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Review

# The library's role in developing information literacy and societal growth

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Information is the bedrock of knowledge development and is expected to achieve societal growth. One of the most obvious trends in recent times has been the rapid growth of information that changes the economy and its attendant structures. Over the years, the developing countries are still not able to match up with this global phenomenon. Lifestyles in most of the developing world have continued to deteriorate simply because of the insensitivity of the government to citizens' plight. Many people are wallowing in abject poverty, debt crises, communal violence, diseases, food shortage and malnutrition, etc. This study focused on the library's role in developing information literacy and societal growth. Knowledge acquisition, preservation, access to information and dissemination always enhanced development and will continue to change the way people seek and use information. The study, therefore, concluded that the application of IT in all sectors of the economy will encourage self sufficiency in food production, good health and rapid development among the citizenry.

**Key words:** Library, information literacy, societal growth, Nigeria.

## INTRODUCTION

The library is a service delivery institutions, a custodian of knowledge and a center for information dissemination. Traditionally, the library is a place where books are acquiring, store and retrieve for use and such information if well applied could modify user's behaviour. Hence, encourages a more civilized and developed society. According to Obajemo (2002), a good library is indispensable if academic excellence is to be achieved. Knowledge preservation and dissemination have rapidly changed the way people seek and use information. The development of Information and Communication Technologies (ICTs), which has not only changed the

way information is generated, stored, organized and distributed, but more extensively have become essential tools for teaching, learning and research. Before, access to holdings in the library is simply through the print format, but today electronic resources are procured for quick service delivery and help to meet the information needs of individuals. The library plays a vital role in enabling users to develop information literacy that may likely change individuals attitude towards living, and if access to such information is well managed. Gawith (2000) said that to be information literate, is to be able to find, read, analyze, interpret and apply information to

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build and communicate knowledge effectively. American Library Association (1989) identified information literate as a person who is able to recognize when information is needed and have the ability to locate, evaluates and uses effectively the needed information.

Libraries today are changing their way of service delivery and most recent libraries are termed as Digital Libraries or Hybrid Libraries which uses electronic devices. Hence, with a fingernail tip, you can communicate with others globally without any structural or geographical barriers. The digital or electronic resources are dynamic in nature to share information globally and there has been an increased scope for automated delivery mechanism. The advent of ICT constitutes an increasing significant element in the exchange of ideas, making information accessible, easier and faster, to accelerate, enrich and deepen basic knowledge, to add vitality to both research, learning and teaching, enhance the process of intellectual delivery, experience and new knowledge among peers around the world. Not only that, it has the ability to restructuring, re-engineering and developing the society for better living.

## SOCIETAL GROWTH

Naturally, the geographic, socio-cultural, economic and political ideologies of people living in Nigeria are different. However community development is a participatory process that must be appropriated by all components of people living in that community. Societal growth encompasses using the state apparatus to enhance development. In contrary, and rightly captured by Oyelaran-Oyeyinka (2014:21):

*that Nigeria is a country marked by extreme social and economic paradoxes. It is rich in material wealth, but large swathes of its people are poor, Nigeria's Gross Domestic Product (GDP) has grown remarkably but its citizen suffers poor quality of life. It is a major producer of crude oil, with huge reserves of mineral and agricultural resources, the base for industry, but Nigeria's manufacturing sector contributes little to its wealth. Nigeria is rich in human capital, but it has the least endogenous technological capacity. This country should boast very high living standards, but rather its infrastructure is poorly developed and inequality is proportionally higher. It has huge potential for absorbing large skilled and knowledgeable workforce, but unemployment among the youth is unacceptably high. The promise at independent was that of prosperity, but it has long been replaced with befuddling despair that characterized fragile states.*

Studies by Kanczak and Szoltysick (2006) described society as a place in which information is intensely used to support economic, social, cultural and political life; it is a society with the abundant means of communication and

of information processing, the society that is serving as a major part of the national income and ensuring contribution to the source of income for the majority of the population. Societal development can also be seen as the process by which people recreate themselves and their life circumstances to realize higher levels of civilization in accordance with their own choice and values (Ake, 2001). However, scholars have identified information communication mismanagement as one of the major factors that underdeveloped Africa; they are not favourably attuned to information sources that could be beneficial to them simply because the facilities to tap this information are not available. Although, a small number of significant factors are noticed in the area of trade, economic and educational sectors and others, but the application of ICTs could be used as a medium to establish networks between members or the outside world to improve the institutional context of these communities. There is a need to fully involve the stakeholders of the society which I regarded as farmers, students, academia's and policy makers/administrators. An adequate provision of infrastructural facilities, a standardised library will surely encourage accessibility and use of information sources to hasten the transformation of the Nigerian socio-economic system and develop it to those driven by the forces of highly networked information technology.

## Statement of the problem

There was a report of gradual decline in research output in higher education which became noticeable in the late 1980s. This may adversely affect any meaningful development in every sector of the economy. Before then, the National Universities Commission (NUC) noted that, in terms of quality and quantity Nigerian research output was the best in sub-Saharan Africa. This achievement was recorded based on good research training, motivation, and availability of equipment and good library facilities that encouraged service delivery. Unfortunately, this is no longer true of the nation's universities as quality and quantity of research have declined to all-time low and adversely discouraged greater output in every sector of the economy (Okebukola and Solowu, 2001). Summarising the factors that contributed to this decline, Okebukola (2002) identifies the following:

1. Lack of research skills in modern methods.
2. Lack of equipment for carrying out state-of-the art research.
3. Overloaded teaching and administration schedules which leave little time for research
4. Difficulty in accessing research funds.
5. Diminishing ability of seasoned and senior researchers to mentor junior researchers due to brain drain.

These poor performances continue to generate much

concern among lecturers, government and other stakeholders in the educational sector. The low productivity is likely caused by some factors such as inadequate infrastructural facilities, insufficient Internet facilities, low level of information literacy and communication technology development, insufficient research training (local and international), obsolete materials in the library and financial constraints, among others. These identified factors constitute a bottleneck for research breakthrough that may enhance societal growth. High level productivity entails full commitment and this comes basically when the zeal and determination to succeed is embedded in individuals and when the environment encourages such development.

### THE WAY FORWARD TOWARDS SOCIETAL GROWTH

1. Through Information literacy
2. Application of mechanized farming
3. Through acquisition of knowledge (students)
4. Researchers as knowledge disseminators
5. Policy makers/administrators
6. The role of the library

#### Through information literacy

Any societal transformation has to be through large scale development and this greatly depends on knowledge creation, access to information and exchange of ideas globally. Information literacy is the embodiments of high level of information awareness by individual and use to better their life. It is obvious that users of information resources must possess requisite skills in order to harness information resources at their disposal. UNESCO's Information For All Programme (IFAP, 2008:25) has defined Information Literacy as:

*the capacity of people to recognise their information needs, locate and evaluate the quality store and retrieve information, make effective and ethical use of information and apply information to create and communicate knowledge. The scope of Information Literacy includes computer literacy, technology literacy, information technology literacy, internet literacy, digital literacy, media literacy and more.*

In addition, Doyle (2001) describes an information literate person as one who recognises the need for information; accurate and complete information as a basis for intelligent decision making; formulate questions based on the information needs; identifies potential sources of information; accesses sources of information, including computer and other technologies; evaluate information; organizes information to integrate new information; information existing body of knowledge and practical application; and uses of information in critical thinking and problem solving. Information literacy enables people

to interpret and make informed judgments. It is a prerequisite for participating effectively in the information society and part of the basic human rights of lifelong learning. In highlighting the importance of information literacy in higher education, Dadzie (2009) stated that some fresh students entering university and colleges have limited knowledge of fundamental research and information competency skill and may not have learn how to locate information or how to use it in original work and give proper credit for the information used. University libraries should thus involved in the teaching and learning process to guide and enable students improve their information literacy skills, a potential weapon for future assurance.

In summary, information literacy is assumed to be the knowledge and skills necessary to correctly identify information needed to perform a specific task or unravel a problem, proficiently search for information, organize or reorganize it, interpret and advice on it once it is found and retrieved (e.g. downloaded), evaluate the accuracy and consistency of the information, including morally acknowledging the sources from whence it was obtained, communicated and presented. Modern civilization has witnessed three great revolutions. The Industrial Revolution sustained society for over a century. Then, Information Revolution took over that leads to the emergence of the Information Society. Today, the societies are moving towards the Knowledge base wherein knowledge has become the leading driving force of the economy and a tool for overall development. The convergence of computers and telecommunication after about four decades of applying computers to routine data processing mainly information storage and retrieval has created development epoch where information has become the engine for economic growth in the world. Having knowledge of information needed and duly applied tends to change people's behaviour while information literacy acquisition will help information seekers to achieve their goals.

The study by Pezeshki-Rad and Zamani (2005) asserted that the real challenge of our time is not producing or storing information, but effectively use information resources for development. Information users must learn to overcome information anxiety in order to explore the available information to enable them interprets and utilised information for rational decision making.

The global advancement in technology in recent years has given telecommunication a prime place in the structure of world infrastructure and development.

Information availability, utilisation, and the increasingly global communications environment have changed the productivity level of the employees and encouraged high level achievement if properly harnessed and effectively used.

### APPLICATION OF MECHANISED FARMING

Agriculture generally provides food for teeming population



and mainly depends on subsistence farming system which could only sustain their immediate household. Basically, mechanised farming encourages large food productions and industrial development and having access to relevant information will also encourage high level productivity. Historically, the Nigerian economy has depended on its agricultural sector to provide employment and livelihood for the vast majority of its people. In the early 1960's, the basis of Nigerian economy was a well diversified agricultural sector that supported 75% of the population, provided 68% of the Gross Domestic Product (GDP) and 78% of exports. It also supplied 94% of the staple food needed to feed the population. Moreso, estimated per capital income stood at US \$90 and the GDP at an annual rate nearly 5% (World Bank, 1996). Despite the oil-boom in the early 1970s, agriculture has retained its role as a major source of economic growth and development in Nigeria (Oji-Okoro, 2011). However, this laudable achievement recorded in the early 60s and 70s not endure given the recent report of the World Bank (2011) that agriculture has contributed little to the economic growth of the nation in the past 15 years. This is because the government shifted its attention to the oil sector. Manyong et al. (2005) observe that the decline in the agricultural sector to support the economic growth of the nation has been a problem for poverty reduction and high level productivity. However, the major problems of agricultural development in developing countries like Nigeria includes inadequate financing, lack of rural infrastructures, inadequate and late supply of farm inputs, problems of pests and diseases, inadequate tools and machinery, unpredictable climate, inconsistent agricultural policy and agricultural degradation. Many agricultural research institutes were established to address these problems that confront farmers in crop production, livestock farming, forestry or fish production and improvement with a view to make a Nigerian self-sufficient in its food requirement. Researchers strive to develop new farming techniques, farming systems and management practices for increased crop and animal production, so that Nigeria can achieve food security. Basically, agriculture depends largely on the amount of scientific information accessible to farmers or agricultural scientists. The application of modern information technology such as Internet, discussion groups, chat groups, e-mail, Facebook, twitter, blogs, YouTube is new channels of communication that could improve farmers' orientation towards the economic growth of the nation. The subsistence farmers who are predominantly illiterate could be trained on how they could apply this new mechanised technology to better the production output.

#### **THROUGH ACQUISITION OF KNOWLEDGE (STUDENTS)**

The Nigerian students (our future leaders) need information on knowledge acquisition and retrieval. To ensure

that the country is well positioned for this knowledge society, not minding the infrastructure facilities that have continually declined higher education is expected to increase enrollments in the ICT fields of study to encourage development (Federal Ministry of Education, 2004). For instance, Minishi-Manjaja (2007) stated that in South Africa government recognizes that ICT, human resource development is the key to the accomplishment of the ideals of the information age and better society.

In a speech delivered in the University of Lagos, Mass Communication (2013), Professor Ruqqayyat Ahmed Rufai, the former Minister of Education rightly observed that education vis-à-vis research productivity is a powerful weapon that could bring a change in the society. According to Ruqqayyat Ahmed Rufai (2013):

*For most nations, higher education is today defining the pace of economic advancement, scientific progress, social development and national integration. Our universities must align with our national goals and aspiration and brace up to the challenges of knowledge based competition. You must strive to be creative in your approach to contemporary problem solving”.*

Undoubtedly, education is the backbone for human advancement in life. Education is a sound knowledge acquired for good value and societal growth. The ability of the child to read and develop the reading interest with the use of a library resource is a sine-qua-non- for achieving emotional stability, and for keeping abreast of what is happening in his immediate environment and the world at large. Access to library resources are so crucial to the overall intellectual, psychological development of the child while the agencies of educational developers, namely teachers, publishers, author's, parents and librarians must collectively be actively involved in the development of reading interest among the students to ensure that it becomes a lifelong legacy of the child (Gbaje, 2008). It has been discovered that reading interest among students is not encouraging and access to library resources is very minimal due to some difficulty they encounter in locating the resources and this may likely be an obstacle that discourage reading. The use of school library resources is to promote active learning and reading interest in order to contribute meaningfully to the community growth. Therefore, the responsibility of promoting and sustaining the reading interest of students must be vigorously pursued through the provision of material resources in Nigerian libraries.

#### **RESEARCHERS AS KNOWLEDGE DISSEMINATORS**

Societal growth is encouraged when there is a formidable research. Research entails a lot of effort that could provide a solution to economic problems facing the developing countries, particularly in the area of poverty reduction and the quality of educational development in

Nigeria. Basse et al. (2007) affirmed that the importance of research cannot be overlooked in the university environment and is regarded as a major or most significant indicator of academic staff productivity. It leads to generation of new knowledge, encourages innovations, enhances the quality of teaching, increases an institution's reputation and its economic status (Sulo et al., 2012). Globally, the advancement of scientific knowledge is mainly the responsibility of the university lecturers. Scholarly or scientific publications are the life blood of science and development (Hofman et al., 2009). Uthman and Uthman, (2007) stated that scholarly publications play an important role in scientific process by providing a key linkage between knowledge production and use. They are vital for knowledge sharing, dissemination of research findings and career advancement of academics. The main objective of the library is educational, where knowledge stored are retrieved for proper use, therefore, it is important that the library expands according to the evolving new trends of Information Technology (IT) and the trained professional(s) should augment the library services delivery effectively.

### **POLICY MAKERS/ADMINISTRATORS**

Information is a tool to run the affairs of the state. To further encourage access to information, the light of Information Bill 2002 was passed by Nigerian lawmakers. Not only that, an enabling working environment will surely encourage development and tends to expedite action on individual to persist in pursuing their objectives. In view of this, lecturers in Nigerian universities through their union, the Academic Staff Union of Universities (ASUU) have persistently agitated for adequate funding of universities and good remuneration for its members. Stable funding would promote job security and checkmate successive waves of brain-drains in the academia. There is need to give attention to the formulation and implementation of appropriate policies on funding of higher institutions particularly agricultural research institutes. Policy makers must ensure that scientists are adequately motivated to be able to use their experience, intelligence and manipulative skills to solve societal problems through their research findings and recommendations. Policy makers must enact laws that will encourage huge investments by individual and corporate bodies geared towards enhancing development in Nigeria. To support government in achieving development professional librarians should endeavour to predict, grasp, analyse and provide relevant information for individual's use.

### **The role of the library**

The role of the librarian is to collect, repackage and disseminate information for societal growth. The rapid

increase in the application of computers, the Internet, electronic resources, mobile devices, databases and the World Wide Web in all aspects of human activities and most importantly the educational sector. Information processing and retrieval has become a very promising and vital component of the enabling structure for societal growth and individual's career development. This could as well be supported by university libraries in the areas of knowledge acquisition and dissemination, even though some scholars (Emmojoroh, 2005; Opara, 2008) have observed that the libraries are also confronted with numerous problems. These include declining financial support, inadequate infrastructure facilities, low levels of information technology development, obsolete materials and limited access to a variety of information in the form of stored data. Nevertheless, these libraries have a role to play by creating interfaces with the global knowledge system, tailored towards institutions and individual research developments. Adequate provision of infrastructural facilities that will encourage accessibility and use of information sources in order to hasten the transformation of the Nigerian educational system from the traditional method of teaching, learning, and research, and develop it to those driven by the forces of highly networked information technology. Accessibility encourages utilisation of information when tools to access such information are readily available. The world information structure is constantly changing and requires humans being to keep up with this development, gaining and using it persistently has become indispensable for one's social and professional development. Although, access to information itself is not total assurance for societal development expect other machinery needed for growth were on ground. The crucial factors is being well acquainted with and skillfully existing in the ocean of information which means searching for adequate sources, selecting and evaluating information as well as having the ability to transform it into knowledge. Access is determined by a combination of the availability of telecommunication infrastructure and the accessibility and affordability of Internet services. Hence, today accessibility of information is very essential for knowledge accumulation. However, accessibility is much more relevant than availability. Accessibility is about being able to use what is available when it is required. It is also hypothesized that accessibility to information networks worldwide influences the use of resources. Having knowledge of what is there with no means of obtaining it or having information technology without knowledge of how to use it does not constitute access. No doubt, the availability and accessibility of information resources will aid greater productivity.

### **Conclusion**

The goal of self sustaining growth and structural

transformation of a nation depends on modernization of agricultural production, information awareness and use, knowledge acquisition and retrievals, formidable research and encouragement of access to valuable information by the people. The infusion of information technology into all sectors of socio-economic and utilization by individuals could reverse the underdevelopment the African countries are facing today. It is anticipated that Nigerian policy makers will give valuable insight and overhaul the infrastructural facilities to foster development and a better living. Hence, today accessibility of information is very essential for knowledge accumulation. The libraries have a role to play by creating interfaces with the global knowledge system and geared towards enhancing societal growth.

### Conflict of Interests

The authors have not declared any conflict of interests.

### REFERENCES

- Ake C (2001). *Democracy and development in Africa*. Ibadan: Spectrum Books Limited.
- American Library Association (ALA) (1989). *Presidential Committee on Information Literacy: Final report*. Chicago: American Library Association. Retrieved from <http://www.ala.org/ala/mgrps/divs/acrl/publications/whitepapers/presidential.cfm>
- Bassey U, Akuegwu B, Udida L, Udey FU (2007). Academic staff research productivity: a study of universities in south-south zone of Nigeria. *Educ. Res. Rev.* 2(5):103-108. Retrieved from <http://www.academicjournals.org/ERR>
- Dadzie PS (2009). Information literacy in higher education: overview of initiatives at two Ghana Universities. *Afri. J Libr., Archival and Information Science* 19(2): 165-175.
- Doyle C (2001). Information literacy in an information society: A concept for the information age. Syracuse, NY: ERIC
- Emmujoroh D (2005). Public library and nation building: the Nigerian experience. *Library Manage.* 26(3):123-129.
- Federal Ministry of Education (2004). *National Policy on Education*. Lagos: NERDC.
- Gawith G (2000). *Information Literacy: Theory and Practice*. *Good Teacher.* 3(2):4-5
- Gbaje ES (2008). *Basic Library Skills for Teacher Librarian* Department of Library and Information Science, Ahmadu Bello University, Zaria, Presented at Capacity Building Programme for Teacher Librarians Organized by Universal Basic Education Board Gusau Zamfara State. 5<sup>th</sup>-8<sup>th</sup> May, 2008.
- Hofman KJ, Kanyengo CW, Rapp B, Kotzin S (2009). Mapping the health research landscape in Sub-saharan Africa: a pilot study of trends in biomedical publications. *J Med. Libr. Assoc.* 97: 41-44.
- IFAP (2008). *Information For All Programme: Strategic Plan (2008-2013): Discussion draft (17):(Online)*. Retrieved from <http://porter.unesco.org/en/files>
- Kanczak A, Szoltysick K (2006). Is there a place for the librarian in the library of the 21st century? *World libraries*, 16 (1 and 2) spring and fall. Retrieved from <http://www.Worlib. Org/vol 16 no 1-2 / kanczak v 16n 1-2. Shtml>.
- Obajemo AS (2002). Assessment of School Library Service in a Local Government Area, Lagos State, Nigeria: A Case Study. *Afr. J Libr. Archival Inform. Sci.* 12(1):59-67.
- Manyong VM, Ikpi A, Olayemi JK, Yusuf SA, Omonona BT, Okoruwa V, Idachaba FS (2005). *Agriculture in Nigeria: Identifying opportunities for increased commercialization and investment*. Funded by USAID-Nigeria, International Institute of Tropical Agriculture (IITA). Ibadan.
- Minishi-Manjaja (2007). *Integration of ICTs in Library and Information Science Education in sub-Saharan Africa*. (A paper presented at World Library and Information Congress: 73rd IFLA General Conference and Council.
- Oji-Okoro I (2011). Analysis of the contribution of agricultural sector on the Nigerian economic development. *World Review of Business Research.* 1(1):191-200
- Okebukola P (2002). *The state of university education*. Abuja: Nigeria National Universities Commission.
- Okebukola P, Solowu OM (2001). Survey of university education in Nigeria. *J. Curriculum Stud.* 2(2):11-23.
- Opara UN (2008). The public library in contemporary Nigeria: challenges and the way forward. *Int. Federation Libr. Assoc. J.* 34(4):349-358.
- Oyelaran-Oyeyinka B (2014). Rich country poor people: Nigeria's story of poverty in the midst of plenty. *International Ecological Safety Collaborative Organisation*. China
- Pezeshki-Rad A, Zamani N (2005). Information seeking behavior of Iranian extension managers and specialists information research, 10,(3):229. Retrieved from <http://informationRnet/ir/103/paper229.html>.
- Sulo T, Kendagor R, Kobgei D, Chalangat S (2012). Factors affecting research productivity in public Universities in Kenya: the case of Moi University, Eldoret. *J. Emerging Trends Econ. Manag. Sci.* 3(5):475-484.
- University of Lagos, Mass Communication. (2013). I will turn brain drain to brain gain. Speech delivered by Professor Ruqqayyat Ahmed Rufai, the former Minister of Education at the Golden Jubilee celebration and convocation of the 2011/2012. University of Lagos, Lagos. Retrieved from [unilagmasscomm.com/index.php?option=com](http://www.unilagmasscomm.com/index.php?option=com)
- Uthman AO, Uthman MB (2007). Geography of African biomedical publications: an analysis of 1996-2005. *Public Medical Papers. Int. J Health Geogr.* 6:46.
- World Bank (1996). *Poverty in the mist of plenty: a World Bank poverty assessment report*. Retrieved from <http://www.siteresources.worldbank.org/No 19753-UNI>.
- World Bank (2011). *Africa's pulse-an analysis of issues shaping Africa's economic future*. Retrieved from <http://www.siteresources.worldbank.org>

*Full Length Research Paper*

## Academic library consortia in Arab countries: An investigating study of origins, development, and services

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The importance of academic library consortia increased due to the rapid development in the Information and Communication Technology (ICT). In the light of this role the study aims to investigate the establishment of four Academic library consortia in Arab countries at the national level, with analysis of the provided services on their consortia portals. A descriptive study methodology was used to investigate and define the main features of each consortium; goals and objectives, benefits, governance, organizational management, funding and services. The following Data gathering tools are used; a checklist which was sent to the studied consortia's directors, three of them replied (The Egyptian, Lebanese and Jordanian consortia directors); a content analysis method to gather information about the services available on the studied consortia websites (portals); in addition to the published research and news about the studied consortia. The results of the study show that the Ministries of Higher education in Arab countries are aware of the key role of academic library consortia and their impact on higher education. They have a strong commitment towards developing academic libraries to provide access to relevant information resources and services that meet the needs of the communities and support teaching, lifelong learning and research in this changing era. The studied consortia have similarities and differences, which will maximize the opportunity to communicate and cooperate together to form the Arabic unified Academic Libraries Consortium.

**Key words:** Academic library consortia, Arab countries, Egyptian University Libraries Consortium, Jordanian Public University Libraries Consortium, Lebanese Academic Libraries Consortium, Saudi Digital Library.

### INTRODUCTION

Academic Library is one of the important infrastructure components in the higher education system. It supports the educational and research goals; provides tools

needed both for faculties, students, administrative staff and the community. Nowadays, academic libraries have been changed dramatically towards a new era of

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information services due to the advance of open educational resources and increased access to electronic resources (De-la-Fuente et al., 2012)

It is very obvious that, the rapid increasing in the information technology and communication developments will be considered as a challenge to the academic library decision makers; they have to get benefit from these rapid technologies or their libraries will die, and will lose their reliability (Ruan and Qiang, 2013).

The decision makers in academic libraries and sequentially the educational institutions which they belong are facing the problems of shrinking budgets, ever-growing user requirements, high costs of books, subscription of journals, and electronic resources such as databases (Drake, 2010). The best solution to overcome the reduced budget problem is to establish consortia among the academic libraries. This will provide cooperation and sharing, in resources, services and policies. To maximize these benefits the consortia should provide services for their member libraries through one single point known as the consortium portal.

Ministries of Higher Education in Arab countries aware of the vital role of academic libraries in the higher education system, many academic library consortia established at various levels In different Arab countries; at special sectors, e.g., In health, engineering, agriculture; other consortia in the private sector or public sector; and at the national level, under the supervision of ministries of higher education in their countries.

### Objectives of the study

The purpose of the study is to explore the current state and efforts of academic library consortia in Arab countries through four Arabic academic library consortia at the national level; Egyptian University Libraries Consortium (EULC), Jordanian University libraries consortium (JoPULs), Saudi Arabian University libraries Consortium (SDL) and Lebanese Academic Libraries Consortium (LALC); to investigate and summarize each model features to help in drawing the outline for establishing the consortium of Arabic Academic Libraries Consortia.

The study achieved this purpose through the following detailed objectives:

- 1) Provide an overview of academic libraries' consortia models worldwide, to abstract the main features and services in such consortia.
- 2) Summarize the origins, features and development of academic library consortia in Arab countries.
- 3) Enrich the literature about Arabic experiences in academic library consortia.
- 4) Analyze available services provided on the Arabic consortia portal.
- 5) Draw a framework for integrated Arabic academic library consortium by cooperating amongst the national consortia.

### RESEARCH METHODOLOGY

A descriptive study methodology was used to investigate and specify the main characteristics of each consortium; goals and objectives, benefits, governance, organizational management, funding and services in four Arabic Academic library consortia at the national level; Egyptian University Libraries Consortium (EULC), Jordanian university libraries consortium (JoPULs), Saudi Arabian University libraries Consortium (SDL) and Lebanese Academic Libraries Consortium (LALC). The following Data gathering tools are used: first; a literature survey was conducted to summarize the state- of-the art of academic consortia worldwide to conclude the best patterns from their experiences which will help in analyzing the studied consortia's features and services; Second a content analysis method was used through a checklist to gather information about the services available on the studied consortia websites (portals); in addition to the published research and news about the studied consortia. Third, a brief questionnaire was mailed to the consortia directors via e-mail.

Utilizing these data collection methods the study draws an overview and comparative analyses of the standardized and dissimilar characteristics of the studied consortia

### Definitions and terminology

Bostick (2001) defines consortium as "a group of two or more libraries that have agreed to cooperate with each other in order to fulfill certain similar needs, usually resource sharing". Furthermore, on that point there is another definition by Reitz (2014) includes more details; he defines the consortium as "An association of independent libraries and/or library systems established by formal agreement, usually for the purpose of resource sharing. Membership may be restricted to a specific geographic region, type of library, or subject specialization". In general, the term consortium refers to co-operation, Co-ordination and collaboration between, and amongst libraries in order to share information resources and/or services (Bajpai et al., 2009).

From the above, sharing among libraries has more than one term as they appear in the related literature, the study found various terms in the English literature (e.g., Consortium – Collation – alliance – cooperation – federation). The most used term in the literature and the more exclusive is the term consortium, followed by the term alliance which is generally practiced in the European institutions.

In the Arabic literature we will find the same; many terms have been used alternatively. The Romanization

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\*The researcher received a reply from three consortia, so the researcher depended on the analysis of consortia web portal basically in addition to the previous literature about the fourth one.

forms of these Arabic terms as they are pronounced are (Ittiḥād– Takattul – Tajamw'e– E'etlaf). The most used term is the term Ittiḥād this variety inverses on the effectiveness of search engines retrieval.

## REVIEW OF LITERATURE

A review of the literature on library consortia shows a great interest in research on academic library consortia with considerable coverage of case studies. Tammaro (2004) prepared a literature review about academic library consortia in the digital age; this review provides a comprehensive overview for academic consortia history and development. According to Southern European Libraries Link (SELL) (2014), the decision makers look at the academic library consortia as successful models can provide mutual access to a vast collection of electronic resources at lower costs through group negotiation and agreements done with publishers and vendors.

The Consortium can achieve high discount rates of subscription in electronic resources from the most famous databases and electronic resources' publishers (Efada; SDL; Malaysian Online E-Resources Consortium; Al-Obaied-Allah, 2008; Choukimath et al, 2004; University Grants Commission, 2013; Khan, 2006) Most of the electronic resources' publishers responded positively to the call of the Consortium. "The rates offered to the consortium are lower by 60 - 99%, depending upon the category of institutions" (Shah and Marg, 2012), this will bring pressure on providers, especially electronic resources' publishers to reduce the rate of rise in the cost of purchasing information. Therefore, the library consortia are commonly formed to negotiate this joint purchase, and subscriptions (Burke, 2010). By the advent of the 21<sup>st</sup> Century the developing countries moved towards the associated federated digital libraries, with common objectives to minimize electronic resources subscription costs, get better negotiation with international publishers and preventing duplication (Abdul-Awwal, 2008).

The term "Library consortia", has been emerged to face the exponential increase in the electronic resources' budgets (Choukimath et al., 2004; Bajpai, 2014). The literature mentions that "Academic library consortia emerged in the early 1980s and became prevalent towards the end of the 1990s, when many academic libraries were exploring ways to improve efficiency and to resolve constraints on financial resources" (Dong and Zou, 2009).

Mohamed and Hassan (2008) stated that the term consortium is considered as a new term for resource sharing and library cooperation concepts. The Information technology and communication revolution affected the term and enhanced the services which can be offered through the cooperation. Consequent with the term "cooperation" the term "Consortia" emerged. In his earlier study about the activities of academic library consortia in

the United States, Kopp (1998) goes further; he noted that the beginning of using the "consortium" concept in the literature was in 1950s and the 1960s as most of collaborative and research sharing projects in the USA have been launched (Kopp, 1998).

The literature monitors a lot of academic library consortia at different levels all over the world, both in developed and developing countries as a strategic solution to shrink budgets, and to maximize the services offered to academic libraries intended users. International Coalition of Library Consortia ICOLC, known as the Consortium of Consortia lists over 200 library consortia from around the world, few of them are as international, e. g., AMICAL (American International Consortium of Academic Libraries) which includes members from 14 countries from American liberal arts colleges and universities throughout Europe, North Africa, Central Asia, and Middle East (AMICAL Consortium, n.d.).

### Academic Libraries Consortia: Worldwide Experiences

United States has the highest number of academic consortia according to the International Consortium of Libraries Consortia (ICOLC), besides; it is considered as the leader in this regard. The early history of library collaboration through networks started in 1967 when "a small group of library leaders founded OCLC with an ambitious public purpose, to improve access to the information held in libraries around the globe, and; find ways to reduce costs for libraries through collaboration. This vision launched an effort to share the world's information via library collaboration—first in Ohio, then across North America and today in 113 countries". OCLC is a collaborative network involves different types of libraries (OCLC, visited June 2015).

One of the leading academic library consortia projects is Ohio Link; The consortium of Ohio University libraries which emerged in 1987. The aim of Ohio Link is to facilitate fast and easy access to resources and provide document delivery services for all member libraries (colleges and university libraries of Ohio in addition to the Ohio State Library) through one network available and accessed to all members.

The consortium supervised by a shared council, formed of 13 members, this council holds 6 meetings yearly to set the budgets and strategic plans for providing services (Al-Obaied-Allah, 2008).

The Orbis Cascade Alliance is another leading project in the United States; it was founded in 1993 to serve colleges, universities and community in Washington and Oregon. (Orbis Cascade Alliance, visited 2014).

Academic Libraries of Indiana were established in 2003, now it includes 72 academic libraries in accredited non-profit institutions of higher education in Indiana. The aim is to support teaching, learning and research. The consortium provides Single point access (portal),

accesses a virtual union catalog for all its member libraries, provides collaborative preservation and storage for selected physical collections and provides access to special collections and unique resources (ALI, accessed June 2014).

CARLI, The Consortium of Academic and Research Libraries in Illinois is another leader example, in cooperation & resource sharing among the academic libraries. The main aim of CARLI as mentioned in its website is “to create and sustain a rich, supportive, and a diverse knowledge environment that furthers teaching, learning, and research through the sharing of collections, expertise, and programs” (CARLI, 2014).

Council of Australian University Librarians is an Academic and special libraries Consortium for 70 universities and institutions in Australia and New Zealand. CAUL provides cooperation and sharing programs. The main projects of CAUL are: the national interlibrary loan program among University Libraries in Australia, the Australasian Digital Theses Program, CAUL Australian Institutional Repository Support Service, and its consortia purchasing program, under the authority of the CAUL's Electronic Information Resources Committee program (CAUL, c2009).

In Europe, there is one of the successful multi countries consortia; “The new European Library”, it is a research portal provides access to resources for researchers in the humanities and social sciences; Archives, museums and audio-visual collections already have established domain aggregators (CERL, 2013)

On the other hand, if we shifted to the African region, we will find many projects, e.g., In Egypt, Algeria, South Africa, Zimbabwe, Uganda...Etc. Fourie (2006) analyzed in his comprehensive study five projects in South Africa, including the formation of the consortia as well as their achievements. The author conducted a short survey in 2004 to give an overview of the establishment of the five academic library consortia in South Africa, their status, successes and plans for the future. The results of this study showed that South African academic library consortia need more of work to identify the steps to take them to new levels of service delivery, member participation and strategic planning. The Zimbabwe University Librarians Consortium (ZULC) is another academic library consortium in Africa; it was formed in 2001 from 7 University Libraries in Zimbabwe. The main goal of ZULC is to provide resource sharing among member libraries to face financial problems and to preserve information resources. (ZULC, visited June 2014).

In the Asian region, there are a lot of successful academic library consortia. In India, for instance, there is a UGC-Infonet Digital Library Consortium. The Indian University Grants Commission (UGC) initiated two projects for the academic universities. The first project is “UGC-Infonet Connectivity Program” in order to connect the Indian universities with campus wide networks and Internet bandwidth, the second project is “UGC-Infonet

Digital Library Consortium” which is responsible for providing access to electronic resources in different disciplines through three phases. The INFLIBNET is responsible for execution, performance and monitoring of both the projects. The Consortium established to help the member university libraries keep their journal subscription, which have been discontinued because of the rapid increase in subscription cost much faster than the increase of funds available to the libraries (Thanuskodi, 2012).

In China, there are various types of library consortia at the regional and national level. The two major examples are a Beijing Academic Library Consortium, which includes twenty seven higher education institutions in Beijing, and Tianjin Academic Library Consortium. In addition, there are academic consortia at the regional level include Hebei Academic Digital Library, Guangdong Academic Library Network, and Hubei Academic Library Committee. A comparative study had been carried on between the two Chinese consortia in order to get an overview and comparative analysis of the similarities and different characteristics of the two consortia with reference to their advantages and disadvantages (Xu, 2010).

In Bangladesh, the Digital Libraries Consortium was formed in 2005 to support research and education in Bangladesh through creating a high speed research and education network for both governmental and private universities in addition to research institutions in Bangladesh (Abdul-Awwal, 2008). The University Grants Commission of Bangladesh, planned to support the Information and Communication Technology infrastructure in universities of Bangladesh in order to provide enhanced electronic services and resources to all scholars, staff and researchers.

In the Arab World, the Arabic literature lists a number of research studies which conducted to investigate the Arabic consortia and their origin; e.g., There are two detailed and comprehensive studies analyzed the main projects of Egyptian Universities, Libraries Consortium (EULC). The first study was conducted by Mohamed and Hassan (2008), while the second one was conducted by Farahat (2009) and mentioned by Mohamed and Hassan (2008); the Egyptian Universities' Libraries Consortium (EULC) is considered as one of the largest consortia in the Middle East, including all the Egyptian governmental universities and some other institutions such as foreign and private universities. Megahed (2007) highlighted the importance of the Egyptian Agricultural Libraries consortium as it is the oldest one in Egypt, established in 2002, the consortium formed from three main agricultural libraries in Egypt at this time; Egyptian National Agricultural Library (ENAL), and Faculty of Agriculture library at Cairo University, and Faculty of Agriculture library at Ain Shams University.

In their paper titled “Library Consortia in United Arab Emirates: An Opinion Survey”, Sheshadri, Shivalingaiah and Manjunatha (2011) referred to the existence of five



library consortia in UAE.

Another experience in Algeria through the Regional University Libraries Network as one of Meda Tempus projects had been stated by Zuhair and Amna (2014). This project aims to cooperate in the libraries resources and services with union catalog for the member libraries.

The future of academic libraries in the library consortia age was pointed out by Burke (2010) he discussed the challenges and opportunities face academic libraries in this regard, also the e-resources publishers and how open access will affect in which the publisher will deal with libraries. In his opinion, academic libraries will continue to play a key role in negotiating and licensing e-resources. Bedi and Sharma (2008) agree that library consortium in the information society is very important now comparing to the past, the trend now is towards an Access to resources, and the consortia are the best channels to get these aims with affordable cost and at the best terms of licenses.

## ARABIC ACADEMIC LIBRARY CONSORTIA: FINDINGS

We can conclude from the literature review about Arabic Academic library consortia that the Arab countries are aware of the importance of academic library consortia and their role in enhancing and developing the scientific research and educational process in the changing Information and Communication Technology environment. There are many examples of the academic libraries sharing projects; the leading projects are four projects according to their establishment date: Lebanese academic Libraries Consortium (LALC), Jordanian Public University Libraries Consortium (JoPULs), Egyptian University Libraries Consortium (EULC) and Saudi Digital Library (SDL), as they are examples for the academic library consortia at national level. They have similar and different consortium characteristics. This section will investigate their similarities and differences with regard to their goals and objectives, portal access, sources of funds, organizational model, main projects, resource and services, to draw out main guidelines for further studies about ways of integration between them to form the Arabic academic library consortium.

### Establishment

The idea of cooperating academic libraries in the country under the authority of one consortium in Arab countries emerged with the advent of 21<sup>th</sup> century among studies consortia. The Lebanese Academic Libraries Consortium (LALC) is the first library consortium in Lebanon, the idea emerged in 2001 by the University of Balamand, it was formed in 2002 from four private academic institutions; American University of Beirut, the Lebanese American University, Notre-Dame University and the University of

Balamand. In May 2004 the member libraries signed a Letter of Agreement (LOA) (Kammourie-Charara, 2012). By 2011, LALC has grown into nine members; University Saint-Esprit de Kaslik, University Saint-Joseph, Beirut Arab University and Haigazian University has been added (LALC, visited 2013).

In 2004 JoPULs; the Jordanian Public University Libraries Consortium was formed from ten governmental university libraries in Jordan, linked together through The Jordanian Universities Network (JUNet). The idea of Jordanian consortium emerged by the Jordanian Ministry of higher education, as a result of the Increasing costs in the information resources in the governmental university libraries in Jordan, in order to enrich the digital governmental university libraries network with information and to coordinate database subscriptions and to act as a negotiating committee with publishers in subscribing to electronic resources (COE, visited 2014).

Another project was launched in Egypt in 2006 to form the Egyptian University Libraries Consortium (EULC). The Egyptian University Libraries Consortium consists of more than 25 participating institutions from governmental, foreign, private universities, Research institutions and services in Egypt. It also includes the Egyptian National Agricultural Library and other research institutions. It was established under the umbrella of the Information and Communication Technology Project (ICTP) in the higher education, the consortium supervised by the Digital Library Unit (DLU) at the Electronic and Knowledge Service Center (EKSC) at the Supreme Council of Universities in Egypt (Electronic and Knowledge Service Center, visited 2013). The most important feature of (EULC) is that it is the gateway to the Egyptian university libraries to control and unify all the educational and research resources, efforts and procedures, the EULC provides access to the scientific and academic resources such as bibliographic and full text database of e-journals, books, dissertations, standards...etc, which could improve the educational and research process in Egypt. The consortium controlled centrally by the digital library unit at University Supreme Council (Farahat, 2009).

The fourth consortium, according to the date of constitution is the Saudi Digital Library. It is considered as one of the largest consortia in Arab world according to the number of electronic resources accessed through it. SDL was launched in November 2010. It unifies all Saudi university libraries under one umbrella, to negotiate with publishers on various legal and financial issues, to save money, efforts and to take benefit from the cooperation in general. The main challenges faced SDL in its launching were to push Saudi higher education institutions to contribute and make use of this project, to get better negotiation agreements with publishers for the e-book collections' subscription and establishing the SDL technical platform and designing an attractive and interactive portal (Almegren, 2011). The consortium gains more benefits and rights from publishers. It also



**Table 1.** Establishment and basic information.

Consortium formal name	Lebanese Academic Libraries Consortium	Center of Excellence for Jordanian Public University Libraries Services	Egyptian university Libraries Consortium	Saudi digital Library
Initials/ common name	LALC	JoPULs	EULC	SDL
Establishment date	2002	2004	2006	2010
URL	<a href="http://lalc.lau.edu.lb/">http://lalc.lau.edu.lb/</a>	<a href="http://www.jopuls.org.jo/">http://www.jopuls.org.jo/</a>	<a href="http://www.eulc.edu.eg">www.eulc.edu.eg</a>	<a href="http://sdl.edu.sa/SDLPortal/AR/Publishers.aspx">http://sdl.edu.sa/SDLPortal/AR/Publishers.aspx</a>
Governance	Private	The Ministry of Higher Education	The Ministry of Higher Education	The Ministry of Higher Education
Coordinating unit	American University in Beirut	Center of excellence (University of Yourmoke)	Digital Library at Higher Supreme of Universities	King Saud University
Member Libraries	9	10	32	40

**Table 2.** Goals and objectives of Arabic Academic Consortia.

Objectives	LALC	JoPULs	EULC	SDL
Enhancing access methods by creating one-portal includes access to a verity of services.	√	√	√	√
Minimizing the cost through the shared subscription in electronic resources and negotiating in electronic databases pricing.	√	√	√	√
Creating a Union Catalog among the shared member libraries.	X	√	√	X
Preserving, storing and accessing the university scientific research full text.	X	√	√	√
Enhancing & developing the human resources in the member libraries through the training programs.	√	√	√	√
Centralized management of the member library's content.	X	√	√	√

provides a digital environment for various Saudi member universities, and research organizations (Alasem, 2013).

A brief summary of the constitution and basic data is provided in Table 1.

### Goals and objectives of the Arabic consortia

By analyzing goals and objectives of the studied Arabic consortia as stated on their websites, we will find a similarity between them in the main goal which is to cooperate & share resources and human experiences through the member universities in order to strengthen the library services provided to the students, staff and other users of the institutions. The common objectives to achieve this goal are mentioned in Table 2.

As shown in the table, it is clear that there is a special interest in establishing one single point or portal for the member libraries, this is followed by the electronic resources shared subscription, as such sharing will save the library budgets, this objective is followed by the union catalog. On the other hand Particular attention is given by the EULC, SDL and JoPULs in Preserving, storing and accessing the full text for universities scientific research

especially the dissertations and thesis. There is a similar interest from The JoPULs and EULC to create a Union Catalog by installing a unified integrated library System for all member libraries through a central server. The Future Library system is utilized by the Egyptian libraries consortium and Horizon software is utilized by the Jordanian library consortium, there are however no serious steps in interlibrary loan or document delivery although they are already supplied.

### Benefits of the consortia

According to the goals and objectives of the studied consortia and the past research, we can summarize the benefits as follows.

### Benefits for the end users

1. Support the teaching, learning and research process by needed educational and research resources through shared resources.
2. One single point for all consortium services and resources (portals).

**Table 3.** Consortium Structure.

<b>Consortium</b>	<b>Main authority</b>	<b>Subunit</b>	<b>Coordinating unit</b>	<b>Sub coordinated unit</b>
LALC	Private Union	American University in Beirut	Lebanese American University in Beirut	Each University
JoPULs	Ministry of Higher education	Jordanian Public Universities Information Network	Center of Excellence at Yarmouk University	Center of Excellence at each university
EULC	The Ministry of Higher Education	The higher supreme of universities-	Digital Library	Digital Library unit at each university
SDL	Ministry of Higher education	King Saud University	Librarianship deanship at King Saud University	Librarianship deanship at each university

3. Increasing the range of resources available to consortium users as a result of the shared digital repositories, union catalogs and electronic resources.

4. The Consortium provides archival access and preservation of subscribed electronic resources.

5. The research productivity of member institutions is expected to improve due to increased access to diverse electronic resources.

### Benefits for member libraries

1. Member academic libraries minimize the costs and save their budgets through the collaborative negotiation and shared subscription on the electronic resources. The Consortium can get highly discounted rates of subscription in electronic resources from the most famous databases and electronic resources' publishers, as many consortia mentioned in their reports.

2. Facilitate cooperative acquisition plans among members in the consortium.

3. Enhancing the quality of the services provided and the librarians' qualifications due to the central management and training programs.

4. Avoid duplicates core collection.

It is important to measure the Impact and outcome of the consortium of the member libraries, faculty and students and the teaching and research process. It's easy to measure the benefits to the member libraries, but the real challenge is how to measure the impact on the intended communities.

### Governance

Ministries of higher education tend to develop the quality of education and research process in the universities, to get this goal the ministries have to use the Information and Communication Technologies, through establishing academic library consortia among the universities for sharing resources, services and the electronic resources subscriptions, as academic libraries now have the

minimum ICT infrastructure, e.g., The broadband connection to the Internet, websites connected to various electronic services (Thanuskodi, 2012). The ministries of higher education in three of the studied consortia form the base for the consortium in different levels and names, while LALC is a consortium of private university libraries. Table 3 summarizes this role.

As shown in the table, three out of the four studied consortia follow the Higher Ministry of education in the country; under the supervision of the ministries, there are a sub unit like The higher supreme of universities in Egypt, for example, followed by the direct coordinator or moderator unit, followed by subunits at the member libraries while the Lebanese Academic Libraries Consortium is a private project under the supervision of the American University in Beirut, which is one of the member libraries.

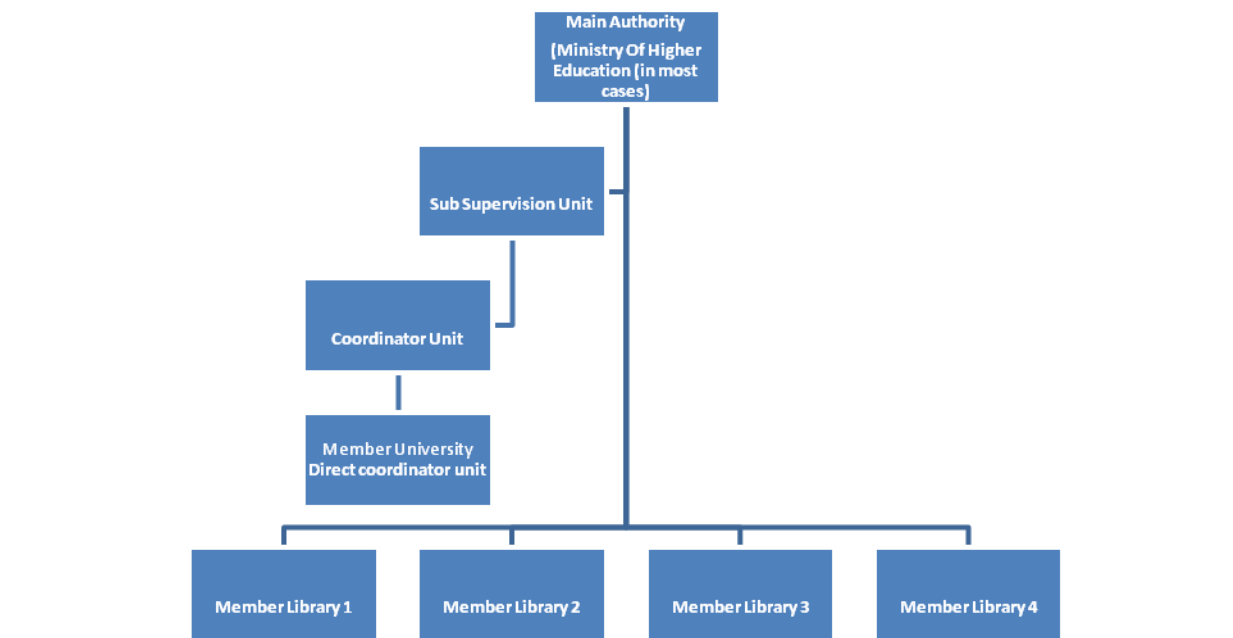
From the previous hierarchy, we can define two main types of parties according to their role; units responsible for funding operations, and units responsible administrative and technical works (Figure 1).

### Memorandum of understanding

It is important for all the participating libraries to sign a Memorandum of Understanding (MOU) (Obeidat, 2010). The studied consortia as mentioned in their website and from the data they provided by e-mail set their (MOU) to state all the rules and regulations, tasks and duties of all parties, mission, and constitution of the consortium.

### Coordinating unit

The coordinating unit plays a vital role in the consortium, it is considered as the backbone for all its processes and services. It supposes to be responsible for all the administrative and technical works in addition to its role as a coordinator amongst the consortium member academic institutions. From the previous samples of academic library consortia we can define four models of the coordinating unit hierarchy. In the studied Arabic



**Figure 1.** Common Consortium organizational structure as abstracted from the studied consortia.

consortia we can find different types of the coordinating units' models according to their structure and organizational authority. The unit's structures can be characterized in one of the following models:

- 1- One member library acts as the coordinating unit without any higher authority.
- 2- The Coordinating unit can be hosted at one of the member libraries under the supervision of ministry of higher education or one of its institutions.
- 3- Separate unit under the supervision of ministry of higher education or one of its institutions.

LALC follows the first model; where the American University in Beirut Acts as the coordinating unit. In their Letter of Agreement they agreed to select the coordinating unit from them every three years with possibility of renewal (Kammourié-Charara, 2008). LALC is composed of one representative from each institution, and they meet every definite time through the year to discuss all the related issues and proposed developments in the consortium.

The second model which dedicates independent unit for this purpose to be hosted in one of the member institutions applied in the SDL. Librarianship deanship at King Saud University is the coordinating unit which administrates the project and all procedures regarding the databases' subscriptions, this includes receiving orders, negotiating with databases' suppliers, paying subscription fees. The National Center for E-Learning & Distance Education was responsible for initiating the project (National Center for E-Learning and Distance Education, n.d.).

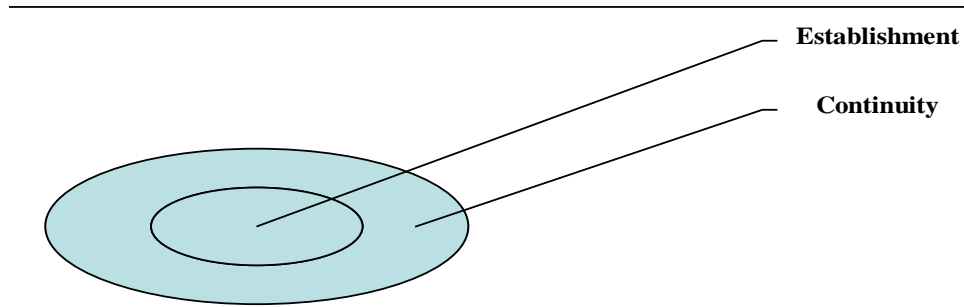
The second model applied also in the JoPULs through the "Center Of Excellence". The coordinating unit (COE) is located at the University of Yarmouk (Al-Qasem and Yamin, 2010; Al-Khaledey, 2009).

The third model which dedicates a separate unit under the supervision of the ministry of higher education or one of its institutions is applied in the EULC where a separate unit was established under the name "Digital Library at the Higher Supreme of Education" to act as the central point and the cornerstone amongst all the member libraries.

### Coordinating unit tasks

According to the data collected about the studied consortia, we can summarize the following tasks and duties of the coordinating unit:

- 1- Coordinates between all the member libraries from one side, and between the consortium and other institutions and consortia from another side. This unit should hold a qualified staff and experts to assist in planning and coordinating and monitoring projects.
- 2- Acts as a communication point between academic libraries and international databases publishers or suppliers.
- 3- Acts as the cornerstone with its committees to set the strategic plans for developing the work.
- 4- Hosts the consortium web portal.
- 5- Trains both the member libraries staff and users, in addition to preparing the required guides and tutorials.
- 6- Follows up the H/W & S/W requirements in the shared institutions.



**Figure 2.** Funding types.

- 7- Monitors and administrates the consortium and evaluates the performance.
- 8- Provides the needed reports and indicators for decision makers.

**Academic institutions member libraries’ tasks**

As stated on their websites, the member institutions are assigned with some tasks and duties:

- 1- Each university or academic institution chooses a project coordinator to pass a long with the main unit and his university or academic institution, and supervise the project in his institution.
- 2- Provide the needed computers connected to the Internet.
- 3- Funding & executing the data entry for the local digital repository, and the union catalog.
- 4- Funding the training for librarians.

**Membership**

Despite the differences in the structure and coordination, there are concurrences between the studied consortia in their member libraries, which include the following:

- 1- Governmental (public) university libraries.
- 2- Private universities & university college libraries.
- 3- Research institutions.

LALC’s member libraries are only the private university libraries in Lebanon, while JoPULs is formed from only the governmental (public) university libraries. SDL and EULC include member libraries from the three categories.

It is Important to form a Common Committee from the member libraries to manage The Academic Libraries Consortium works, the major tasks of this committee are:

- 1. Analyze users’ needs and the libraries facilities and features.
- 2. Set the consortium strategic plans and policies.

- 3. Set the consortium acts and rules in the light of legal issues.
- 4. Conduct a business model for all member libraries, for governmental and private universities as well as other related institutions.
- 5. Hold meetings and workshops, to launch the project.
- 6. Plan for training programs for both librarians and library users.

**Funding**

The most significant challenge facing any consortium is the fund resources for setting up and continuity. Differences refer not merely to the buying power but also, to different educational organizations that require special rules in the agreements with publishers and vendors. From the studied consortia, the funding process takes place through two main phases as follows:

**Establishment funds**

The establishment phase occurs in the beginning of the consortium, which will be for a short time ranging from one year up to three years. The studied consortia have received grants under the umbrella of some projects to sustain the research and educational goals (Figure 2).

**Continuity funds**

The continuity phase will be for a long time all over the consortium life. It is seen as the most complicated issue after the formation of the consortium, so the business model to be followed through its continuity should be set carefully. The difficulties emerge from:

- 1- The differences between sharing libraries’ authorities; some of the members may be are under the umbrella of the Ministry of Higher education, and some of them are under private authorities.
- 2- The differences between shared university libraries

**Table 4.** Main projects of the studied consortia.

Projects	LALC	JoPULs	EULC	SDL
Union Catalog	X	√	√	X
Electronic Resources subscriptions	√	√	√	√
Digital repository	X	√	√	√
Electronic Publishing	X	X	√	√

in their size, number of students and staff and number of colleges or departments.

3- The ICT infrastructure available in the shared university libraries, which will cost some of them additional budget.

4- The differences between university libraries in their budgets, policies, and support from the university.

All these challenges face the decision makers in assigning the business model for the consortium, especially in the electronic resources subscription. The problem will arise with the small size member institutions. To define a business model to the consortium is the most complicated issue as it will be amongst different higher educational institutions, and their budgets authorities will be varied, especially if they are private and public. Many studies provided some consortia experiences; for example, According to ACL Institute, the business model of the consortium should divide to: Key partners – Key activities – key resources (ACL, 2012).

In LALC each member library is responsible for paying its own invoices, while JoPULs depends on a separate budget from the following resources: member libraries' subscriptions and partially from Ministry of Higher Education.

The main source of funds for SDL is the higher education box (Information center for Saudi Universities, 2004). The Egyptian Academic Libraries consortium sets a business model which divided the Egyptian universities depending on the number of users into: Large size universities (number of their actual users 25.000) - Medium size universities (number of their users 10.000-25.000) - Small size universities (number of their users less than 10.000).

### Main projects

There are common projects in most of the studied consortia, in addition to some unique projects for each one of them as shown in Table 4.

### The main projects of the studied consortia

1- Shared subscription, in electronic databases for academic libraries primarily.

2- Establishing virtual union catalog among academic

libraries.

3- Building the Academic libraries' local databases & repositories.

4- Provide electronic publishing tools and mechanism for the scientific research.

### Services

The study monitored the main projects and the services emerged from them, which are represented at their web portals. The consortium web portal is a very important part now if we compared the studied Arabic consortia we will find different services and information available through the consortium as shown in the Figure 3.

All the studied Arabic consortia have web portals which act as the single point or the gateway to provide hyperlinks for member libraries, databases shared subscription (Figure 4). However, there are unique characteristics of each one of them. Table 5 summarizes the main services which are offered:

1. SDL provides an interactive gateway with different types of guided information e.g., Video tutorials, updated announcements, workshop news, news from publishers, it holds a very big electronic collection. Some other significant characteristic is the availability to the Saudi students all over the globe to register data about their masters and PhD theses in the digital repository from the SDL web site as easily as uploading them.

2. The main feature of EULC is the accessibility for the registered research proposals for master and PhD degrees in the Egyptian Universities which help the postgraduate students and the faculties and the researchers in general to be aware by these proposals and their topics. Another feature is the union catalog for the Egyptian University libraries which follows the international bibliographic standards, the digital repository for the theses, faculties' research papers and the universities journals articles. Besides the electronic publishing module which fully supports the electronic publishing online process for the Egyptian universities' journals.

3. JoPULs provides links to the union catalog prepared according to the international bibliographic standards; Authority control lists of the Arabic names to unify the bibliographic work in this regard, provides library management software for its member libraries. Provides full information about the consortium rules and laws.

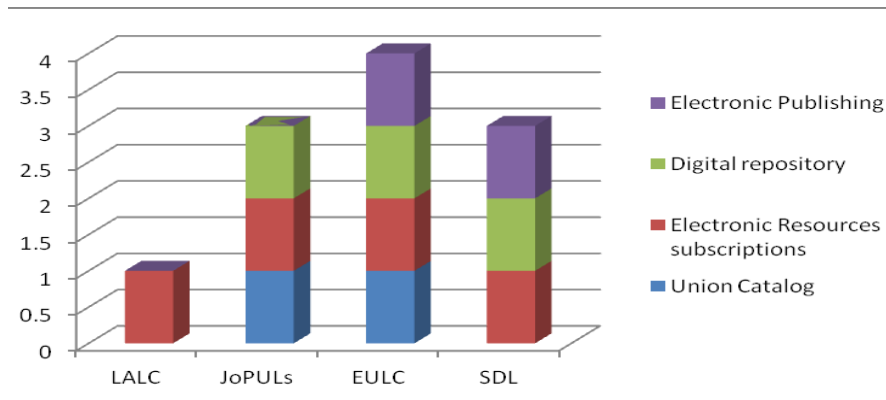


Figure 3. Main projects of the studied Arabic consortia.



Figure 4. Web Portal main services.

4. LALC provides information about the consortium and its members, LALC representatives, membership forms, annual report and the memorandum of establishing.

Figure 5 summarizes the different services available through the studied Arabic consortia:

**Social communication tools on the portals**

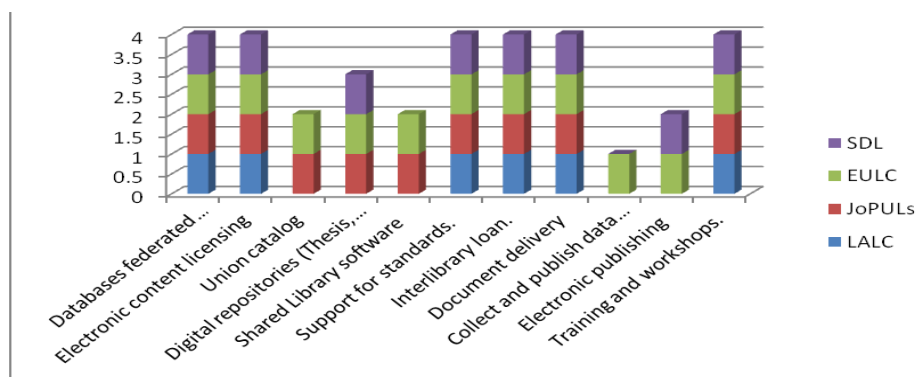
It is important to meet the users' preferences in the

rapidly changing information technology era, so the consortium coordinators should take benefit of the ICT to communicate with their users and the community as well. In these tools the consortium can publish the news and interacts with users.

As indicated in Table 6, SDL provides various social communication tools with their participants, in order of the frequency of usage; the consortium has a Facebook, Twitter, YouTube and LinkedIn accounts which they are good channels to convey with the consortium community, so SDL benefits fully from the advantages of the social

**Table 5.** The services provided in the studied consortia.

Projects	LALC	JoPULs	EULC	SDL
1. Databases federated subscriptions,	√	√	√	√
2. Electronic content licensing	√	√	√	√
3. Union catalog	X	√	√	X
4. Digital repositories (Thesis, researchers' literature... etc.)	X	√	√	√
5. Support member libraries with the Library software	X	√	√	X
6. Support for standards.	√	√	√	√
7. Interlibrary loan.	√	√	√	√
8. Document delivery	√	√	√	√
9. Collect and publish data about the approved Master and PhD's proposals in the shared universities.	X	X	√	X
10. Electronic publishing for the shared universities' journals and proceedings).	X	X	√	√
11. Training and workshops.	√	√	√	√

**Figure 5.** Services provided on the studied Arabic consortia.**Table 6.** Links to the communication tools on the consortia portals.

Communication tool	LALC	JoPULs	EULC	SDL
1- Facebook	X	X	√	√
2- Twitter	X	X	X	√
3- LinkedIn	X	X	X	√
4- YouTube channel	X	X	X	√

media in contacting and assisting their users. EULC provides a Facebook link to their page, while there are no links or official account by the name of JoPULs or LALC.

Arabic Academic Libraries consortia integration:

1. SDL includes a large number of electronic resources; attractive and interactive web portal; good policy and procedures to collect the Saudi theses and dissertations, all over the world through its website; also the interactive social communication tools (Figure 6).

2. EULC is unique in providing electronic publishing module for the universities' journals; data registration of the approved research proposals for Master and PhD. Degrees centrally from the universities; the digital repository of Egyptian universities Master and PhD theses and dissertations, the union catalog and the electronic resources (Figures 7 and 8).

3. JoPULs provides union catalog; authority control lists for the bibliographic data; and the electronic resources. It supports one library management system for all its member libraries (Figures 9 and 10).



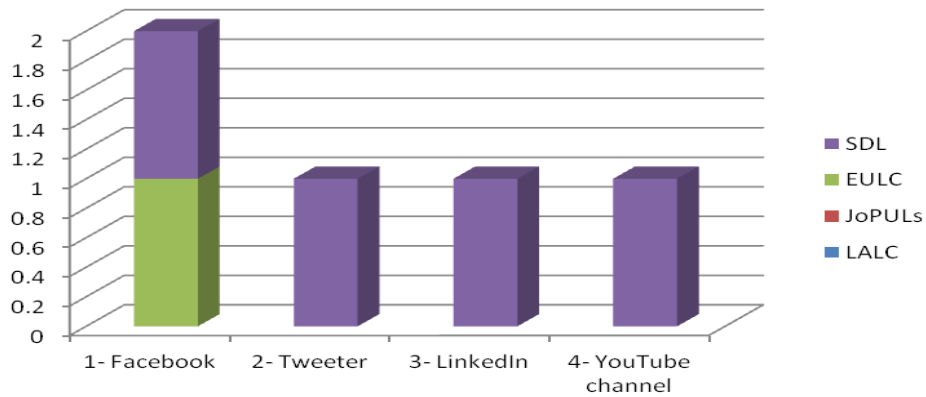


Figure 6. Links to the communication tools on the consortia portals.

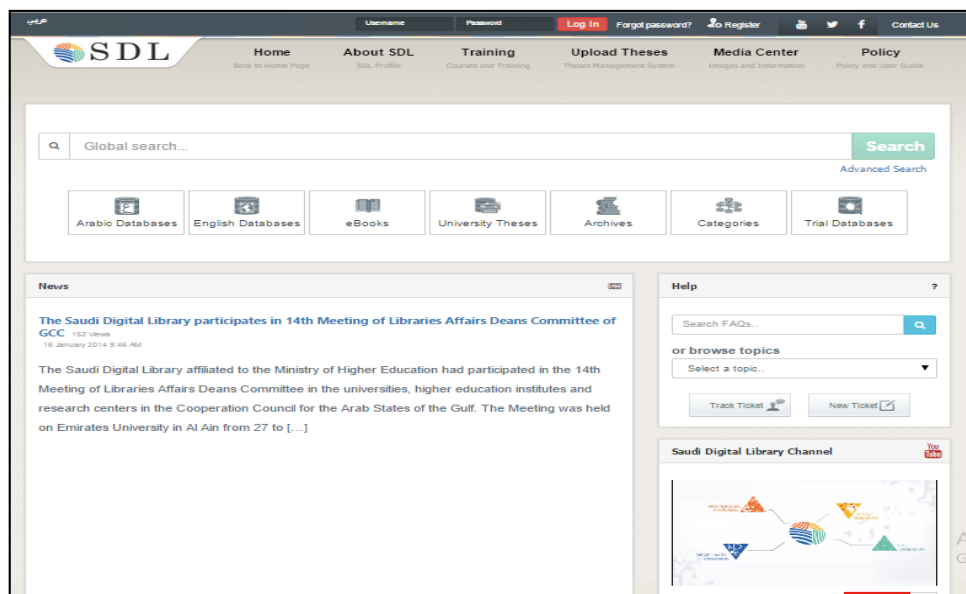


Figure 7. Saudi Digital Library portal homepage.

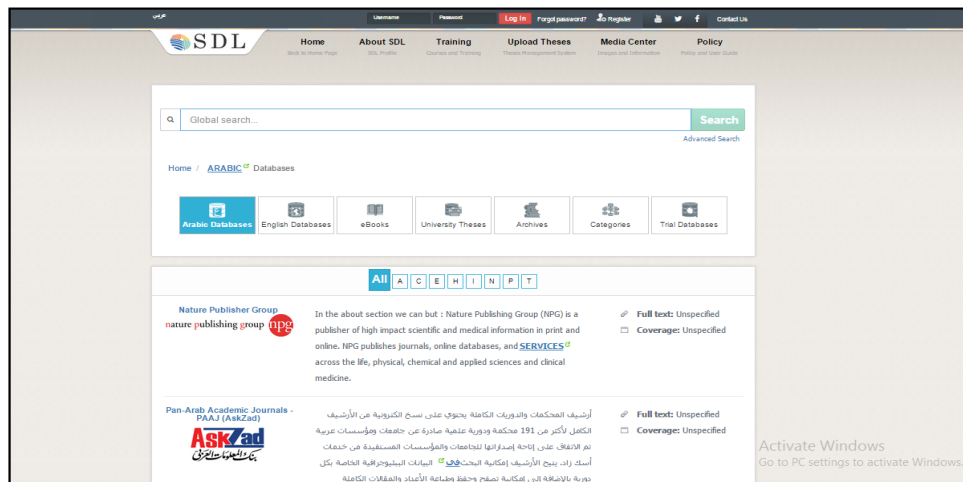


Figure 8. Saudi Digital Library portal Search.



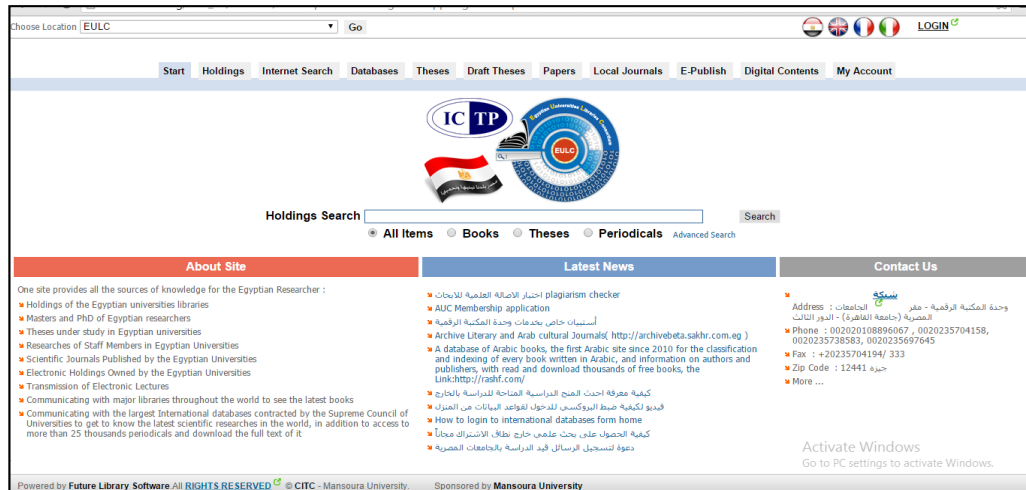


Figure 9. Egyptian Universities Consortium portal homepage.



Figure 10. Egyptian universities consortium digital library.



Figure 11. Center of Excellence for JoPULS portal services.

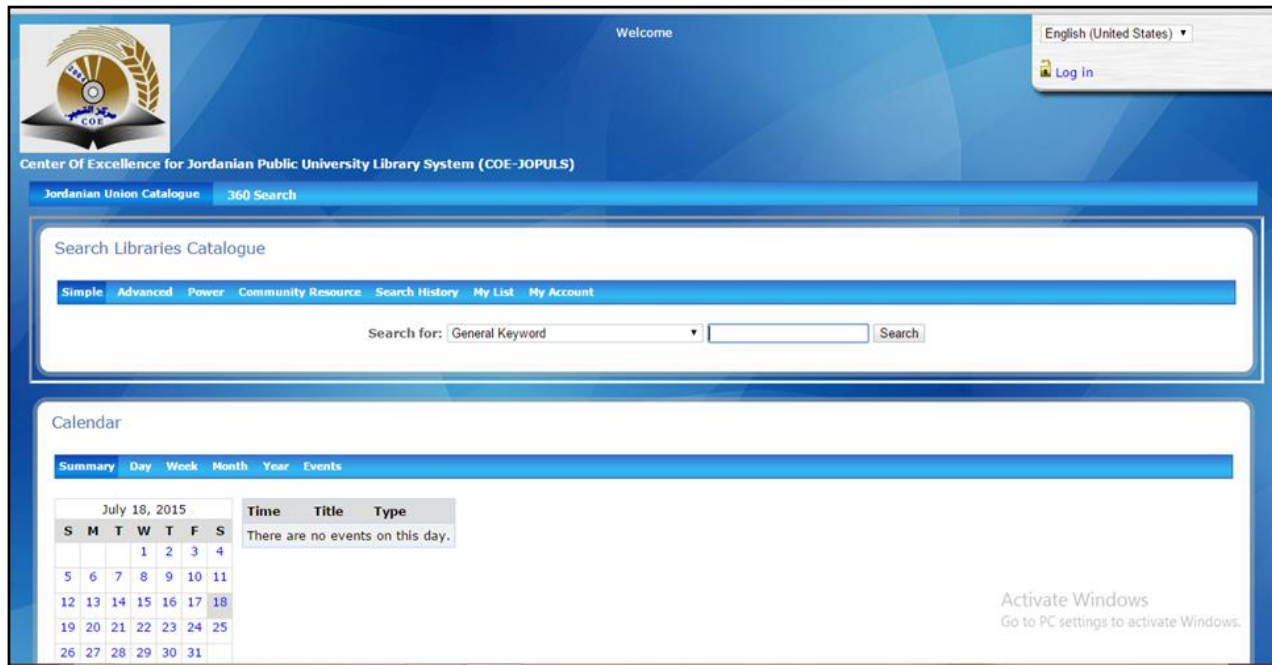


Figure 12. Center of Excellence for JoPULs search screen.



Figure 13. Lebanese Academic Libraries Consortium portal homepage.

4. LALC is the most previous one; although it consists of private university libraries, but it has the motivation and power to continue since its establishment in 2001 till now (Figures 11 to 14).

### Conclusion

The main aim of this research is to study the state of the

art of the Arabic academic library consortia in the light of the services provided on their web portals; The “Lebanese Academic Libraries Consortium”, the “consortium of Jordanian Public University Libraries”, the “Egyptian University Libraries Consortium” and “Saudi Digital Library”. There are other projects in Arab countries in their first stages, e.g., The Digital Library in UAE, The Omani Digital Library, the Regional University Libraries

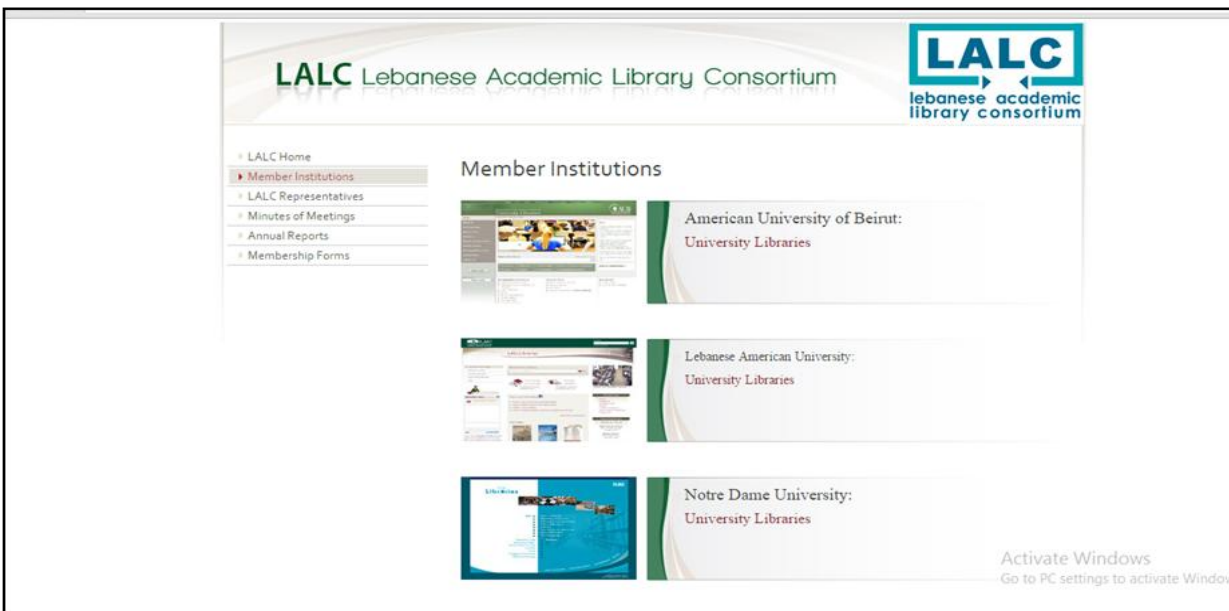


Figure 14. Lebanese Academic Libraries Consortium member libraries.

Table 7. SWOT analysis for the proposed Consortium of Arabic Academic Libraries consortia.

Strengths	Weakness
1. ICT infrastructure	
2. Common library standard	- Differences in the used library software
3. Higher Ministries of education support	- Lack of cooperation plans among the Arabic Academic libraries
4. Qualified and experienced managers and staff	- Communication workflow
5. Similar goals and objectives	- Fund resources
6. Effective Consortia portals	
7. Good projects provided in each consortium	
Opportunities	Threats
8. Integration of the services.	- Trade laws such as each country's currency, payment preferences, taxes, and tariffs
9. More power in negotiation	- Different levels of authorities
10. Local Digital repositories in each consortium	Budget shrinks
11. Marketing programs for the consortium	

Network in Algeria. All these projects are under the umbrella of their ministries of higher education as a responsible and initiative institution (except the Lebanese Consortium).

The studied consortia have similarities and differences, which enable them to communicate and cooperate together to form the Arabic Academic Libraries Consortium. As they have the ICT infrastructure; the similar goals and objectives; consortia web portals; the qualified staff; standards to create the bibliographic records (in case of the union catalogs). In the other hand each consortium has its features and advantages which distinguish it from the others as mentioned above.

The resulting union between the Arabic consortia in the Arab countries will maximize the benefits. A SWOT

analysis can determine in detail the Strengths, Weakness, Opportunities and Threats of Arabic consortia in order to set a strategic plan for a unified Arabic consortium in a way that the resulting mixture or combination has complementary strengths and non overlapping weaknesses.

In the following section a brief SWOT analysis based on the results of the study. This analysis may be used as a basis for further studies about the strategic planning for The Arabic Academic Consortium (Table 7).

## RECOMMENDATIONS

1. In-depth studies should be conducted to assess the

impact and outcome of the consortium of the member libraries, faculties and students; the teaching and research process through developing service evaluation and performance indicators. It's easy to measure the benefits to the member libraries, but the real challenge is how to measure these benefits to the intended communities.

2. SWOT analysis studies should be done in detail in order to define the Strengths, Weakness, Opportunities and Threats of Arabic consortia in order to set a strategic plan for a unified Arabic consortium in a way that the resulting mixture or combination has complementary strengths and non overlapping weaknesses.

3. It is better for academic library consortia to include the governmental and private universities. It also can include other research institutions, in order to provide access to the scientific and academic resources such as bibliographic and full text databases of e-journals, books, dissertations, standards...etc, which could improve the educational and research process at all levels.

4. Ministries of higher education in Arab countries aware of the vital role of academic libraries in the hole higher education system, many academic library consortia established at various levels as a strategic solution to shrinking budgets, and to maximize the services provided to academic libraries intended users, this is the trend all over the world both in developed and developing countries.

5. The consortium coordinators should support the decision makers in different sectors of higher education, in setting the plan for scientific research strategies.

6. The consortium should set the desirable business model to meet its members' needs and abilities taking into account the deviation between the member libraries in size, the type of the institution and its users' preferences.

7. To raise funds for the development and sustaining the activities of the Consortium the common committees should plan better strategies such as income generating activities from workshops, developing projects, publications, and to develop good marketing strategies.

8. It is beneficial for the consortium to develop a model for the societal interaction with users and communities through creating forums, group discussions, seminars, workshops, Facebook, Tweeter, YouTube accounts.

9. The coordinating authority should offer the required metadata to describe the consortium portal to make it accessible for a wide range of users through the Internet Search engines.

### Conflict of Interests

The author have not declared any conflict of interests

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### REFERENCES

- Abdul-Awwal KM (2008). "An Initiative for Digital Resources Consortium for University Libraries in Bangladesh". 6th Convention PLANNER - 2008, Nagaland, November 06-07, (Ahmadabad, 2008). Nagaland University, INFLIBNET Centre.
- ALI (2014). "Academic libraries of Indiana". About. Retrieved June 20, 2014, from <http://academiclibrariesofindiana.org/about>.
- Alasem AN (2013). "Evaluating the Usability of Saudi Digital Library's Interface (SDL)". Proceedings of the World Congress on Engineering and Computer Science, Vol I, San Francisco. Retrieved May 25, 2014, from [http://www.iaeng.org/publication/WCECS2013/WCECS2013\\_pp178-181.pdf](http://www.iaeng.org/publication/WCECS2013/WCECS2013_pp178-181.pdf).
- Almegren A (2011). "Arabian prints: the Saudi Digital Library". Open Educa Berlin. Retrieved June 5, 2014, from [http://www.online-educa.com/OEB\\_Newsportal/arabian-prints-the-saudi-digital-library/](http://www.online-educa.com/OEB_Newsportal/arabian-prints-the-saudi-digital-library/).
- Al-Obaid-Allah A (2008). "Library Consortia". Informatics (22). Retrieved Dec. 15, 2013, from <http://informatics.gov.sa/old/details.php?id=231>.
- Al-Qasem SM, Yamin I (2010). "Libraries Consortium, Concepts and Objectives: Center of Excellence for Jordanian Public University Libraries: case study". Proceedings 16<sup>th</sup> Special Libraries Association Conference, Arabian Gulf Chapter: Virtual Knowledge in Information Institution: trends and issues, Abou Dhabi. Retrieved Dec. 25, 2013, from <http://www.slaagc2013.org/pdf/rasd-tawtheeqy.pdf>
- AMICAL Consortium. (N.d.). "About AMICAL". Retrieved Dec. 15, 2013, from <http://www.amicalnet.org/about>
- Bajpai RP, Mal BK, Bajpai G (2009). "Use of e-resources Through Consortia: A Boon to Users of Indian University Libraries". International Conference on Academic Libraries (ICAL): 5th to 8th October, 2009 (p.501). Delhi: Delhi University Library System, University of Delhi (North Campus). Retrieved Feb. 20, 2014, from [http://crl.du.ac.in/ical09/papers/index\\_files/ical-85\\_83\\_195\\_2\\_RV.pdf](http://crl.du.ac.in/ical09/papers/index_files/ical-85_83_195_2_RV.pdf)
- Bajpai Y (2014). "Concept of Eritrean Academic-Public Library Consortia: A Step toward the Information Society of an African Nation". Int. J. Sci. Res., 3(3). Retrieved Aug. 22, 2014, from <http://www.ijsr.net/archive/v3i3/MDIwMTMxMDMx.pdf>
- Bedi S, Sharma K (2008). "Library Consortia: A step Forward the Information Society". Proceedings of Trends and Strategic issues for Libraries and Global Information Society". March 18-19, 2008. Retrieved Feb. 22, 2014, from [http://eprints.rclis.org/11395/1/Shalu\\_Bedi\\_and\\_Kiran\\_sharma\\_LIBRARY\\_CONSORTIA.pdf](http://eprints.rclis.org/11395/1/Shalu_Bedi_and_Kiran_sharma_LIBRARY_CONSORTIA.pdf)
- Bostick SL (2001). "Academic Library Consortia in the United States: An Introduction". Library Quarterly, 11, 6-13.
- Burke R (2010). Library Consortia and the Future of Academic Libraries. Retrieved July 19, 2014 from <http://www.alastore.ala.org/nealschuman/companionwebsite/academic/Burke2010.pdf>
- CARLI (2014). "CARLI: Consortium of Academic and Research Libraries in Illinois. Mission & Values". Retrieved June 2014, from: <http://www.carli.illinois.edu/about/values>
- Choukimath PA, Uma BA, Koganuramath MM (2004). "Strategic Plan for Mahatma Education Society Consortium (MESCon)". 2nd International CALIBER-2004, 11-13 February. New Delhi: INFLIBNET

- Centre. Retrieved Aug. 13, 2014, from [http://ir.inflibnet.ac.in/bitstream/1944/324/1/04cali\\_16.pdf](http://ir.inflibnet.ac.in/bitstream/1944/324/1/04cali_16.pdf).
- CAUL (c2009). "Council of Australian University Librarians. Home". Retrieved Mar. 10, 2014, from <http://www.caul.edu.au/>.
- COE (2014). "Center of Excellence. Mission". Retrieved April 22, 2014, from <http://www.jopuls.org.jo/>.
- COE (n.d.). "Instructions of Center of Excellence in Library Services for Jordanian Public Libraries". Retrieved May 20, 2014, from <http://www.jopuls.org.jo/law.asp?LID=18>.
- Drake MA (2010). Academic Library Challenges. *Searcher* 18(9):16-53.
- De-la-Fuente G, Bueno R, John R, Boon S (2012). The roles of libraries and information professionals in Open Educational Resources (OER) initiatives: Survey Report. JISC CETIS. Retrieved from: <http://publications.cetis.ac.uk/2012/492>
- Dong EX, Zou TJ (2009). "Library Consortia in China". *LIBRES*. 19 (1). Retrieved Mar.10, 2014, from <https://www.questia.com/read/1P3-1853459341/library-consortia-in-china>.
- Efada. (N.d.). Launching Universities and Research libraries in AUE. Retrieved Jan. 02, 2014, from <http://uzweb.uz.ac.zw/zulc/about/intro.html>.
- EULC (2014). "Egyptian University Libraries Consortium". Retrieved Jan. 13, 2014, from [http://srv4.eulc.edu.eg/eulc\\_v5/libraries/start.aspx](http://srv4.eulc.edu.eg/eulc_v5/libraries/start.aspx).
- Farahat T (2009). Electronic Resources Consortia: field study of the University Libraries Consortium. *Cybrarians J*. 18 (March 2009). [http://www.journal.cybrarians.info/index.php?option=com\\_content&view=article&id=345:2009-07-05-20-53-30&catid=141:2009-05-20-09-52-31](http://www.journal.cybrarians.info/index.php?option=com_content&view=article&id=345:2009-07-05-20-53-30&catid=141:2009-05-20-09-52-31)
- Kammourie-Charara H (2012). "Academic library consortia in Lebanon". Retrieved Jan. 10, 2014, from <http://www.slideshare.net/houeidakam/academic-library-consortia-in-lebanon2?related=2>.
- Kammourié-Charara H (2008). "LALC: one time more". Proceedings 14<sup>th</sup> Special Libraries Association Conference, Arabian Gulf Chapter, Doha. Retrieved Mar. 12, 2014, from <http://www.slaagc2013.org/pdf/rasd-tawtheeqy.pdf>
- Khan JI (2006). "A global perspective on university libraries and a roadmap for Bangladesh Digital Library consortium: Draft 2.5". Technical Report. Kent, Media Communications and Networking Research Laboratory, Department of Computer Science, Kent State University, Retrieved May 25, 2014, from <http://medianet.kent.edu/techreports/TR2006-02-02-UGC-DLC-K.pdf>.
- Kopp JJ (1998). Library consortia and information technology: the past, the present, the promise. *Information technology and libraries*, 17 (1):7-12.
- LALC (2014). Lebanese Academic Library Consortium: About us. Retrieved Jan., 10, 2014, from <http://lalc.lau.edu.lb/>.
- Malaysian Online E-Resources Consortium. Initiatives towards formation of academic library consortium in Malaysia. (N.d.).
- Mohamed KA , Hassan A (2008). "Web usage mining analysis of federated search tools for Egyptian scholars". *Program: electronic library and information systems*, 42 (4), pp. 418-435.
- "National Center for E-Learning & Distance Education". (N.d.). Retrieved from [http://www.mcit.gov.sa/Ar/InformationTechnology/Pages/LocalNews/t ec\\_news\\_38.aspx](http://www.mcit.gov.sa/Ar/InformationTechnology/Pages/LocalNews/t ec_news_38.aspx)
- Obeidat O (2010). "An investigation of the role of digital libraries in bridging the digital divide in developing Arab countries: the case of Yarmouk University, Jordan". Retrieved from [http://espace.library.curtin.edu.au/cgi-bin/espace.pdf?file=/2011/03/03/file\\_1/153404](http://espace.library.curtin.edu.au/cgi-bin/espace.pdf?file=/2011/03/03/file_1/153404)
- OCLC (2015). <https://www.oclc.org/about/story.en.html>
- Orbis Cascade Alliance. <https://www.orbiscascade.org> .visited 2014
- Reitz JM (2014). "ODLIS: Online Dictionary of Library and Information Science". Retrieved Dec.16, 2014, from [http://www.abcdlio.com/ODLIS/odlis\\_c.aspx](http://www.abcdlio.com/ODLIS/odlis_c.aspx).
- Ruan L, Qiang Z (2013). "The Role of Information Technology in Academic Libraries' Resource Sharing in Western China". *Library Trends*, 62(1) :180–204.
- SDL (2014). "Saudi Digital Library. About". Retrieved Dec. 30, 2014, from [http://portal.sdl.edu.sa/english/?page\\_id=1453](http://portal.sdl.edu.sa/english/?page_id=1453).
- SDL (2014). SDL User Guide. Retrieved from <http://sdl.edu.sa/SDLPortal/ar/UserManual/SDLUserGuide.pdf>
- SELL (2014). "Southern European Libraries Link. About SELL". Retrieved July 30, 2014, from <http://www.heal-link.gr/SELL/about.htm>.
- Saroja G, Sujatha G (2014). "Application of Total Quality Management to Library and. Information Services In Indian Open Universities". Retrieved May 14, 2014, from <http://www.col.org/forum/pcfpapers/saroja.pdf>.
- Sheshadri KN, Shivalingaiah D, Manjunatha K (2011). "Library Consortia In United Arab Emirates: An Opinion Survey". *Asia-Pacific Conference Library & Information Education & Practice*, 2011, Retrieved May 20, 2014, from [http://eprints.uitm.edu.my/3961/1/SP\\_LC111\\_39.pdf](http://eprints.uitm.edu.my/3961/1/SP_LC111_39.pdf).
- Tamaro AM (2004). "Resource sharing: academic library consortia in the digital age: A literature review". Retrieved Feb. 19, 2014, from <http://dspace-unipr.cineca.it/bitstream/1889/1153/1/zorzi.pdf>.
- University Grants Commission (2013). "Guidelines for Ugc-Infonet Digital Library Consortium During The Xi Plan Period (2007 - 2012)". University Grants. Commission, New Delhi – 110002. Retrieved Mar. 22, 2014, from [http://www.dauniv.ac.in/downloads/UGCXIPlanFinancial\\_Support.pdf](http://www.dauniv.ac.in/downloads/UGCXIPlanFinancial_Support.pdf).
- Xu D (2010). "From CALIS and CASHL to the Library Consortium Trend in China". *Library Management* 31(8/9).
- Zuhair A, Amna B (2014). "Information networks and their role in supporting the self-configuration, research and teaching methods for the faculties: a field study for the libraries network Meda Tempus". Second National forum of Computers and Information Technology in Hiegeh Education. Retrieved Dec. 26, from <http://manifest.univ-ouargla.dz/documents/Archive/Archive%20Faculte%20des%20Sciences%20Sociales%20et%20Sciences%20Humaines/Deuxieme-reunion-nationale-sur-la-technologie-informatique-et-de-linformation-dans-lenseignement-superieur-05-06-Mars2014/aîne%20ehdjer%20zouhir.pdf>.
- ZULC (2002). "Introduction to ZULC". Retrieved June 2014, from Zimbabwe University Libraries Consortium: <http://uzweb.uz.ac.zw/zulc/about/intro.html>.





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