National Network for Enhancing Research, Teaching, and Delivery Services among Library and Information Science Schools (LIS) in Nigeria: A Proposed Model

Ahmed Mohammed[1] Ph.D

Abstract

Abundant literature and researches have indicated quite numerous challenges undermining library schools in Nigeria. Such include inadequate funding, poor state of teaching and research laboratories, inadequate faculty members' due to poor remuneration resulting to brain drain, lack of serious collaboration among the schools, low ICT skills leading to low compliance among faculty members etc. In order to minimize the aforementioned problems, this paper is designed with the sole aim at proposing outstanding network conceptual model for action among LIS schools in Nigeria, it discusses]\ the structure and operational procedures for the smooth operations of the scheme. The paper further identified Problems associated with the scheme, and measures on how to address the impediments identified were equally proposed. It concluded by further recommending measures on how this viable project could be attained and sustained for better future prospects.

Key words: Networking Conceptual Model, LIS Schools in Nigeria, ICTs, - Nigeria

Introduction

In a globalizing world where economic growth is driven by highly skilled labor and where fundamental research is necessary to produce new knowledge that can enhance creativity and accelerate discoveries, universities have to provide an educational environment that will expose students to a variety of information resources (Adeogun, 2005). Considering the above agitations, the developed world have since recognizes and utilize Information and Communication Technologies (ICTs) into almost all facets of their life, such as education, health care delivery, security, information gathering, handling, utilization and dissemination, etc. Equally, in their counterpart developing countries, ICTs can be properly employed and utilize as done by the later. It has been asserted by many scholars Yusuf (2005) for instance, that "ICTs can be employed in various ways in developing countries" citing the example with Nigerian tertiary institutions universities inclusive. However, despite the enormous hopes and aspirations for integrating ICTs in the developing countries, in contrary opinion some commentators lamented that those developing countries have got a lot of restrictions in carrying the ICT to the most possible end point of the society due unfavorable nature of their economy that has been characterized by many scholars as under developed due to unstable political culture and chaotic socio-cultural environment, with low capacity utilization, low industrialization, poor infrastructures, unemployment and underemployment and pervasive poverty. Other features including high rates of illiteracy, insecurity, popular (general) apathy, traditionalism, poor reading culture poor information environment, poor information policy formulation and implementation, etc. among others (Diso, 2009), this has placed many, if not all Nigerian library schools in a disadvantaged position in conducting their businesses (teaching, learning and research). Despite the aforementioned catalogue of problems, this paper still argues that Nigeria still has a lot of hope and aspiration in utilizing and integrating ICTs to the maximum for advancement and knowledge sharing. The global trend is now shifting towards the use of ICT in all spheres of human endeavor, such as e-commerce, e-government, e-finance, e-library and e-learning, etc.

---

[1] Department of Library and Information Sciences, Faculty of Education, Bayero University, Kano-Nigeria P.M.B 3011
E-mail: amkwaru4@yahoo.com

In the educational sectors, the trend has been the integration of ICT into the sphere of education, such as on–line courses, tele-education, tele-medicine, distance education, virtual learning, virtual laboratory and virtual LIS courses (Ogunsola: 2004p.6). Thus, Information and Communication Technology (ICT), and the computer science has brought metamorphic changes in information products, information seeking behavior of the users, and the overall information organization. The changes in the process of information generation are due to the convergence of a variety of technologies, i.e. Hypertext, Multimedia, Virtual reality, etc. ICT has brought new structures and new mechanisms to organize and make information efficiently and instantly available to the users. Information being a strategic tool, the role and responsibility of the Library and Information Science (LIS) professionals are at the push of transition from its traditional and ethical rigid to information sourcing and sharing among knowledge society (Mahapatra,: 2006). Education for library profession is a revolutionary process; the core of the curricula is the people in relation to the information itself and technology that enable the provision of this information. There is a need to produce library science graduates with sophisticated management and policy and planning skills and the vision to translate core values of today and tomorrow's information world. (Apurba: 2008p. 1). Perhaps, this can only be possible through envying viable networking, culture among LIS Schools, thereby promoting regular meetings through collaboration and training, among the professionals.

Stakeholders and commentators in the field of Librarianship have been calling for collaboration among institution for the purposes of resources sharing due to lack of capacity among institutions, (Diso: 2009, Mohammed: 2009, Sonnenwald, Mirja, Jeffrey and Heli: 1999). This has been the result of a call from the Center for Technology in Government 2004 that the search for more effective ways to deliver public services dates back to the early 1980s. This shows that the delivery of services and innovations is increasingly relying on cross boundary collaborations among government agencies, the private sector, and nonprofit organizations. The essential role of librarians in providing access to information for development means that Library and information science departments must provide dynamic educational systems. (Mohammed: 2009).

It is in the light of this background, this paper, attempts at proposing an out- standing network model for action among LIS schools in Nigeria with a view to better the services they offer (teaching, learning and research). It also discusses the rationale, structure and operational procedures for the smooth operations of the scheme. The paper further identified Problems associated with the scheme, and measures on how to overcome them were equally proposed. It concludes by further recommending measures on how this viable project could best be sustained for better future prospects.

An Overview of Lis Education in Nigeria

Library education in Nigeria is as old as the universities as rightly observed by Saleh (20011) Library education in Nigeria is closely related to the general social and political history of the country. However, in those days those who aspired to become librarians went to British to qualify for the Association of the Library Association (ALA). Moreover, the attainment of Nigerian Independence in the year 1960, to date the country has witnessed a tremendous increase in the establishment of library schools in Nigerian beside universities.   The first library school was established at the then   University College Ibadan, now university of Ibadan the following are the list of accredited library schools in Nigeria 1. Abia State University, Uturu Library & Information Science 2, Abubakar Tafawa Balewa University, Bauchi Library & Information Science 3. Adeleke University, Ede Library Science 4, Ahmadu Bello University, Zaria Library & Information Science 5. Ambrose Ali University, Ekpoma Library & Information Science 6. Bayero University, Kano Library & Information Science 7. Baze University, Abuja Library & Information Science 8. Benson Idahosa University, Benin City Library & Information Science 9. Benue State University, Makurdi Library & Information Science 10. Delta State University, Abraka Library & Information Science 11. Federal University of Technology, Minna Library & Information Science 12. Federal University of Technology, Yola Library & Information Science 13. Ibrahim Badamasi Babangida University, Lapai Library & Information Science 14. Imo State University, Owerri Library & Information Science 15. Kwara State University, Ilorin Library & Information Science 16. Madonna University, Okija Library & Information Science 17. Nnamdi Azikiwe University, Akwa Library & Information Science 18. Tai Solarin University of Education, Ijebu-Ode Library & Information Science 19. Umaru Musa Ya'adua University, Katsina Library & Information Science 20. University of Calabar, Calabar Library & Information Science 21. University of Ibadan, Ibadan Library & Information Science 22. University of Ilorin, Ilorin Library Science 23. University of Maiduguri, Maiduguri Library Science 24. University of Nigeria, Nsukka Library & Information Science 25. University of Uyo, Uyo Library & Information Science (LRCN,2015).

Review of Literature

The advances in ICTs have decisively changed the library and learning environment. On the one hand, ICTs have enhanced the variety and accessibility to library collections and services to break the barriers of location and time. Leiner *et al* (2005) reported that the first recorded description of the social interactions that could be enabled through networking was a series of memos written by J.C.R.Lincklid of MIT in August 1962 discussing his "GALACTIC Network" concept he envisaged interconnected set of computers through which everyone could quickly access data and programs from any site. The voluminous growth of published documents in the recent past, increasing cost of information sources, technological advancements that offer newer methods of information processing, retrieval and dissemination are some of the factors which have made resource sharing a necessity. Diso (2008) in his paper proposes networking arrangement among faith groups for mutual benefit, in his opinion, he recommended the levels (which include international, regional and national) at which the cooperative relationships should be developed and sustained, with sustained emphasis on synergy between theory and practice. The paper suggested the following as the means of achieving the set objectives of the networking.

(a) Inter-institutional collaborations in research and publications, training, attachment in libraries and information institutions, sabbaticals, short staff and student exchange programs, etc.
(b) Regular interactive forums – conferences, workshops, symposia etc.
(c) Sustained online group subscription to ensure that members have constantly kept in touch with one another and regularly informed and updated on current developments. In his study Mahajan (2005), admitted that "Due to a financial crunch and the rising costs of journals, many Indian university and college libraries cannot subscribe to all the required journals and databases. To overcome this Problem, libraries are forming consortia". To sum it up, in regards to the concept network a number of work have been written, but not much has been done on the specific issue of networking model among LIS schools in Nigeria.

The Concept of Network

Definition of the concept becomes of significant importance in order to assist in understanding the whole scenario at hand. A network consists of two or more computers that are linked in order to share resources (such as printers and CD-ROMs), exchange files, or allow electronic communications. The computers on a network may be linked through cables, telephone lines, radio waves, satellites, or infrared light beams. For the purpose of this paper, the network we are referring to is information networking. UNESCO (1991) cited in Alemna (2006) defines information, networking as "a set of interrelated information systems associated with communication facilities, which are operated through more or less formal agreements and institutional arrangements, in order to jointly implement information handling operation, with a view to pooling their resources and to offer better services to users". The main purpose of networks is to facilitate access and utilization of data and information resources of participating institutions. (Alemna: 2006 p. 2)

The Four basic types of networks include:

- Local Area Network (LAN);
- Small Area Network (SAN);
- Metropolitan Area Network (MAN) and;
- Wide Area Network (WAN)

A Local Area Network (LAN) is a network that is confined to a relatively small area. It is generally limited to a geographic area such as a library, lab, school, or building. Rarely are LAN computers more than a mile apart. In a typical LAN configuration, one computer is designated as the file server, it stores all of the software that controls the network, as well as the software that can be shared by the computers attached to the network. Computers connected to the file server are called workstations. The workstations can be less powerful than the file server, and they may have additional software on their hard drives. On most LANs, cables are used to connect the network interface cards in each computer. Equally SAN is a network arrangement within a small building or area for the purpose of sharing resources or services. Wide Area Networks (WANs) on the other hand connect larger geographic areas, such as LIS schools, Nigerian Libraries, or the world. Dedicated transoceanic cabling or satellite uplinks may be used to connect this type of network. As proposed by this paper WAN, is chosen for the smooth take up of the network projects for LIS schools in Nigeria to communicate so that payment of phone bill would be enormously reduced. A WAN is complicated.

It uses multiplexers to connect local and metropolitan networks to global communications networks like the Internet. To users, however, a WAN will not appear to be much different than a LAN or a MAN. (Center for Instructional Technology: 2005).

The Rationale for Networking

- **Speed**. Networks provide a very rapid method for sharing and transferring files. Without a network, files are shared by copying them to floppy or flash disks, then carrying or sending the disks from one computer to another. This method of transferring files (referred to as sneaker-net) is very time-consuming.
- **Cost**. Networkable versions of many popular software programs are available at considerable savings when compared to buying individually licensed copies. Besides monetary savings, sharing a program on a network allows for easier upgrading of the program. The changes have to be done only once, on the file server, instead of on all the individual workstations.
- **Security**. Files and programs on a network can be designated as "copy inhibit," so that you do not have to worry about illegal copying of programs. Also, passwords can be established for specific directories to restrict access to authorized users.
- **Centralized Software Management**. One of the greatest benefits of installing a network is the fact that all of the software can be loaded on one computer (the file server). This eliminates that need to spend time and energy installing updates and tracking files on independent computers throughout the building or network stations.
- **Resource Sharing**. Sharing resources is another area in which a network exceeds stand-alone computers. Most organizations, including LIS schools cannot afford enough laser printers, fax machines, modems, scanners, and CD-ROM players for each computer. However, if these or similar peripherals are added to a network, they can be shared by many users.
- **Electronic Mail**. The presence of a network provides the hardware necessary to install an e-mail system. E-mail aids in personal and professional communication for all LIS school personnel, and it facilitates the dissemination of general information to the entire faculty staff in the school. Electronic mail on a LAN can enable students to communicate with teachers and peers at their own school. If the LAN is connected to the Internet, students can communicate with others throughout the world.
- **Flexible Access**. Networks allow users to access their files from computers. Users can save and share file on a public access area of the network, like this one faculty member and their students can also work cooperatively with his/her supervisor through the network.
- **Workgroup Computing**. Workgroup software (such as Microsoft Back Office) allows many users to work on a document or project concurrently. For example, educators located at various schools within a county could simultaneously contribute their ideas about new curriculum standards to the same document and spreadsheets. Among others. (Center for Instructional Technology: 2005). Other reasons advanced include:
- Increased connectivity.
- The rapid convergence of computing and telecommunication
Technologies of immense power.
- The rise of distributed computing, particularly client server architectures, with data collection device's computational power, data source application programs, and peripheral equipment widely distributed.
- Development of a wide variety of sophisticated and composite (multimedia) applications for end-user, unmediated use.
- The increased need for standards to ensure interoperability across numerous, heterogeneous platforms.
- Growing awareness of privacy and confidentiality issues.
- Pressing need for network navigational, orientational, and finding tools.
- Failures in document integrity and quality.
- The growing diversity of information technology users such users are heterogeneous in computing and telecommunication skills, in reasons for using information technology, and in demands for information resources and networking applications.
(Doty and Bishop: 1994).
- "Repackaging" information for distribution to professional colleagues;

- A shared collection development, increased acquisition of "non-print" materials, and greater emphasis on the development or archives for non-digitized material;
- Academic librarians "partnering" with faculty to improve the academic Community's information literacy, as well as enhancing the quality of acquisitions and services;
- Adapting to the distributed environment made possible by the new technologies and made necessary by Internet enabled information delivery … (Majumder: 2009).

Network Typology
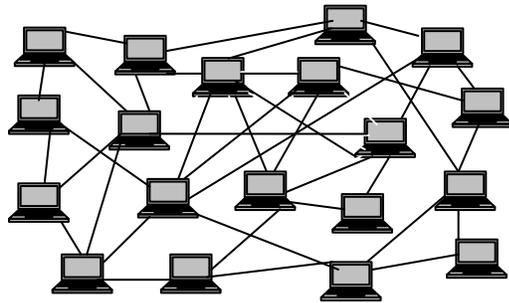
Figure 1.1 Mesh Networks

Justification

One aspect of network architecture is its typology. Mohammed (2008) cited Odufuwa (2006) defines topology as "the configuration of cables, computers, and other peripherals. Physical topology should not be confused with logical topology which is the method used to pass information between workstations". Mesh networks are chosen in this network arrangement because of the following advantages:

1. Mesh networks are very reliable since if there is a fault on one 'leg' different route can be found around faulty section.
2. They are efficient- a lot of traffic on one leg will show down transmission, but other routes are found automatically to a faster path.
3. It is assumed that in Mesh WAN service emphasizes the fact that all participants, contribute to the common output.
4. The model is flexible because it will give room for accommodating more databases as more LIS schools willing to join the scheme.
5. Sophisticated networks such as mesh have the speed to cope with a larger number of stations (Healthcote 2000 P125) cited in Mohammed (2008).

Network Model for Lis Schools in Nigeria
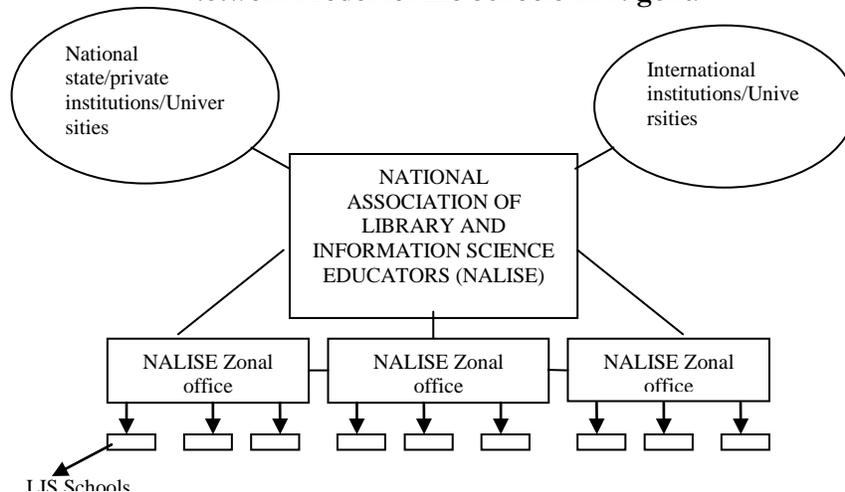
Figure 1.2   The Model has the following features:

- Information generated and created anywhere in the world is disseminated speedily at all levels.
- There are uniform fees for participating institutions to be decided by the network management.
- Where there are interventions of donor agencies, the LIS schools would require to pay forty (40%) of the total cost.
- Institutes/Universities should be fully equipped with computers and other related equipment to enable communication as well as for the purposes of document delivery services.
- Each institute is independent.
- To make this networking efficient and viable, skilled and experienced personnel need to be deployed.
- The attitude of such people is of critical importance.
- Uses of electronic form of publication for sharing resources are the most common features of this network.
- For effective and efficient management Nigerian Library Association (NLA) could zone the country into at least three (3) for the smooth coordination of the program.
- At a later stage, duplication of costly and highly used Journals may be avoided by some mutual agreement and the same can be shared through the network.
- This network is decentralized form of acquisition and storage in building the shared resources. This would be technically valuable and economical also. (Kaul:2001)
- Other national-state or private universities within and outside the country wishes to join could do so by applying formally.
- This model focuses on all aspects in regards to teaching, learning and research since the LIS schools in Nigeria have virtually similar objectives.

In the next phase, LIS schools can also think about establishing digital libraries. (Kaul: 2001).

Information may reside on different storage media such as electronics memory or magnetic and optical disk. In order to access digital information it is necessary to use either special purpose, multimedia reader stations or some form of computer system. The information can also be accessed remotely via telephone modems or by means of computer communication networks. This information can be shared at a very low cost. Therefore, while a conventional library might hold one or two copies of a book, a digital library could generate an unlimited number of copies at the touch of a button (Chopra, 1999). Cited in (Kaul: 2001).

Strategies for Effective Networking

For this gigantic project to succeed, from the inception it would only cover all library schools in the Nigerian federal universities. Others LIS schools wishes to join whether state or private own institutions, international institutions abroad should do so when the network management decides.

Operational procedures

Under this arrangement, each library school should dedicate at least one staff to represent her and work tirelessly for the success of the network. And Nigerian Library Association (NLA) in this arrangement would serve as national headquarters and coordinating body for the network whose expected to have at least three (3) zonal offices for the smooth conduct of the network. NLA should have the sole responsibility of managing the network whose duties may include the following:

- Policy Formulation;
- Coordination;
- Monitoring
- Staff training and
- Implementation of network process. Etc among others.

Areas of Possible Networking

Under the scheme of networking, some limited areas are choosing and agreed upon to cooperate among key players or institutions, some of the areas worth cooperating and recommended by this paper may include among the following**:**

1. Resources sharing

i. This is believed to be the backbone of cooperative arrangement among partners under networking. Under this arrangement, LIS schools can form networking arrangement, thereby putting their resources together for their own members benefit. These resources could be in the form of documents, books, journals and other teaching, learning supporting resources for their benefits.
ii. Joint acquisition of teaching, laboratory equipment
iii. Staff exchanges, among others.

2. Consortia

According to Goudar (2003) "Consortia are all about sharing resources and improving access to information" in a similar manner, National Medical library (2007) defined Consortia as "a cooperative arrangement for purchasing electronic resources among a group of institutions, (LIS Schools) which will provide collective purchasing power and enable them to avail best possible bargaining facility to ensure highest discount price for electronic journals". Many literatures and scholars have made tremendous effort to define the term 'electronic journals' Burton and Tomney (1998) for instance, defines electronic journals as one in which:

- "Publishes original scholarly writings
- Is peer reviewed or edited, and
- Is available (although not necessarily exclusively) in electronic form".

In a similar vein, Colorado Alliance of Research Libraries (2003) asserted that "electronic serials may be defined very broadly as any journal, magazine, e-zine, webzine, newsletter or type of electronic serial publication which is available over the Internet"

Sreekumar and Sunitha (2005) cited by Aina (2008) "e-journals offer a range of potential advantages… and end users: such as multiple simultaneous access to the same issues, remote access, inbuilt searching facilities, multimedia capabilities and reduced storage concerns". Hickey (2005) further outlined the advantages of electronic journals as

- Full text searching is very easy;
- Speed of access; speed and cost of publication;
- Availability of article to the users most of the time.

Despite ranges of advantages e-journals offers on the other hand it has some set backs such as:
- Having to rely on the equipment-hardware and software which may become obsolete;
- Less permanence
- Incompatibility software such as different software interfaces for different system. He, however, concluded that, despite these shortcomings listed, e-journals are favored by users.(Aina:2008p.38).

To sum it up, electronic publishing, offers advantages that the information needed is obtained via on-line through computer terminals and the users (readers) interact through communication lines, usually the telephone. Also with a suitable computer and appropriate peripherals, such as computer drive, keyboard, etc. one can now access electronic information on CD-ROM. Unfortunately, there are certain skills required can shift completely to electronic journal collections(Aina :2008 p.38)

In order to achieve the expertise in managing Networking Consortia, the following areas may be considered and give much emphasis on as Majumder (2009) suggested:

- Necessary modifications, innovations and changes have to be brought into the existing syllabus in universities to generate better relevance and quality of education.
- It is also recommended that traditional methods of teaching should be replaced by IT based teaching.
- Practical sessions of library science courses should be converted as learning by doing the actual professional work setup rather than a mere simulation of the same in the classroom.
- It is essential to make mandatory for students of library and information science to serve few months of internship in a modern library.

- Use computers and allied technologies to preserve class lecture so that student can refer back the same in self-study, the same could also be used for distance learning.
- Expertise of faculty and practicing librarian should be shared across institutions through formal and informal arrangement to provide their expertise to learners in different institutions.
- Some of these courses can be conducted on a modular basis, facilitating the participants in picking those of interest. Apart from teaching faculty, expert librarians and information scientists would also be involved in these programs to bridge the gap between peach and practice. Other benefit LIS schools can drive from consortia of e-journals include:
- Increase the access base – More e-Journals
- Rational utilization of funds - A little more pays a lot
- Ensure the continuous subscription
- Qualitative resource sharing - Effective document delivery service
- Avoid price plus models - Pay for upfront products not for R&D
- Improved infrastructure
- Enhanced image of the LIS schools (library) - Visibility for smaller libraries
- Improve existing library services - Boosting professional image
- Harness developments in IT - Facilitate building digital libraries
- Cost sharing for technical and training support
- Increase user base – Access from desktops of users (Goudar:2003)
- Exchanges among faculties and students
- Linkages etc.

3. Collaboration

According to Zau and Dong (2007) the term consortium is derived from the U.S. library lexicon to generally refer to any form of cooperation and collaboration among participating libraries, institutions or schools. In the U.S.A., three important elements form of consortium have been identified:

(1) It is a loosely defined partnership based on each institution's own interests and needs;
(2) It is formed by a contract that delineates the rights and obligations of each member; and
(3) Its members retain their separate legal status, and the consortium's control over, each participant is generally limited to activities involving the joint endeavor.

In a similar manner, Wikipedia defined Collaboration as "a recursive process where two or more people or organizations work together intersection of common goals — for example, an intellectual endeavor that is creative in nature by sharing knowledge, learning and building consensus".emphasinzing that Collaboration does not require leadership and can sometimes bring better results through decentralization and egalitarianism. This could be possible by LIS schools in Nigeria for the purpose of advancement and general development of their programs to aid teaching, learning and research. Majumder & Bose (2008) cited in Mohammed (2009) highlights the possible areas where collaboration among LIS schools can be carried out thus:

- Computer-based Presentation
- Dial-in Service
- Electronic Message Groups
- Video conferencing
- TELNET
- Desktop Data
- World Wide Web
- Interactive Multimedia
- Hyper Text/Hypermedia.
- Viable networking
- Internet connectivity
- E-mail services (yahoo user groups)

- Websites
- National Portal to information and services,
- Databases creation. Other areas include
- Joint publication (authorship among LIS Faculties)
- Joint conferences, seminars and symposium
- Joint researches etc.

Program Evaluation Technique

In order to measure the success or failure of the viable network like this one, a number of factors (yard stick) would serve as a guide for such exercise, some of which may include the following:

- Number of LIS schools and information network nodes established and sharing knowledge resources;
- Number of knowledge exchanges and knowledge institutions connected with web-based networks;
- Number and quality of capacity building training, meetings and workshops organized or held; and
- Increase in adoption and adherence to international standards on information processing, management, communication and dissemination. (Alemna: 2006p.11).

Considering the significance of collaborative networking among institutions, lacking collaboration could result to duplication of efforts, individualistic curriculum and syllabi, continuing shortages of manpower with technical know how, local expertise, different focus in our program and general lack of inter university cooperation among others.

Basic Challenges

Networking among LIS School is threatened by a number of problems, such as:

Funding and Administrative problems

- Funding are not forthcoming- the budgetary allocation of the Universities and many sectors are not adequate not to talk of executing the project like networking due to decreasing nature of the budgetary allocation to the educational sectors.
- Indifferent attitudes of government towards education and the library sector is not favorable.
- Donors are not forthcoming to commit their resources (money) perhaps due to unjust and lack of sincerity among key players
- Passive Attitudes of our managers and staff towards work are not favorable which could not encourage smooth take up of the project like this one.
- Incessant power failure all over the country
- Poor communication gadget in the country could negate the viable networking to succeed.
- Emphasis on teaching of traditional aspects by not giving enough scope for IT and practical aspects of library automation.
- Lack of coordination, collaboration and cooperation between LIS schools on the one hand, Library, and department of LIS schools in Nigeria on the other (Sonnenwald, Iivonen, Alpi and Kokkinen (1999) and Diso (2009)
- Inadequate infrastructural facilities, i.e. well equipped ICT laboratories for training of faculty members and students of the LIS schools
- Lack of supporting policy.
- Lack of standardization at the national level.
- No concrete effort to establish a mechanism for accreditation of LIS Course by the Professional Association like NLA (Majumder: 2007)

Technical problems

- **Expensive to Install**. Although a network will generally save money over time, the initial costs of installation can be prohibitive. Wireless, network cards, and software are expensive, and the installation may require the services of a technician.
- **Requires Administrative Time**. Proper maintenance of a network requires considerable time and expertise. It could be possible for the schools to have installed a network, only to find that they did not budget for the necessary administrative support such as maintenance.
- **File Server May Fail**. Although a file server is no more susceptible to failure than any other computer, when the files server "goes down," the entire network may come to a halt. When this happens, the entire LIS schools in the project may lose access to necessary programs and files.
- Lack of technical know how, show how and some time know why among many academics in the LIS schools, professionals and policy makers in the country could not permit such project to succeed to the greater heights.
- Exorbitant cost of hardware and software for networking
- Lack of adequate and reliable vendors that acquire, install and administer the network in the country.

Recommendations and Conclusion

1. Government should expand sufficient funds for universities for the smooth take up of the network project like this one for the betterment of LIS education.
2. Heads of Library schools, Deans of faculties/schools as well as vice chancellors should cooperate and be proactive towards achieving such laudable project.
3. Government should reorder priorities for the provision of electricity and telecommunication infrastructure for the general well being of the country's economy to be viable and function effectively so also to permit networking to succeed effectively.
4. Donor agencies such British Council, United States Information Services (USIS), MAC Arthur Foundation Mobile Telephone Network (MTN), etc need to come and support such laudable project.
5. National Agencies such as Petroleum Development Trust Fund (PTDF), Education Trust Fund (ETF), Nigerian Information Technology Development Agency (NITDA) should also play a helping role in this direction. Although the agencies are doing their best and deserved commendation, more need to be done.
6. Library educators should learn to embrace ICTs so as to facilitate their work (Teaching, learning and research) so as to join the race of their colleagues abroad for their betterment.
7. Standby generator should be provided for the smooth network activities to take place since most of the working tools cannot function without sufficient electric power supply.
8. Training of faculty members in LIS schools on ICT and related courses should be redoubled and continuing on a terminal bases for the survival of the network project.
9. It is recommended by this paper that such networking project among LIS schools in Nigeria, should commence immediately for uplifting teaching, learning and research among LIS schools in Nigeria.

Conclusion

The challenges faced by ICT in all spheres of life and particularly in the educational sector, can only be handled if proper harnessing and utilization are made to these tools. It is generally agreed that, Nigerian LIS schools are suffering from financial constraints, poor condition of services leading to shortages of enough manpower, wider communication gaps among faculty members, inadequate teaching faculties, and facilities, poor state of teaching and research laboratories such as ICTs Laboratories and equipment among others, called for immediate formation of networking ventures among LIS schools in Nigeria for the purpose of sharing resources and services for effective teaching, learning and above all to allow for conducive atmosphere for research to prosfer

References

Adeogun, M (2005) "Resource Sharing Services and Constraints in Selected Seventh day Adventists University Libraries in Sub-Saharan" Africa in Information   Development 21; 152 DOI: 10.1177/0266666905054510 available at http://idv.sagepub.com/cgi/content/abstract/21/2/152 (accessed on 5th/10/2008) P.   1-10.

Alemna,A(2006) "establishing and managing development networks in Africa: perspectives on the African virtual library and information network (AVLIN)" A presented at the workshop on Building African Capacity to Implement the   Outcomes of the World Summit on the Information Society (WSIS) in the Sphere of Libraries and Access to Information and Knowledge Tuesday, 28 March 2006 p.1-13

Aina, L.O (2008) "Library Capacity Building Through E-Journal Consortia in Nigeria" Being a paper presented at a seminar/Workshop organized by Cataloguin,   Classification and indexing Section of the Nigerian Library Association. Heal at   Kwara State Library Board, Ilorin, and 26th -31st OctoberP.36-44

Center for Instructional Technology College of education, university of South Florida (2005) an educator's Guide to school networks chapter 1 and 5

Colorado, Alliance of Research Libraries (2003)(online) "electronic journals FAQ   Available at http://ejournals.coalliance.org/faqs.cfm

Diso, L.I (2008) "Cooperation for Mutual Benefit: Creating a Global Community for Knowledge Sharing" Being a Paper Presented at International Conference Organized by World Congress of Muslim Librarian and Information Scientist (WCOMLIS), held at Malaysia   on (25th -27th) November,2008 P.1-28

Diso, L.I (2009) "emerging issues and challenges for LIS   education in Nigeria" being a paper presented at anational conference organized by national association of library and information science educators (NALISE),held on (2nd -5th) June, 2009 hosted by the department of library and information science university of Nigeria, Nsukka P.1-13

Doty, Philip and Bishop, Ann P. (1994) "The National Information Infrastructure and Electronic Publishing: A Reflective Essay" journal for the American society for information science 45(10) p.758-799

Goudar, I.R.N (2003) "consortia model for e-journals and India initiatives" being a paper   presented at Prof. M.R. Kumbhar Memorial Lecture.16 April (2003) P.1-33

Kaul, S (2001) "information resource sharing models in developing countries: a network Emerging from the World Bank supported environmental management capacity building project" in INSPEL 35 (2001)1, pp. 9-26

Librarian Registration Council of Nigeria(2015) accessed on 28/4/2015 available at the http://www.lrcn.gov.ng/LIST%20OF%20ACCREDITED%20LIBRARY%20IN   TITUTIONS.pdf

Mahajan, P (2005) "Academic Libraries in India: a Present-Day Scenario" in Library Philosophy and Practice Vol. 8, No. 1 (Fall 2005) Available at http://libr.unl.edu:2000/LPP/lppv8n1.htm (retrieved on 16th /08/2009)

Mahapatra, G. (2006). LIS education in India: Emerging paradigms, challenges and   propositions in the digital era. Presented at the *Asia-Pacific Conference on   Library & Information Education & Practice 2006 (A-LIEP 2006), Singapore, 36 April 2006.*

Majumder, A.J (2009) "impact of library Consortia on LIS Education" available at http://dlist.arizona.edu/2547/01/consortia%26lis.pdf (Retrieved on 12/07/2009). P.1-5

Majumder, AJ (2007) "Library and information Science in Digital Era" available at http://dlist.sir.arizona.edu/2546/01/digital%26lis.pdf (Retrieved on 12/07/2009). P.1-4

Mohammed, A (2009) "Collaboration Among Library and Information Schools (LIS) in Nigeria for Effective Teaching in the Knowledge Society in Nigeria: a Proposed Model" Being a Paper Presented at a National Conference Organized by National Association of Library and Information Science Educators (NALISE), held   on (2nd -5th) (June) hosted by the Department of Library and Information Science,University of Nigeria, Nsukka P.1-22

Mohammed,A (2008) "Towards meeting up with ICT Challenges among Islamic sharia Court(Law) Libraries in Nigeria: A proposal for networking" being a paperpresented at international conference organized by World Congress of Muslim   Librarian and Information Scientist (Wcomlis), held at Malaysia   on (25th   27th) November,2008 P.1-23

National Medical Library's Electronic Resources in medicine Consortium (2007) {Delhi}informatics India.

Ogunsola, L.A (2004) "Nigerian University Libraries and the Challenges of Globalization: the way Forward" in
        Electronic Journal of Academic and Special Librarianship V.5 (2-3) (Fall 2004) available
        athttp://southernlibrarianship.icaap.org/content/v05n02/ogunsola_101.htm (Retrieved on 26/04/ 2005)
Sonnenwald Diane H, Mirja Iivonen, Jeffrey A. Alpi ,Heli Kokkinen(1999) "Collaborative Learning Using
        Collaboration Technology: Report from the   Field"   Published in A. Eurelings, F. Gastkemper, P.
        Kommers,R. Lewis, R. van Meel, & B. Melief, (Ed.), Integrating Information and Communications
                Technology in Higher Education, , Kluwer Publishers, (pp. 241-258)
Tommy and Burton, P.F (1998) "Electronic journals a study of use and attitudes among academics" Journal of
        information science 24 (1998):p.419-429
Wikipedia the free encyclopedia (2009) "Digital library" available at http://en.wikipedia.org/w/index.php?title=\
        Collaboration-,the free encyclopedia.mht . (Retrieved on 30/06/2009)
Yusuf, M.O (2005) "Integrating Information and Communication Technologies (ICTs) in   Nigerian Tertiary
        Education" in the African Symposium: An Online Journal of African Educational Research p 43-50
ZouTim Jiping and Dong Elaine Xiaofen (2007) "In Search of a New Model: Library Resource Sharing in China - A
        Comparative Study" being a paper Presented at   world library and information congress: 73rd IFLA general
        conference and Council 19-23 August 2007, Durban, South Africa http://www.ifla.org/iv/ifla73/index.htm