maintaining the same character and specifications as the original book, and various systems for linking with the library. The information bank and digital library "Ask Zad" consists of (1) the press information bank (2) the reference library (3) the digital library for references and encyclopedias (4) the digital library for periodicals and documents. Modern technologies, publishing and documentation are mixed together in one vessel, which benefits all segments of society, each according to their interest and specializations, and answers any question directed to the site over the Internet, using a powerful and fast search engine.

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Table 1: Arab universities that have electronic databases and their number

Country	University Name	No of electronic Databases	Databases on CDs
Jordan	Yarmouk University	9	
	Zarqa University	5 companies (no links)	unspecified
	Hashemite University	4 companies (no links	
Emirates	Emirates University	135	
	Al Sharekah University	18	
	Ajman University of Science and Technology	3 companies	
	American in Sharjah	44	
	Zayed University University	29	
	American University in Dubai	27	
	University of Wollongong	254	
	Union University	Not mentioned (no links)	
Bahrain	Gulf University	11	
	Bahrain University	19	
Algeria	University of Algiers	Unspecified (page under construction)	
Saudi Arabia	King Saud University	22	
	King Fahad University	21	
	King Faisal University	8 + 19 trial + 12 free	1
	King Khalid University	Unspecified (no links)	
	Umm Al Qura University	5	
	King Abdulaziz University	8 (no links)	870
	Institute of Public Administration	7	
Sudan	Columbia University	414	
	Ahfad University	-	unspecified
	Sudan University of Science and Technology	Do not open, unspecified, no links	

Syria	Virtual University	no list of databases, no links	
	Damascus University Faculty of Medicine	Resources, references, links in 30 medical specialties	
Oman,	Sultan Qaboos University	35	
Palestine	An-Najah National University	5	3
	Birzeit University	4 companies + 4 full text periodicals	25
	Quds University	Links for websites, periodicals and resources in 59 specialties arranged according to the Library of Congress Classification	
Qatar	Qatar University	50	
Kuwait,	Kuwait University	Website under construction	
Lebanon	American University of Beirut	30 + 92 for medical college	
	University of Balamand	25	none
	University of Rotterdam	25 + 2 trial	2
	Lebanese American University	27	
Egypt,	American University in Cairo	86	
	Arab Academy for Science and Technology	-	35
Morocco	Al Akhawayn University	17	

Table 2: The total number of faculty members, graduate students, and undergraduate students in some universities*

University	Grand Total Of Faculty & Students	Total Faculty	Total Graduate Students	Total Undergraduate Students
King Saud University	52554	2968	2497	47089
King Abdulaziz University	45719	2317	961	42441
Umm Al Qura University	23603	1252	369	21982
Institute of Public Admin.	3954	599	-	3355
American University of Beirut	4767	700	-	6974

* Statistics for Saudi universities were obtained from the Ministry of Higher Education website.
 * Statistics for the current academic year was obtained from the American University of Beirut were obtained directly

Table 3: Frequency of using Electronic Databases by Faculty at Some Arab Universities

DATABASES	KING SAUD U			KING ABDUL-AZIZ U			UM AL-QURA U			INSTITUTE OF PUBLIC ADMINISTRATION			AMERICAN U OF BEIRUT		
	FT	Ab	Total	FT	Ab	Total	FT	Ab	Total	FT	Ab	Total	FT	Ab	Total
Academic Search Elite	-	-	-	-	-		4260	2878	7136	-	-	-	-	-	-
Academic Search Premier	29793	11077	40870	546	590	1136	4258	1242	5500	-	-	-	3465	2739	6204
Agricola	-	-	-	-	-					-	-	-	0	60	60
American Humanities Index	-	-	-	0	0	0	0	0	0	-	-	-	0	1	1
American Humanities Index (Archives only)	-	-	-	0	0	0	0	0	0	-	-	-	0	0	0
Biological abstracts	-	-	-	-	-	-	-	-		-	-	-	0	13	13
Biomedical Reference	-	-	-	-	-	-	342	181	523	-	-	-	27	13	40
Business Source premier	-	-	-	1594	1738	3332	-	-		-	-	-	85	23	108
Communication & Mass Media Complete	-	-	-	23	27	60	1	0	1	-	-	-	27	32	59
Computer Source	-	-	-	-	-	-	-	-	-	-	-	-	3	2	5
Econolit	-	-	-	1	17	18	-	-	-	-	-	-	2	60	62
ERIC	206	1699	1905	-	-	-	-	-	-	-	-	-	18	100	118
GeoRef	-	279	279	-	-	-	-	-	-	-	-	-	0	2	2
Health Business Fulltext Elite	-	-	-	301	177	478	-	-	-	-	-	-	33	5	38
Image Collection	-	-	-	0	0	0	148	0	148	-	-	-	5	0	5
Legal Collection	-	-	-	5	17	22	-	-	-	-	-	-	-	-	-
MasterFILE Premier	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2
MEDLINE	-	1564	1564	-	-	-	12	270	282	-	-	-	-	-	-
Nursing and Allied Health Collection: Comprehensive	-	-	-	-	-	-	-	-	-	-	-	-	15	2	17
Professional Development Collection	-	-	-	-	-	-	-	-	-	-	-	-	12	4	16

Psychology & Behavioral Sciences Collection	-	-	-	-	-	-	-	-	-	-	-	-	23	9	32
PsycINFO	2141	1575	-	-	-	-	-	-	-	-	-	-	0	302	302
Regional Business News	-	-	-	13	6	19	-	-	-	-	-	-	0	0	0
Sociological Collection	-	-	-	243	92	335	-	-	-	-	-	-	51	205	256
SPORTDiscus	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
Subjects—Academic Search Premier-Hierarchical	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Subjects—Business Source Premier-Hierarchical	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Subjects—Health Business Elite-Hierarchical	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
The Serial Directory	-	-	-	-	-	-	-	-	-	-	-	-	0	1	1
ABI/INFORM Global	5372	1421	6793	-	-	-	-	-	-	8781	1896	10677	-	-	-
ProQuest Biology Journal	794	155	949	-	-	-	-	-	-	-	-	-	-	-	-
PorQuest Computing	593	50	643	-	-	-	-	-	-	-	-	-	-	-	-
Proquest Medical Library	4894	778	5672	-	-	-	-	-	-	-	-	-	-	-	-
ProQuest Science Journal	167	49	216	-	-	-	-	-	-	-	-	-	-	-	-
Frequency of Use Grand Total	**44067**	**18716**	**62783**	**2738**	**2664**	**5402**	**9021**	**4571**	**13592**	**8781**	**1896**	**10677**	**3767**	**3575**	**7342**
Total # students & faculty			**52554**			**45719**			**23603**			**3954**			**7674**
Uses per person			**1.19** 1 use per person			**.12** 1 use per 8 people			**.58** 1 use per 2 people			**2.7** 3 uses per person			**.96** 1 use per person

Table 4: The amount of use of databases at some Arab universities?

DATABASES	KSU Total Use	KSU Use per month	KAAU Total Use	KAAU Use per month	UQU Total Use	UQU Use per month	IPA Total Use	IPA Use per month	AUB Total Use	AUB Use per month
Academic Search Elite					7138	510				
Academic Search Premier	40870	3406	1136	95	5500	393			6204	50
ABI/INFORM Global	6793	566					10677	890		
Business Source premier			3332	278					107	5
Health Business Fulltext Elite			478	40					38	2
Proquest Medical Library	5672	473								
MEDLINE	1564	130			282	20				
Biomedical Reference					523	37			40	2
ProQuest Biology Journal	949	79								
Biological abstracts									13	.5
ProQuest Science Journal	216	18								
PsycINFO	3716	310							302	13
Psychology & Behavioral Sciences Collection									32	.7
ERIC	1905	159							118	5
PorQuest Computing	547	46								
Computer Source									5	.04
Sociological Collection			335	28					256	11
GeoRef	279	23							2	
Image Collection			0		148	11			5	
Communication & Mass Media Complete			50	12					60	2.5
Agricola									60	2.5
Econolit			18	1.5					62	2.6
Legal Collection			22	2					-	
Nursing and Allied Health Collection: Comprehensive									17	.7
Professional Development Collection									16	.7
Regional Business News			19	1.5					0	
MasterFILE Premier									2	
SPORTDiscus									1	
The Serial Directory									1	
Subjects—Academic Search Premier-Hierarchical									0	
Subjects—Business Source Premier Hierarchical									0	
Subjects—Health Business Elite-Hierarchical									0	
American Humanities Index			0		0				1	
American Humanities Index (Archives only)			0		0				0	