Library

AND EDUCATIONAL REFORMS IN THE 21ST CENTURY

Edited by
Olu Olat Lawal
(Editor - in - Chief)
Kwaghga Ikelush (Associate Editor)

LIBRARY AND EDUCATIONAL REFORMS IN THE 21ST CENTURY

Edited by

Olu Olat Lawal
Department of Library and Information Science, University of Calabar, Calabar. Nigeria
(Editor – in – Chief)

Kwaghga Beetseh
Francis Suleimanu Idachaba Library, Federal University of Agriculture, Makurdi, Nigeria.
(Associate Editor)

SCIENCE AND EDUCATION DEVELOPMENT INSTITUTE, NIGERIA

© All rights reserved. No reproduction, copy or transmission of this publication may be made without written permission.

This first edition published 2015 by
SCIENCE AND EDUCATION DEVELOPMENT INSTITUTE, NIGERIA
2 Church Avenue, Oke Eri Quarters
Oba Ile
P.O.Box 214, Akure
Ondo State
Nigeria
+2348122469297

ISBN: 978-978-52231-3-2

BOARD

Abulude, F.O. (Nigeria) - President/CEO

LIST OF ADVISORY BOARD MEMBERS

Mr Balogun G. A. Sanni
Saag Chemical (Nig.) Ltd, 4 Sanni Way, Off Godwin Omonua, Off Banks Way, IsoloI llasamaja, Lagos, Lagos State, Nigeria.

Prof. Mohammad S. Mubarak
Chemistry Department, University of Jordan, Amman-11942, JORDAN

Prof. T. T. Adebolu
Department of Microbiology, Federal University of Technology, Ondo State, Akure, Nigeria

Prof. Francisco Torrens
Universitat de València, InstitutUniversitari de Ciència Molecular, Universitat de València, Edificid'Instituts de Paterna, València, Spain

Hon. Niyi Jones Akinyugha
30B, Olufumilayo Str., Dideolu Estate, P.O.Box 4822K, Ikeja, Lagos, Nigeria

Prof. V. A. Aletor
Elizade University, Ilara Mokin, Ondo State, Nigeria

Prof. E. A. Aderinola
Department of Agricultural Economics, Federal University of Technology
Akure, Ondo State, Nigeria

Mr. Sola Akitimehin
Akinrinaye Street, Ilesha Garage, Akure, (Nigeria)

Table of Contents

Preface	vi
The Editors	vii
The Contributors	
Physical Books and Conventional Libraries: Who Needs Them in This Age of Digitalization? - Okon Edet Uya	1
The Use of Technological Devices in Learning Outcomes: What Place for Librarians? - Beetseh, Kwaghga, Chorun, Matthew Terfa and Akaa, Charity Wanger	9
Current Status of Information and Communication Technology in Public Libraries of Andhra Pradesh: A User Survey - K.Kumar	16
Library and Information Science Education in the 21st Century: Reforms or Restructuring? - Olu Olat Lawal	40
Current Trends in Librarianship - Jane Aba and Nkechi Anthonia Idoko	46
Entrepreneurship Education for Library and Information Science Professionals: Panacea for Self-Reliance and Job Creation in Nigeria - Chorun, Matthew Terfa, Beetseh, Kwaghga and Rebecca Ameh	61
Library and Education Reforms in the 21st Century - Omolade Susan Ademilua and Alice Mofesola Akomolafe	70
Library and Information Science Professionals as Managers: A Comparative Analysis - Chorun, Matthew Terfa, Beetseh, Kwaghga and Michael T. Upev	82
Knowledge Management for Library and Information Professionals in the 21st Century - Anthony Agena Igbashal, Precious Doo Akpe and Upev, Michael Tever	95
Application of Free and Open Source Software in Libraries: An Overview - Olu Olat Lawal	108

The Use of Information and Communication Technology (ICT) for 21st Century Library Education - Idachaba,Joy Asibi, Upev, Michael .Tever And Samuel Dzever Tion 115

PREFACE

In the past 25 years the emergence of the Internet had transformed information foraging and professional practice in various disciplines which are research-based and largely contributory to national development. The effects of Information Communications Technology (ICT) had been notable in the professions and skills acquisition agencies. It is significant to observe that globally, especially in the developed countries, LIS professionals have engaged in debates on the propriety or otherwise of integrating ICT in Library services delivery for four decades now. There are challenges of varying proportions which have mitigated ICT's full beneficial adoption for use. This problem was no less visible in the strategic frontier of education and training of LIS professionals. Evaluation of use of ICT in achieving quality service delivery in Libraries and Information establishments became necessary at least to re-align with Institutional objectives, vision and mission for well-coordinated positive results in national development. In this perspective, papers have been contributed in this volume indicating actions and various measures needed to fulfill an acceptable level of practice. In doing this, it is natural to engender further debates and valuable exchange of ideas on the propriety or otherwise of the role of ICT in overall Library Development.

Professor Olu Olat Lawal
Editor-in-Chief

THE EDITORS

Editor-in-Chief

Olu Olat Lawal is a Professor at the Department of Library and Information Science, University of Calabar, Calabar. Nigeria. He graduated from Library Schools at Universities of Ibadan, Birmingham and Loughborough where he obtained his PhD degree in 1983. He was University Librarian of University of Calabar (1997-2011) and Professor of Library and Information Science since 2003. Prof. Lawal is happily married with children and grandchildren.

Associate Editor

Beetseh, Kwaghga is a library staff with Federal University of Agriculture Makurdi. He is a part time lecturer with College of Advance and Professional Studies Makurdi. Mr. Beetseh has published locally and internationally. He is member of Association of Nigerian Teachers (ASSONT). He is happily married.

THE CONTRIBUTORS

Ambassador Professor Okon Edet Uya was a Professor of History, University of Calabar and Uyo. He passed on peacefully, after a brief illness, on 17th April, 2014. May his soul rest in peace (Amen).

Ademilua Susan Omolade is a Librarian at the Federal College of Agriculture Akure, Ondo State. She bagged Bachelor Degree in Library Science and Economics from Bayero University Kano. She has published in reputable local and international journals.

Akomolafe Alice Mofesola is the Deputy Librarian of Federal College of Agriculture Akure, Ondo State. She holds BLS and MLS from Ahmadu Bello University, Zaria. At present she is the head of the library where she supervises other staff members. Her research interest includes information resources management, knowledge management, and information searching and retrieval. Mrs Akomolafe has published scholarly works both in local and international.

Chorun, Matthew Terfa is an alumnus of the Benue State University Makurdi, where he studied Library and information Science and the College of Education Katsina-Ala where he obtained the Nigerian Certificate in Education and registered with the Teachers Registration Council of Nigeria (TRCN) and the Librarian's Registration Council of Nigeria (LRCN). His Teaching experience cuts across the three tiers of education and spanned over a period of 17 years. Currently, he is a Librarian II with the Federal University of Agriculture, Makurdi. He is happily Married and blessed with children.

Idachaba Joy A is a Chartered Librarian working at the University of Agriculture Library Makurdi. She is a Principal Librarian, holds BLS, MLS (NIG) and currently running a Ph.D. programme in the Department of Library and Information Science

University of Nigeria, Nsukka. She has published scholarly works including Journal articles and Abstracts of Ph.D. Thesis and Dissertation of University of Agriculture Makurdi. Idachaba J.A has a very strong passion for Librarianship as a profession.

Michael T. Upev is a Senior Librarian, Head of Collection Development at Francis Sulemanu Idachaba Library, University of Agriculture, Makurdi, Nigeria. He holds Master of Library Archival information Studies Degree from the University of Ibadan in 2004. His research interest includes information resources management, knowledge management, and information searching and retrieval.

Ameh, Rebecca has worked in the library of the Federal University of Agriculture, Makurdi for the past 23 years, She studied at the prestigious Ahmadu Bello University, Zaria for her DLS, Benue State University, Makurdi for her B.Sc. and is currently an M.Sc. candidate in Library and Information Science in the Department of Educational Foundations and General Studies of the Federal University of Agriculture Makurdi. Rebecca is happily married and blessed with children.

K. Kumar, Ph.D is presently working as Assistant Professor, Library and Information Science in Sri Venkateswara Veterinary University, College of Veterinary Science, Proddatur. His research focuses on Digital Library Initiatives in Engineering Educational Institutions in Rayalaseema Region of Andhra Pradesh. He has 15 years' experience in librarianship in both Engineering and Medical Educational Institutions. Around 43 articles were published in peer reviewed journals, 26 conference proceedings (both National and International) and had attended about 12 workshops and seminars. His subjects of interest include Digital Library, Web Technology, Cloud Computing, Data Mining and Computer Networks.

Anthony Agena Igbashal is a Deputy University Librarian at the Federal University of Agriculture, Makurdi, Nigeria. He holds the degrees of Bachelor of Library Science and the Master of Library and Information Science from Ahmadu Bello University Zaria, Nigeria. The author's areas of interest include Bibliography, Cataloguing, Classification and I. C. T. He has both local and international publications to his credit. Mr Igbashal is currently a Ph. D. student at the University of Nigeria, Nsukka.

Akpe, Precious Doo is an assistant Librarian at Francis Suleman Idachaba Library, University of Agriculture, Makurdi, Benue State of Nigeria. She holds a B.Sc. (Hons.) degree in Library and Information Science. She is a certified Librarian in Nigeria, NLA member. She is currently a postgraduate student of M.Sc cadre.

Samuel Dzever Tion is a Librarian 1 and College Librarian at Francis Sulemanu Idachaba Library, University of Agriculture, Makurdi, Nigeria. He holds Master of Library Information Studies Degree from the University of Nigeria Nsukka. His

research interest includes information resources management, Knowledge management, and Information searching and retrieval.

PHYSICAL BOOKS AND CONVENTIONAL LIBRARIES: WHO NEEDS THEM IN THIS AGE OF DIGITALIZATION?

Okon Edet Uya
University of Calabar and Uyo

TEXT OF A KEYNOTE ADDRESS, DELIVERED AT NIGERIAN LIBRARY ASSOCIATION NATIONAL CONFERENCE AND ANNUAL GENERAL MEETING, CALABAR, JUNE 9 – 14, 2013,

INTRODUCTION

I am extremely delighted, indeed honoured and privileged, to have been invited once more to participate and present the keynote remarks in the annual gathering of what I consider one of the most important but usually not sufficiently appreciated professional associations in our country, the Nigerian Library Association. For a nation that tends to be unappreciative of the roles of Libraries and librarians in our nation building efforts, it is useful to remind that, as Melvil Dewey, perhaps the first professional Librarian insisted in 1888, "the library is a school" and the librarian is in the highest sense a teacher." **Libraries are critical in formal and informal education; citizenship political and values socialization and orientation; in self-education efforts of individuals and communities desirous of converting their learning into vocations thus serving "as the layman's university."**

No wonder that great Nigerian patriot who was largely responsible for laying the foundations of what is now the National Library of Nigeria, Dr. Nnamdi Azikiwe once described it as "an evergreen tree of knowledge which could, in such a complex, pluralistic society as Nigeria, contribute to building a richer and better social order, thus serving as a principal instrument in weaving the tapestry of the country's multi-ethnic and cultural pluralism". This is a point often forgotten by some of our present leaders who treat education with great levity bordering on disdain.

I am glad that at critical junctures in the life of your profession when confronted with new challenges, you have always invited me to share my thoughts on the matter. You may recall that on December 16, 1975 I played a role similar to the present one where I delivered an address titled "African Cultural Revival Studies: Implications for Library Development Programmes" which was subsequently published in *Nigerbiblios*, Vol. 1 Number 3, July 1976. In that presentation, I urged librarians and library developers to leverage with the changing nature of scholarship on African culture and history in assembling and collecting the materials and resources for their centres. On February 28, 1994, I delivered another keynote address titled "Archival Collection and Historical Research" at a workshop for Librarians in the University of Calabar where I challenged Librarians to embrace the then new trend for the collection, processing and

preservation of oral evidences, especially Oral Traditions, as an important part of Library holdings especially in the light of the fact that the custodians of such traditions, the older generation, were dying off with volumes of books, their voices and memories consigned to mother earth whenever we bury them.

I am not sure that the appeal was fully embraced and implemented. I returned to the same theme more recently when I keynote another conference of Librarians at the ICT/Book Fair and Exhibition at the University of Uyo on April 28, 2009, titled "Indigenous Information Dissemination in the 21st Century". Here again, I challenged Librarians, especially University Librarians to be sensitive to the different and expanding forms and means of communication in a world which was increasingly becoming IT – driven and the threat this posed to our traditional information systems, still the principal means of accessing knowledge by the vast majorly of our people, especially those in the rural areas.

In that address also, I publicly declared that "as a major beneficiary of books and libraries which have been my permanent companion since I wrote my first journal article as a University of Ibadan final year undergraduate student in 1966 which metamorphosed into a book, ***Preclude to Disaster: Analysis of the Racial Policies of Boer and British Settlers in South Africa before 1910*** (Howard University, Washington D. C., 1973), I can say without fear of contradiction that the widely acclaimed academic quality of my 166 publications including thirty-nine books owes a lot to the rather intimate interaction between me and libraries in such places as the U.S.A. (especially the University of Wisconsin, Madison Library; Moorland Spingharn Library of Howard University, Washington, D. C., the Library of Congress and the National Achieves Washington D. C.); Europe, Jamaica, Haiti, Cuba, Brazil, University of Belgrano, Buenos Aires, Argentina; the National Archives and Library, Nigeria, The Unical Library and so on".

My romance with books and libraries thus partly explains my willingness to accept invitations to be part of your usually stimulating conferences and I am sure this one will live up to our expectations. Even if it tried to excuse myself because of my rather crowded programme especially as Member of Panel of Eminent Persons of the African Peer review Mechanism which had to prepare and substantially shape the nature of the colloquium on Pan Africanism and Africa renaissance recently concluded in Addis Ababa as part of the 50th Anniversary of the Organization of African Unity/African Union, Professor Lawal would not let me. Indeed, he pursued me to Addis Ababa with phone calls to extract final commitment that I will be available for this conference. I must congratulate you for having a dedicated, well-groomed professional in whose formation I have had a hand, Professor Olu Lawal, as Chairman of the Local Organizing Committee.

I should also remind you that I have been intimately involved with library building and development at several critical moments over the years. While at Howard University as Tenured full Professor of African and African-American History between 1972 and 1974, I initiated the Dunbar Oral History Project which has since become a major feature of the Moorland Spingarn Collection. At the University of Calabar to which I returned in 1974, I was a principal participant and contributor to the design and execution of the magnificent University of Calabar Library, whose vastness which many misunderstood and criticized, was motivated by the conception, borne out of experiences around the world, especially those of the Universities of Ibadan and Nsukka, that Universities should grow into their libraries rather than the reverse. Fortunately, despite some deviations from the original design, the Unical Library remains what it was envisioned to be – one of the biggest Libraries in Africa South of the Sahara. At the National level, I was a member of the National Library Board from 1975 to 1979 during which time I played an important role in reviving the house journal, *Nigerbiblios* and the decision to decentralize the National Library service by establishing state branches. Incidentally, Calabar, Cross River State was one of those that benefited from that decision.

In terms of academic status, the designation of library staff of appropriate categories as academic rather than non-academic was straightforward and well justified given the nature of the work they do and we were glad to win the battle. The proper grading and designation of Librarians as Professors because they earned the same remuneration as Professors was all together a different kettle of fish. To be a Professor, one has to profess within a recognized academic discipline and department. We therefore, in the face of stringent opposition from those who wanted to play politics with the matter, insisted that those in the Library who aspired to be Professors or even Readers should belong to a designated academic Department, preferably Library Sciences in the Faculty of Education which had first to be established and then subjected to the standard assessment that others had to undergo.

Fortunately, this debate led to the establishment of our Department of Library Sciences and the first Professor in that Department who clearly merited the appointment in 2003 was Olu Lawal. I am happy that Professor Lawal later appreciated my position which I canvassed purely on academic rather personal grounds. Even more satisfying for me is the fact that Olu has justified our confidence as he can stand and defend his Professorship anywhere in the world. The lesson here should be clear, namely that in academic matters, principles rather than sentiments, however attractive, must prevail.

I have deliberately and provokingly titled my brief remarks as "Physical Books and Conventional Libraries: Who Needs them in the age of Digitalization?" which derives substantially from the theme of your Conference, namely "Future Libraries:

Infinite Possibilities". Librarianship and Libraries share with Diplomacy and Diplomats the distinction of being two professions that have stoutly resisted and outlived predictions for their collapse, irrelevance and eminent death especially in periods of major advances in technology. For example, Queen Victoria rejected a proposal to upgrade the British legation in Rome to a full embassy because, in her estimation, "given the new telecommunication techniques then available the time for ambassadors, their pretentions and privileges, were definitely over". As we now know, the Queen was proved wrong because rather than die, diplomacy has survived and indeed expanded in scope, coverage and image, this has been the same sentiment that has greeted conventional libraries since ht emergence of the new information Technology and internet systems, with their electronic mails and files providing instant and speedy means of communication, information sharing and knowledge dispersal – activities heretofore reserved for Libraries and Archives.

Particularly threatening in this regard has been the advent or e-books which allow access to Library resources anywhere in the world from our desks at home. In this era of instant inter-connectivity, some have questioned the relevance of the conventional Library filled with physical printing materials such as books, journal, articles, research findings and other resources which can now be accessed on line. Wearing my cap as a Minister of the Gospel, I predict and prophesy to you that Libraries will not die; that your professions will not become irrelevant, that infact, with innovation, creativity and some adaptation, you will even become more useful and relevant in the years ahead.

Now, to show that these are not just pastorals to comfort you in times of distress and potential threat of unemployment, let me share with you the following information drawn from the experience of the British Publishers Association. According to the Association, "record sales were recorded in 2012 despite the recession and rise of e-readers". Total spending on printed and digital books rose four percent and although digital spending rose by 66 percent, "it does not appear to have led to a market decline for print, with physical book sales down by just one percent". "Fears that the rise of e-readers would kill off physical books have so far proved exaggerated," the report concluded. Indeed, Philip Jones, editor of ***The Bookseller magazine*** reported that shops were seeing a "rebounding" in sales of physical books, thanks to "children and non-fiction areas and the growing market for books." "The death of the physical books was a long way off", he continued, pointing out that "physical book sales still make up around 80 percent of the overall market". "Digital is overtaking in some areas, but not all areas, so I think the physical book is going to be with us for long," he concluded. Similar trends have been reported in the U.S.A., Japan and other European countries.

I share the above views and sentiments. Physical books will remain critical in our educational enterprises for a long time to come, despite the emergence of the e-books and digital resources. If the experience of somehow technologically advanced Britain

with higher density of digital penetration is as above, one can easily be confident the Nigerian example with physical books will be even more impressive. This will depend substantially on the ability of Libraries to establish effective liaisons with Book Publishers, Printers and end users such as the educational institutions. The critical bottom line, however, remains the attitude, disposition and commitment of governments at all levels to education as a major driver of needed national transformation in all sectors of our national life.

Given the rather poor, or should we say abysmally poor, reading habits of adult Nigerians which has now infected our youth, the major users of Libraries will continue to be lecturers and students at all levels of our education enterprise. Despite increasing privatization in this sector which incidentally is accentuating the gap between the rich and poor in our society, government policies and programmes will remain the major determinant of the kind of education we provide to our children and the relevance of books and libraries. Where governments fall or become insensitive or unconcerned about the ***quality, not quantity***, of the education menu served to our children, we will continue to manufacture half bakes, barely literate, unskilled and unemployable graduates from our educational industries, sometimes almost totally oblivious of the fact that, as stated by my late friend and colleague, Professor Adiele Afigbo, "the quality of people derives from the quality of their education". As I had occasion to assert severally, "although we experienced and are still experiencing crisis in the political, economic, religious and social sectors of our national life, crises in the educational sector, because of their multiplier long term effects, represent perhaps the greatest threat to the survival of our fragile democracy".

Indeed, the multifarious problems in funding, access, conditions of service, quality, morale, facilities, and even the meaning and purpose of education have so threatened our educational sector that many of us wonder whether or not we are consciously mortgaging the future of our children, indeed our country, since a country cannot be better than the products of its educational system. It is in this context of quality education for our children at all levels that libraries and books assume fundamental and critical importance and establish their uncontested relevance for now and in the future.

As a Member of the Panel of Eminent persons of the African Peer Review Mechanism (APRM), I have had the privilege of observing firsthand the state of education in many African countries. This, in addition my experience with the Nigerian case at all levels especially at the University level as Professor and administrator for almost forty years and as a book publisher and author should enable me to make the following observations related largely to books and libraries.

The appalling and unacceptable level of illiteracy within and outside our educational systems can be reached to the collapse of the reading culture, even among our University Professors, Lecturers and students. Truth, which must be told, is that we do not read, unless compelled to do so by approaching examinations, promotions or teaching assignments, many students graduate from our Universities without having entered the Library, the academic nerve center of any institution of learning, indeed, for many students, the Library is merely a building, not the contents of the building. Because of this poor reading habit, our students and some of our lecturers cannot write anything of appreciable length without unpardonable mistakes with the most elementary rules of grammar. Truth is, you cannot write well if you do not read, and in an era of declining resources for parents and sponsors, the public Library should be a companion for the students, in my days in secondary school, we used to have a book titled 'Students Companion' May I recommend that all of us in the educational industry make the library and books our constant companion.

We note that our governments at all levels have embraced education as an important aspect of their Good Governance philosophy by initiating widely advertised free education programmes at some levels; establishing more schools to broaden access; and engaged in some form of teaching training or the other. However, it would appear that we have fallen prey to the "numbers game" which is the main emphasis in the so-called Minimum Millennium Goals. I had occasion in Addis Ababa to draw attention to this during the recent colloquium on "Relevant Education for Africa's Transformation" in which I was the main discussant. In the race to meet numbers and report impressive targets, many African governments at both national, regional and sub-regional levels are establishing ramshackle structures which cannot qualify as schools properly so-called-poor construction; poor facilities with no water, light or workshops and laboratories; untrained staff and most irritatingly no *Libraries*. It has always been my view that a school without a library is not a school. It will be interesting to have a census of schools even in Calabar, Cross River State, and the South/South Geopolitical Zone without appropriately stocked Libraries. ***Yet some of these governments are hurrying to establish e-libraries even when there are no Libraries in their Local Government areas.*** Yes, we need to catch up with the rest of the world, but the basic need of our educational institutions for now is the Traditional Library stocked with appropriate books. We therefore, call upon our governments at all levels to treat with seriousness the imperative of establishing Libraries in their Local Government areas and all primary, secondary and tertiary schools within their jurisdictions. This is essential if we are to make Good Governance a reality rather than a mere political slogan. It will also enlarge the patronage for books and libraries and increase the density of readers in our rural areas.

In this regard, I am pleased to report to this distinguished audience that I have personally established a private library, the Okon Uya Heritage Library in my country

home in Oron, Akwa Ibom State. Small as it is in size for now, the Library houses many important resources probably not available elsewhere in this area among them:

i) Perhaps the largest collection of books on African Diaspora Studies, the African American Experience and Latin American History assembled since 1967;
ii) All the records of Council, Senate, Faculty of Arts and Education, History Department, IPPA and many important committees of the University of Calabar where I served as Chairman or Member;
iii) Complete Record, including audios and transcripts, of the Report of the Political Bureau, 1986 – 1987 of which I was a Member and Chief Reporteaur;
iv) Full Report, including transcripts, public Hearings and tapes of the work of the Electoral Reform Committee (Uwals Committee) 2008 – 2010 of which I was a member;
v) Reports of the Panel of Eminent Persons, African Peer Review Mechanism important in understanding the triumphs and travails of democracy and sustainable development in African countries;
vi) A substantial number of important and rare books on African, especially Nigerian, history, culture, politics, economy and society.

These Records private collection were organized and classified by the former University Librarian Professor Olu Lawal and his subordinate staff Dr Okon A. Ani. I am happy to report that our humble effort is attracting the attention of scholars and researchers around the world and some bodies like UNESCO interested in education. Graduate students at the Universities of Uyo, Calabar, Port Harcourt and Ibadan have also found the collection very useful. I invite you to visit us and help expand our holdings by donating copies of your publication to us. Recall the statement credited to our first Prime Minister, Sir Abubakar Tafawa Balewa that "nothing could be more fitting than the gift of books".

CONCLUSION

May I now conclude by trying to answer the question I posed in the title of my presentation – Physical Books and Conventional Libraries: Who Needs them in this Age of Digitalization? Clearly from this sketchy presentation, we can conclude as follows:

i) Our students at all levels of education need them.
ii) Our teachers, lecturers, professors and other University men and women need them. The most distinguishing characteristic of the intellectual and academic is an insatiable thirst for knowledge based on healthy skepticism that there probably is a better explanation for anything hidden away in the library. For those of us in the evidence based disciplines like History and Law, patronage of the Library and Archives, the store house of written evidences and documents, is simply indispensable.
iii) Our communities desirous of engaging the so-called Democratic dividends of Good Governance need them to expand their mental horizon and empower

themselves against bad governance since a mobilized, sensitized, knowledgeable, and conscientized citizenry is the greatest deterrent to bad governance and insurance for good governance.

iv) Our leaders at all levels need them to overcome the unacceptable intellectual deficits in governance observed throughout Africa.

v) Parents need them to socialize their children at home into a reading culture.

vi) The media need books and libraries to constantly upgrade their knowledge and improve their analytical skills.

vii) We, professional Librarians, need them to stay employed and expand our audiences to various publics.

In one word, we all who claim to be educated or aspire to be educated rather than just being certificated need books and libraries. Judged from this prism, the future of Libraries and Conventional physical books even in this age of digitalization and e-books is bright.

The real challenge for Librarians in our country, as W. N. Seymour insisted as far back as 1980 in the case of USA, is to remember that:

> "responsive library service is not simply a product of Dewey Decimal system but it also requires intelligent planning, ability to learn from experiences, and sensitivity to human needs. Concerned library personnel who want to provide responsive service must keep themselves constantly alert to changing library roles and ensure that library users derive maximum benefit from the services provided".

May our Good Lord, the source of all knowledge, wisdom and understanding grant use the grace to be wise, creative and innovative in confronting the challenges before us as Librarians and lovers of books. I thank you for your patience in hearing me out.

Editor's note: Professor Okon Edet Uya, Passed on peacefully on April 17th, 2014. May his soul rest in peace (Amen).

THE USE OF TECHNOLOGICAL DEVICES IN LEARNING OUTCOMES: WHAT PLACE FOR LIBRARIANS?

Beetseh, Kwaghga[1], Chorun, Matthew Terfa[1] and Akaa, Charity Wanger[2]
[1]Francis Sulemanu Idachaba Library, [2]Department of Agricultural Education, Federal University of Agriculture Makurdi.

ABSTRACT

The present age of digital and electronic information environment is greatly changing and challenging the profession of librarianship. This era has changed roles of practitioners from those whom users asked for guidance on how to access information to people who now have to provide service and instruction regardless of place, time, or form. Personnel of the profession have the task to keep pace with present day dynamics. This paper assesses the evolving roles of information professionals in the digital age. It points out the competencies-skills, knowledge, and attitudes required to practice in the digital and electronic information environment.

KEYWORDS: *Technological devices, learning outcome, librarians Information professionals, digital age, digital information, electronic information environment.*

INTRODUCTION

Librarians have always played a vital role in the education of a nation's populace. They have formed relationships of synergies with subject specialists to build library collections to support instruction in the classroom and provided instruction in the form of classes on use of library skills and have conducted library instructional orientations sessions to assist students doing research. The instructional orientation sessions were usually by request of faculties/departments or offered as an optional course. Library collections were built around curriculum that was being taught at the time the books were published?? and purchased but rarely were library collection and course curriculum built simultaneously. In most cases, a librarian's role was limited and in some cases more passive than proactive in the area of instruction. A librarian's role has traditionally been more of the builder of library collections and maintainer of library collections.

In the digital age of today, librarians can no longer be simply information providers or the 'keepers of knowledge'. The changes in technology using electronically stored and retrieved information has changed the way patrons and students are able to access, retrieve and use information. The instantaneous access of information through the web and the Internet has made vast amounts of information and data available to

anyone with a computer, a modem and a service provider. Digital information is changing the role of librarians from a person or persons' assistance in finding information in a place called a Library to someone who needs to provide services and instruction regardless of place, time or format. The process of evaluating books and purchasing books is still vital to building quality library collections. But how do we make important and valid information available to our parent institutions and patrons that may appear on the Web next day? Or how do we make government documents available which are no longer being printed but are only available in virtual format on the Web? The information from the Mars exploration that was posted on the World Wide Web every 15 minutes is a good example of access to information that can reach the entire world within seconds.

Our roles as educators have also changed from someone who gathers information and makes it available only to the public through workshops or Orientations into individuals who actively participate in the educational process. Although Bibliographic instruction has always been provided, this role has expanded to a much broader instructional and participatory role in the instructional process. This role can be one of actively participating in the building of on-line courses by providing assistance in finding current and valid information for instructors delivering instruction on the Internet. Our role as educators should also extend into the area of providing instruction. Librarians must be involved in creating independent thinkers. The digital information age has enhanced our roles to knowledge navigators and instructors teaching the discipline called information literacy.

The current trend in many libraries today is deployment of computer technologies in rendering efficient and effective services to their users. Librarianship has undergone a radical change in recent years. Libraries have changed and the role of librarians has greatly been affected. Consequently, librarians have assumed the role of educators to teach their users how to find information both in the library and over electronic networks. Librarians have expanded their roles by providing local community information through publicly assessable computing systems. Some librarians are experts on computers hardware and software. Others are concerned with how computer technologies can preserve human cultural records of the past or to ensure that library collections on crumbling paper or in old computer files can still be used in the future. Librarian's role has moved outside library walls. They now work in information industry as salespeople, designers of new information systems, researchers, and information analysts. Librarians are also found in such fields as marketing and public relations and law firms, where staffs need rapid access to information.

With the growth of the Internet and availability of vast amounts of information in an instant, a librarian's role must be one of teaching critical thinking and resource-based learning. New vocabulary in education such as: living curriculum, critical

literacy, information power, information literacy, and information problem solving mandate that we re-examine our roles as professional information providers and educators. Students need to acquire the skills of evaluating information. We no longer have the luxury of having professionals in subject areas to evaluate and filter 'bad' information from 'good' information in magazines and books with clear references to experts in a field. Valid information is published on the Web daily along with opinions and rumor. This new vocabulary is bringing new challenges in library instruction.

Changing information scenario

According to Covey (2000), the industrial revolution changed man's society from agrarian to industrial and today to information .Man's society is thus undergoing a sea of change due to phenomenal growth of information and application of information technologies(IT) in form of high degree of computerization and transmission of electronic information. This has led to the quick retrieval of desired information merely by pressing a buting. It is observed this day that the information environment is passing through various challenges due to lack of certain skills. The challenges as viewed by this paper are; Information professionals skills, information management skills and up to date subject knowledge.

Impact of Digital Information on Library Instruction and Library Services (use of technological devises and learning outcomes).

Changes in education such as the infusion of instructional technology and the use the Internet to deliver instruction has also changed how libraries and librarians can provide and assist instructors in teaching in this era.

An information society is one that is knowledge based and enables most of its members to engage in pursuits that are knowledge-intensive; knowledge-generating; and knowledge-based (Manfred Kochen) Information literacy, critical literacy and the ability to locate, evaluate and cite information is a crucial part of the educational process for students today. Resource based learning integrates both critical thinking strategies and the effective use of information into the learning process and is being used effectively from primary level of education to the University level. New skills such as problem-solving, information literacy and critical literacy are skills our students are required to have to function effectively in the current work environment (ICTs skills for the technology driven educational system).

Instruction Today (Web Based Delivery).

The trend in education towards distance learning and web-based instruction is providing new challenges for information professionals as service providers as well as instructors. Information professionals are required to provide access to quality and valid information to support on-line instruction as well as provide on-line instruction both indirectly in the form of guides and on-line tutorials as well as directly in the form

of courses to teach information literacy. Many institutions and universities are recognizing the necessity of requiring an information literacy course as part of the curriculum in the digital age. In all Nigerian tertiary institutions, we are requiring students who enroll to take an Information Literacy course before they may take any other on-line course (Use of library and ICTs).

The challenge that librarians face as knowledge navigators is to link information to the process of acquiring knowledge from that information. The statement "Information is Knowledge" is not completely true. Only when critical thinking skills are used in conjunction with all the instant information available for example, on the Internet that real value can be attached to information and learning outcome positively guaranteed.

Michael Csaine once said "I educated myself in the library, which means I found out for myself what I wanted to know. School taught me what I didn't know and what I should find out when I left school. School should really teach you how ignorant you are and what you want to find out or as someone else once commented 'schools are for teaching, libraries are for learning'.

How to meet these new challenges.

There are several ways that we can adopt to meet these challenges brought on by electronic information and the explosion of the World Wide Web as a vehicle to make the vast information that research diffusion and development has availed the world. Many academic libraries are using a variety of tools and techniques to assist patrons in finding and evaluating information. The following is a list of some of the ways that Libraries adopt towards meeting the needs of our patrons and students.

1. Provide organized access to information

Creating an Electronic Library may be the most effective way for a library to provide access to quality information located on the Internet. Although there are a number of quality electronic libraries available on the Web as well as great subject-based search engines such as YAHOO!, Google, etc. creating your own electronic library will allow you to provide access to information that is directly related to the information needs of your parent institution. It is an opportunity for collaboration between subject specialists and the librarians. In Web-based instruction, courses can be built around the resources that librarians and lecturers find on the Internet. An Electronic Library also allows you to find the information you need or use most often in one place.

2. Provide instruction through learning guides and on-line tutorials (customized user education).

Finding quality information is the biggest challenge our users are faced with in the research and instructional process. With the advent of distance delivery of instruction and web-based pages for libraries using the vast amounts of information

available on the Internet, it is essential that independent learners are skilled in locating information. Internet guides and on-line tutorials provide instructional opportunities 24 hours a day at a distance or in the library. Students can access these tutorials and guides from home or from the computers in the library and walk through self-paced instruction on any topic from what is on the net.

3. Provide access to guides to recommended search engines for the Internet

Using search engines effectively and choosing the best search engines for your specific needs may be the most challenging skill that teachers and learners need to master. Guides to recommended search engines that introduce and compare search engines in a standard format are an invaluable tool for independent learners. Patrons can readily compare the different features of several search engines and access the search engines directly from your library's page. You may find this helpful when net search is busy and you would like to go directly to a specific search engine.

4. Provide instruction in the area of Information Literacy

Teaching Information Literacy in the electronic environment is a new and exciting role for librarians. Creating courses and formal instruction in the discipline of information literacy with the purpose of encouraging independent learners and critical thinkers to meet the challenges of the new information age is the role of the future for librarians. In today's workplace, employees are not only expected to work well with others, communicate well, find creative solutions to problems; they will also be expected to use the Internet and electronic information effectively to solve problems and conduct business. More and more businesses are moving towards conducting business on the Web for advertising, delivering services and products as well as using the Internet as a communication tool. Librarians must be involved in creating valuable employees with the current skills required to be successful on the job. This calls for a general review of the current user education curriculum in use in our institutions of higher learning.

Technical Support for the New Digital Age

The evolution of the library and information technology has brought on new challenges for academic libraries and information access and delivery. Academic libraries constitute the bulk of the avenue for library services in our society. The libraries share common databases, intercampus loan, inter-departmental loan and electronic resources. Roughly 40% of those enrolled at the higher institutions have previously visited either one of the other data base. It is essential for a core group of shared resources to be accessible across the academic libraries and information centers. Remote access and authentication of database usage as well as connectivity and student rates for Internet Services Providers are just of the related challenges facing a centralized Instructional Technology Services at our institutions of higher learning.

CONCLUSION

No longer is the library a closed society with librarians and staff working solely with Library Technical Services for ordering, processing and cataloging of print and video materials. A holistic approach integrating customer service, complex technology and fiscal planning is necessary to achieve successful delivery of services on the campus libraries and beyond the walls of the libraries. Librarians need to be managers of information access, designers of systems in conjunction with programmers and institution technicians, and service providers when working with students to meet their information and learning needs in the digital age

In conclusion, librarians have historically been the experts in locating, evaluating and making information available to the public. We have moved from books and print materials to individual databases with single search engines towards the open environment of the World Wide Web. Librarians are the most appropriate professionals to lead the team of people in finding the answers to the challenges we are facing in the digital environments of electronic information and the Internet. We have always been the experts at teaching people how to use the tools to locate that information regardless of format. We are the most effective searchers and researchers and our basic role of teaching those skills has not changed. The technology and varied format of information is changing and making new demands on our profession. In this fast-paced world it is important that we change with the changing roles and challenges.

REFERENCES

Akin ,Awoyemi ,(2010). Changing role and responsibilities of library and information professionals in an electronic information environment .Abuja Infolib. *Journal of Library and Information Science*. Vol.5 (1 and 2): 23 – 28.

British Council (1997). Ministry of Education, Skills and Training Information Literacy Rational. 5 June 1996. http://www.est.gov.bc.ca/curriculum/irps/it810/itration.htm Accessed 2 July, 2014.

Bundy, D. Alan BA (1997). Pedagogy, Politics, Power: Preaching Information Literacy to the Unconverted 3 August 1997
http://adminserv2.schulz.unisa.edu.au/library/papers/infolit1.htm

Bruce, Christine. (1997). The Seven Faces of Information Literacy in Higher Education 1997. http://www.fit.qut.edu.au/InfoSys/bruce/inflit/faces/faces1.htm

Griffiths, Jos-Marie. (1997). The Changing Role of Librarians: Managing New Technologies in Libraries. 1995. http://ftphost.hq.eso.org/gen-fac/libraries/lisa-ii/papers/griffiths/jo

Se-marie-griffiths (1997). Impact of Digital Information on Library Services and Instruction Resources: What is the Information Society?
http://www.utas.edu.au/docs/cult/IS_lect_11.html

Johnson, Steven Lee (1997). Leadership Abstracts, Vol 10 Number 5 May 1997, Community Institution Leadership in the Age of Technology.
http://www.slj400@msn.com Maricopa Community Institutions Information Update.
Mather, Paul R (1997). Education: Critical literacy: The WWW's great potential Nov 24, 1996 http://ei.cs.vt.edu/%7Ewwwbtb/book/chap6/critical.html

Paul, Richard (1997). Critical Thinking Community - Library 1996. http://www.sonoma.edu/cthink/University/univlibrary/library.nclk

CURRENT STATUS OF INFORMATION AND COMMUNICATION TECHNOLOGY IN PUBLIC LIBRARIES OF ANDHRA PRADESH: A USER SURVEY

K.Kumar
Department of Library and Information Science, College of Veterinary Science, Sri Venkateswara Veterinary University, Proddatur-516 360.

ABSTRACT

Public libraries grew alongside with education, literacy and publications. Survey on the opinion from information resources and services in district central libraries of Andhra Pradesh revealed that majority of the users were elderly undergraduates and postgraduates. Newspapers and Magazines were the most frequently read information sources whereas book lending services were the most often used services. Since majority of the users were senior citizens, public libraries need to take proactive approach in motivating young users to use these resources and services and enhance their competence.

KEYWORDS: *Public Library, Users, Information and Communication Technology.*

INTRODUCTION

Information and communication technology (ICT) plays a vital role in bringing about changes in our society. As technology is getting more sophisticated and more affordable every day, the range of services provided are also increasing. In wake of ICT revolution, the role of the public library **(Zaman Shuva, Nafiz, 2005)** has changed radically especially in developed countries providing more sophisticated and user friendly services to their users. A library with a content of local relevance will encourage communities to make use of library services, especially if they are empowered to participate in development of the content. Public libraries serving ethnic communities **(Greyling, Elizabeth and Zulu, Sipho, 2010)** whose histories are locked up in written, pictorial and oral traditions are well positioned to provide a platform for public engagement in the collecting and disseminating of indigenous knowledge in the communities they serve.

Public libraries have a long-standing **(Bird, Angela and Tedd, Lucy , 2004)** role in promoting books and encouraging reading; such activity have given added impetus to national and international developments. They have evolved into a primary source of Internet access in many communities, generating wide-ranging impacts in the communities that public libraries serve. This article focuses on assessing the current status of public libraries in Andhra Pradesh through a survey in terms of services rendered and usage of ICT.

Literature Review

(Parker and Stephen, 2006) reflected on the library and information situation in countries belonging to East, Southeast and Central Asia. They argued the role of libraries and information centers in a knowledge-driven society and highlighted the challenges presented by advances in ICT and evaluated various solutions implemented or proposed by four Asian countries including Korea, China, Japan and Myanmar. Finally, they described the factors and institutions influencing universities and public libraries.

Bon *et al*, (2013) analyzed ICT equipment in public libraries and compared them with requirements of some national and international professional guidelines and rules. It was stated that by increasing the number of computer workstations in 2010, the plan of the Resolution of national programme for culture 2008-2011 concerning the number of personal computers was attained. Other ICT equipments were also modernized.

Based on the findings of a public libraries and the internet study, **Bertot et al, (2008)** examined the ways in which the internet access provided by public libraries affects their communities. The authors describe the public access technology roles of public libraries and explore the relationships among community impacts, community expectations, and public policies related to libraries. The analysis emphasizes the effects of future internet platforms and applications and online communities on the community impacts. They also examined the ways in which to measure these impacts from other perspectives, including developing a means of assessing the users' perceptions of the impacts of public library internet access in their own lives and in their communities.

Gautam (1994) discusses how a modern public library using the latest technology, can play useful role in society by promoting adult and continuing education and serving as a cultural and information centre for the community with particular reference to the conditions in India.

Chang and Hisieh (1996) explain that public libraries, with well-established library systems, have flourished in Taiwan during the past four decades owing to economic prosperity. They point out that despite this, less than one-tenths of the population in the community served by these libraries has registered as library users and also suggests that such relatively low level use of by customers may be due to lack of awareness of the services that the public library has to offer. They propose an effective approach to designing marketing strategies to incorporate marketing channels, corresponding communications messages and services quality dimensions, in order to promote the use of library services and to change the use pattern of current customers.

Heitzman and Asundi (2000) described the development of public library system in the state of Karnataka, by conducting several exercises in evaluating the system. After outlining the system in the rural district of Chikkamagalur, they concentrated on Bangalore city. Qualitative and quantitative survey data potraied the demographics of library users, their information needs, their rating of library materials, facilities, library staff and the relationship between their evaluations and preliminary stages of automation. Analysis focused on issues such as age, gender, trajectories of career development and the rural-urban divide in determining the future planning of the system.

Objectives

- To find out the frequency of visit by users of various age groups to district central library
- To know the educational status of users.
- To explore the reasons for visiting the library and reasons for not visiting library more frequently.
- To understand the information channels used to gather information including internet browser, search engines.
- To know about the information resources most frequently consulted.
- To point out the constraints faced by the users while using internet services.

Survey Area

Figure1: Survey Area (Map Source, 2014)

METHODOLOGY

A survey of users of public libraries in Andhra Pradesh was undertaken with the help of a well-structured questionnaire in both English and Telugu languages consisting of14 questions. All of these libraries are kept open between 8.00 A.M to 8.00 P.M, on all working days, except on Fridays and on government holidays. Simple Random Sampling was adopted to collect the data. From each library, a total of 10 visitors each from morning and evening were requested to fill the questionnaire. Out of the

total 260 questionnaires distributed, only 171 valid questionnaires were received with a response rate of 65.76%. The response rate from individual libraries is presented in Table1 and fig 1.

Data from the survey consisted of information pertaining to demographic information of the respondents; general information about the users; information on ICT and related resources in the library; constraints faced by respondents; and respondents opinion on availability of ICT recourses in public library.

Table 1: Users Distributions of Questionnaire

S.No	Library Code	Study taken Library	No of Questionnaires Distributed	Questionnaire Received
1	**DCLA**	District Central Library, Anantapur	20 (7.79)	18 (10.53)
2	**DCLC**	District Central Library, Chittoor	20 (7.79)	16 (9.36)
3	**DCLEG**	District Central Library, East Godavari	20 (7.79)	15 (8.77)
4	**DCLWG**	District Central Library, West Godavari	20 (7.79)	17 (9.94)
5	**DCLG**	District Central Library, Guntur	20 (7.79)	11 (6.43)
6	**DCLK**	District Central Library, Kadapa	20 (7.79)	13 (7.60)
7	**DCLKL**	District Central Library, Kurnool	20 (7.79)	14 (8.19)
8	**DCLKR**	District Central Library, Krishna Dist	20 (7.79)	11 (6.43)
9	**DCLN**	District Central Library, Nellore	20 (7.79)	13 (7.60)
10	**DCLP**	District Central Library, Prakasam	2020 (7.79)	12 (7.02)
11	**DCLS**	District Central Library, Srikakulam	20 (7.79)	10 (5.85)
12	**DCLVZ**	District Central Library,Vizianagaram	20 (7.79)	09 (5.26)
13	**DCLV**	District Central Library, Visakhapatnam	20 (7.72)	12 (7.02)
		Total	**260 (100.00)**	**171 (100.00)**

(Figures in Parentheses indicate percentage) **Response Rate: 65.76%**

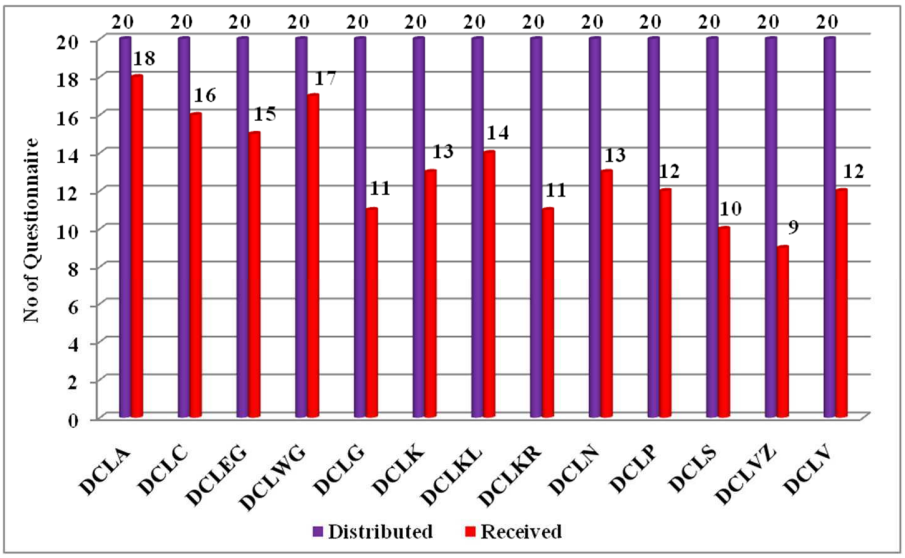


Figure 1: Sample Size

Limitation of the Study

- The present study is confined to use of information resources, services and ICT facilities available in public libraries of Andhra Pradesh. Questionnaire were distributed randomly only for 20 visitors per library.
- Even though, there are various libraries in Andhra Pradesh like, State Central Library, Regional Libraries, Branch Libraries, Village Libraries and Mobile Libraries, the study was constricted to public library.

DATA ANALYSIS AND INTERPRETATION

Part-I: Demographic Information

Gender-wise library visitors

As illustrated in Table 2, the gender-wise library visitors showed that 70.18% were male and 29.82% were females.

Haruki Nagata *et al.* (2007) discussed about dramatic social change and progress in information communications technology in Japan during 2004 and 2006, where surveys and analysis were used to identify residents' lifestyles and their views and attitudes toward public libraries. The findings demonstrate that those who positively appreciated the various benefits of the public library tended to be frequent/regular visitors and to belong to the group of 'actively striving' and the 'respecting others' in 2004 survey, and similar types of grouping in 2006 survey. The Table 3 provides data about age-wise library users. It is found that 25.15% of the users were above 56 years, and they visit library regularly, while 22.81% were between the ages 46-55 and visited the library less frequently (20.47%).The proportion of old users is high because

youngsters find traditional libraries gloomy **(Roselli, 2013)**.The results revealed that in order to acquire new user groups, libraries need service innovations.

Table 2: Sex Vs Frequency for Visits to Library

S.No	Library Code	Library	Male	Female	Total
1	**DCLA**	District Central Library, Anantapur	16 (9.36)	2 (1.17)	18 (10.53)
2	**DCLC**	District Central Library, Chittoor	12 (7.02)	4 (2.34)	16 (9.36)
3	**DCLEG**	District Central Library, East Godavari	12 (7.02)	3 (1.75)	15 (8.77)
4	**DCLWG**	District Central Library, West Godavari	10 (5.85)	7 (4.09)	17 (9.94)
5	**DCLG**	District Central Library, Guntur	9 (5.26)	2 (1.17)	11 (6.43)
6	**DCLK**	District Central Library, Kadapa	5 (2.92)	8 (4.68)	13 (7.60)
7	**DCLKL**	District Central Library, Kurnool	8 (4.68)	6 (3.51)	14 (8.19)
8	**DCLKR**	District Central Library, Krishna Dist	8 (4.68)	3 (1.75)	11 (6.43)
9	**DCLN**	District Central Library, Nellore	8 (4.68)	5 (2.92)	13 (7.60)
10	**DCLP**	District Central Library, Prakasam	8 (4.68)	4 (2.34)	12 (7.02)
11	**DCLS**	District Central Library, Srikakulam	7 (4.09)	3 (1.75)	10 (5.85)
12	**DCLVZ**	District Central Library,Vizianagaram	7 (4.09)	2 (1.17)	9 (5.26)
13	**DCLV**	District Central Library, Visakhapatnam	10 (5.85)	2 (1.17)	12 (7.02)
		Total	**120 (70.18)**	**51 (29.82)**	**171 (100.00)**

(Figures in Parentheses indicate percentage)

Education Qualification and Occupation of users

It is understood from Table 4 that majority (46.78%) of the users were under graduates followed by postgraduates (15.79%). It is obvious that graduate people tend to have more reading habit than the other respondents. Similar observations were made by **Glorieux *et al.* (2007)** who reported that traditional libraries have limited impact on low-educated visitors. **Hooghe and Vissers (2009)** also found similar pattern in internet usage that substantial majority of the visitors were highly educated.

Age-wise library visitors

Table 3: Age-wise library visitors

S.No	Age	Daily	Twice a Week	Once in a Week	Once in a Month	Rarely	Total	Rank
1	15-25	5 (2.92)	5 (2.29)	6 (3.51)	2 (1.17)	3 (1.75)	**21 (12.28)**	**5**
2	26-35	10 (5.85)	8 (4.68)	5 (2.92)	10 (5.85)	6 (3.51)	**39 (22.81)**	**2**
3	36-45	8 (4.68)	8 (4.68)	10 (5.85)	5 (2.92)	2 (1.17)	**33 (19.30)**	**4**
4	46-55	9 (5.26)	15 (8.77)	6 (3.51)	4 (2.34)	1 (0.58)	**35 (20.47)**	**3**
5	56 and Above	20 (11.70)	8 (4.68)	5 (2.92)	8 (4.68)	2 (1.17)	**43 (25.15)**	**1**
	Total	52 (30.41)3	44 25.73)	32 (18.71)	29 (16.96)	14 (8.19)	**171 (100.00)**	

(Figures in Parentheses indicate percentage)

Table 4: Educational Qualification of Users

S.No	Education Qualification for Users	No of Users	Percentage (%)	Rank
1	Primary	18	10.53	**5**
2	Xth Class	20	11.70	**4**
3	Intermediate	26	15.20	**3**
4	Under Graduate	80	46.78	**1**
5	Post Graduate	27	15.79	**2**
	Total	**171**	**100.00**	

Occupation of Users

Table 5: Distribution by Occupation

S.No	Occupation for Users	No of Users	Percentage (%)	Rank
1	Students	25	14.62	**4**
2	Unemployed Youth	40	23.39	**2**
3	Employee in Private Sector	12	7.02	**5**
4	Employee in Government Sector	30	17.54	**3**
5	Retired Person	64	37.43	**1**
	Total	**171**	**100.00**	

Table 5 reveals that majority (37.43%) of library users were retired persons who visit library on a regular basis compared to others. It should be noted that employees of government sector (17.54%) visited the library more frequently compared to private sector employees (7.02%). **Sawaya *et al.* (2011)** observed that when advocating at the national level, statistical data and empirical evidence can demonstrate that public libraries contribute to stakeholders' goals. It is found from the survey report that using technology skills users have gained as well improved their businesses, become better

educated, and access government services. The following bar diagram (Figure2) depicts distribution of users by occupation.

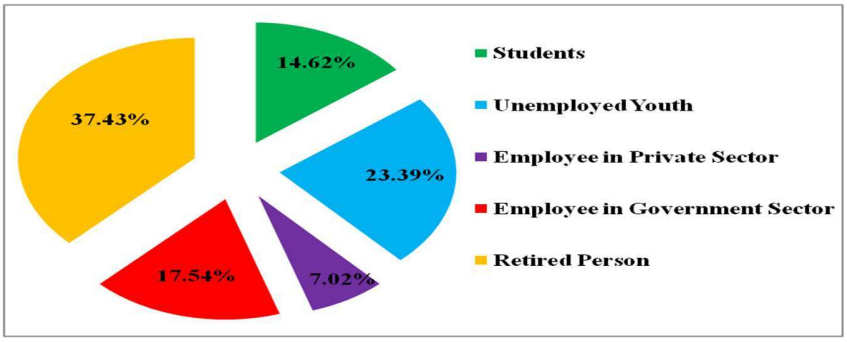


Figure 2: Distribution of users by Occupation

Part-II: General Information

Users Time Spent during each visit

Table 6: Time Spent during each visit

S.No	Time Spent During each Visit	No of Users	Percentage (%)
1	15 Minutes	20	11.70
2	30 Minutes	32	18.71
3	Less than an Hour	38	22.22
4	Between one and two Hours	46	26.90
5	More than two Hours	35	20.47
	Total	**171**	**100.00**

Table 6 provides information on the time spent by users during each visit. It is understood that about 26.90% of users spend one to two hours per visit while 20.47% spend more than 2 hours and 22.22% users spend less than an hour.

Reasons for Visiting Library

Table 7: Reasons for Visiting Library

S.No	Reasons for visit	No of Users	Percentage (%)	Rank
1	To read Newspaper & Magazines	55	32.16	**1**
2	To Borrow and Return non-Fiction	26	15.20	**2**
3	To find information about Employment	25	14.62	**3**
4	To Prepare for competitive Examinations	20	11.70	**4**
5	To Improve general Knowledge	15	8.77	**6**
6	For Serious Reading	18	10.53	**5**
7	For Reading Personal Reading Materials	12	7.02	**7**
8	To Find Information for research	18	10.53	**5**
	Total	**171**	**100.00**	

Table 7 shows that majority of the users visited library for reading for reading newspapers and magazines (32.16%) followed by users who borrow and return non-fiction books (15.20%), employment information seekers (14.62%) and serious readers (10.53%).

Frequency of Use of Library Services

Table 8 indicates the frequency of usage of library services. A Hierarchical Cluster Analysis was used to study the purpose.

Table 8: Frequency of use of Library Services

S.No	Library Services	No of Users	Percentage (%)	Rank
1	Reference Service	57	33.33	**1**
2	Books Lending Service	38	22.22	**2**
3	Reading Room Service	23	13.45	**3**
4	Photocopying	31	18.13	**4**
5	Book Reservation Service	10	5.85	**5**
6	Watching TV News	12	7.02	**6**
	Total	**171**	**100.00**	

Cluster Analysis for Frequently Used Library Services

The variables and variable codes considered for the cluster analysis representing the frequency of usage of library service in Table 9.

Table 9: Frequently Used Library Services (Variables and Variable Codes)

S.No	Variable Code	Variable Name
1	FULS A	Reference Service
2	FULS B	Books Lending Service
3	FULS C	Reading Room Service
4	FULS D	Photocopying
5	FULS E	Book Reservation Service
6	FULS F	Watching TV News

The resulting dendrogram of hierarchical analysis is shown in figure 3

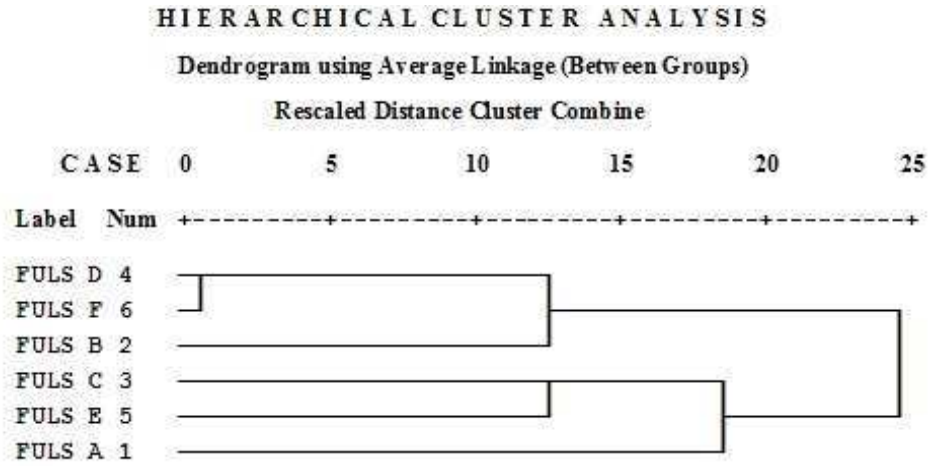


Figure 3: Dendrogram for Frequently Used Library Services

Table 10: Cluster1- Least Frequently Used Library Services

S.No	Variable Code	Variable Name	Agree	Disagree
1	FULS D	Photocopying	31	140
2	FULS F	Watching TV News	12	159
3	FULS B	Books Lending Service	38	133
4	FULS C	Reading Room Service	23	148
5	FULS E	Book Reservation Service	10	161
		Total	**114**	**741**

N=171

Agree: 114 **Disagree: 741**

Agree Ratio: 114 /171 = 0.67 **Disagree Ratio: 741 /171 = 4.33**

Agree and Disagree Ratio (0.67:4.33) = 0.15:1

In cluster 1, five variables were grouped as shown in the Table 10. The agree and disagree ratio is 0.15:1, which can be interpreted that book reservation services is the least frequently used library service.

Table 11: Cluster 2- Most Frequently Used Library Services

S.No	Variable Code	Variable Name	Agree	Disagree
1	FULS A	Reference Service	57 (33.33)	114 (66.67)
		Total	**57**	**114**

N=171

Agree: 57 **Disagree: 114**

Agree Ratio: 57 /171 = 33.33 **Disagree Ratio: 114/171 = 66.67**

Agree and Disagree Ratio (33.33:66.67) = 0.50:1

As shown in Table 11, in cluster 2, only one variable was recorded. The agree and disagree ratio has been arrived at 0.50:1, which can be interpreted that the users in this cluster utilize Reference service most frequently than any other library services.

Part-III: ICT Information

Studies are carried out globally on diffusion of ICT's in society by developing network of public internet access points, which are most often at public libraries. **Rutkauskiene *et al.* (2009)** presents a methodology for measuring the outcomes and to acquaint with the main results of the study "Libraries for Innovation" supported by Global Libraries program of the Bill and Melinda Gates Foundation. The findings revealed that users can gain from using public access computing in public libraries including access to ICT, technology training, assistance, expanded employment opportunities, conducting commercial transactions, access to and assistance with local, state and federal government electronic services, support to learning, communication and personal identity. The Department of Public Libraries, Andhra Pradesh **(Public Library Website, 2014)** realized the importance of having knowledge society and encouraging library facilities in rural areas through Book Deposit Centres, Bapuji Vignana Kendras etc. But there is still a vacuum between knowledge providing centers i.e. library facilities and knowledge seekers. Therefore, there is a need to think of providing information/knowledge through various means other than book form. It is time for any responsible administrator to think of providing the knowledge required to every individual at their door steps in the electronic format i.e. through the internet/online services. The following section covers the opinion of respondents with regard to preference for library automation, existence of digital library web based and internet services.

Preference for Library Automation

Table 12: Preference for Library Automation

S.No	Library Automation	No of Users	Percentage (%)
1	Yes	120	70.16
2	No	51	29.82
	Total	**171**	**100.00**

When the respondents were asked about their opinion on preference of library automation, 70.16% gave positive response while 29.82% responded negatively. Their responses were recorded is Table 12.

Application of various modules of Library Automation by users

Table 13: Library Automation Services

S.No	Library Automation Modules	No of Users	Percentage (%)	Rank
1	Circulation (Issue, Return, Renewal)	69	40.35	**1**
2	Online Public Accession Catalogue (OPAC)	32	18.71	**2**
3	Current Awareness Services (CAS)	15	8.77	**4**
4	Selective Dissemination Information (SDI)	12	7.02	**6**
5	Serial control	13	7.60	**5**
6	Reservation of books	24	14.04	**3**
7	Others	6	3.51	**7**
	Total	**171**	**100.00**	

With regard to computerized library modules on circulation system, responses of users are depicted in Table 13. It is observed from the table that 40.35% feel comfortable with circulation, and 18.71% have opined positively for OPAC service.

Status of Internet Service

Table 14: Status of Internet Service

S.No	Internet Service	No of Users	Percentage (%)
1	Good	93	54.39
2	Satisfactory	50	29.24
3	Poor	28	16.37
	Total	**171**	**100.00**

Jefferson *et al.* (2007) has suggested that ICTs can be easily and cost effectively used for multiple purposes. Their study has also pointed out that ICTs can be helpful in providing insights for future research. When the respondents were questioned about the status of internet service, 43.86% users had good opinion, 29.24% had satisfactory opinion, while 16.37% had poor opinion.

Frequently Used Internet Browsers

Table 15: Frequently Used Internet Browsers

S.No	Internet browsers	No of Users	Percentage (%)	Rank
1	Mozilla Firefox	45	26.32	**1**
2	Internet explorer	30	17.54	**3**
3	Google chrome	35	20.47	**2**
4	Safari	20	11.70	**4**
5	Opera	15	8.77	**6**
6	Neo planet	16	9.36	**5**
7	Others	10	5.85	**7**
	Total	**171**	**100.00**	

Ideals and visions of a Library 2.0 have in the recent years been widely discussed in public library research **(Carlsson, Hanna, 2012)** and practice and librarianship in the setting of a Swedish public library. The library users were queried about the frequently used internet browsers, and their responses were tabulated in Table 15. It could be noted that most of the respondents frequently used Mozilla Firefox (26.32%) followed by Google chrome (20.47%). Mozilla Firefox, Google Chrome and Internet Explorer ranked as the top browsers.

Frequently used Search Engine

Table 16: Frequently used Search Engine

S. No	Internet browsers	No of Users	Percentage (%)
1	Alta Vista	25	14.62
2	Google	51	29.82
3	Lycos	15	8.77
4	MSN search	13	7.60
5	Yahoo	35	20.47
6	Hot boot	20	11.76
7	Exite	10	5.85
8	Others	2	1.17
	Total	**171**	**100.00**

Table 16 presents data on frequently used search engine by library users. It is observed that Google is the predominately used (29.82%) search engine followed by Yahoo (20.47%) and AltaVista (14.62%), which were ranked first three position respectively.

Frequently used Web based services

Table 17: Frequently used Web based services

S.No	Web based services	No of Users	Percentage (%)	Rank
1	Email	55	32.16	**1**
2	Chatting	38	22.22	**2**
3	E-resource search	25	14.62	**4**
4	Use of OPAC/web OPAC	28	16.37	**3**
5	Web page design	25	14.62	**4**
	Total	**171**	**100.00**	

Janes, Joseph (2010) explored the role of applications, gadgets, and widgets by library user services. The author suggests that the World Wide Web is becoming less important in the lives of the users, who instead are using the Internet to share files and view videos. He says that the use of the World Wide Web is decreasing for digital delivery and information search and at present mobile internet is becoming popular. Majority of users were interested to use operate system for viewing e-mail (32.16%), chatting (22.22%) and using web OPAC (16.37%). The data was presented in Table 17.

Preference for Digital Library Services

The Universal Digital Library project (2014) had a goal of keeping one million books on the Web. There is lot of interactions going on all over the globe in keeping the entire knowledge in the Net whether it is a scientific knowledge or moral stories, fictions, text books, music, dance, sculpture, photos etc. to be accessible to anyone at any time. The committed steps taken by Prof. Raj Reddy of Carnegie Mellon University, Pitts Burg, U.S.A. as the Chief Architect of Universal Digital Library Project, who has motivated the Government of Andhra Pradesh, Department of Public Libraries to be a part of Universal Digital Library project.

Table 18: Preference for Digital Library Services

S.No	Digital Library	No of Users	Percentage (%)
1	Yes	159	92.98
2	No	12	7.02
	Total	**171**	**100**

Khan (2013) aimed to evaluate the effectiveness of HEC digital library resources and services in the public sector universities of Pakistan on the basis of research scholars' satisfaction and its impact on their research progress. The survey reported that digital library provides effective resources and services to research scholars and also found a significant impact on their research progress at these universities. Table 18 shows that,92.98%of respondents had positive opinion about digital library service

whereas only 7.02% respondents were against it. It is evident that digital formats are becoming popular. **Bradburn (2006)** reports that during virtual or traditional seminar in Great Britain, several speakers opined that ignoring digitalization of libraries results in failure and unsatisfactory library services.

Constraints

Reasons for not visiting library frequently

Users were questioned about the constraints for not frequently visiting library and their responses are recorded in Table 19. The primary reason behind less frequent visits to library was the dissatisfaction towards services rendered (26.32%) followed by use of other resources for collecting information (14.62%) and not being a member of the library(13.54%).The importance of various services in library were also observed in previous studies. **Iwhiwhu (2012)** observed that library users in Nigeria were similarly dissatisfied with insufficient and poor library services which held serious implications for themselves and library. **Glorieux *et al.* (2011)** also observed that services such as availability of CDs, videos and DVD and opening hours is positively correlated with visitor turnout. **Granfield and Robertson (2008)** observed that while seeking references, in-library visitors prefer reference desk whereas those outside of library prefer virtual reference.

Table 19: Reasons for Not Visiting Library Frequently

S. No	Reasons for Not visiting	No of Users	Percentage (%)	Rank
1	Library Working Hours are Inconvenient	15	8.77	**5**
2	I don't need Library	5	2.92	**6**
3	Library is far away from my home	15	8.77	**5**
4	Lack of Transportation Facility	3	1.75	**7**
5	I am not a Member of the library	23	13.45	**3**
6	Lack of Adequate Collection of Books	15	8.77	**5**
7	I use School/College Library	20	11.70	**4**
8	I collect required information from other Sources	25	14.62	**2**
9	Services are not satisfactory	45	26.32	**1**
10	Lack of Time	5	2.92	**6**
	Total	**171**	**100.00**	

Constraints in the use of Internet Services

Table 20: Constrains behind Internet Services

S.No	Internet Services	No of Users	Percentage (%)	Rank
1	Insufficient Number of terminals	25	14.62	**2**
2	Low bandwidth	18	10.53	**5**
3	Lack of printout facility	22	12.87	**3**
4	Privacy problem	14	8.18	**7**
5	Virus transfer	20	11.70	**4**
6	Power fluctuation	16	9.36	**6**
7	Lack of trained Staff	30	17.54	**1**
8	Time slots are not sufficient	16	9.36	**6**
9	Others	10	5.85	**8**
	Total	**171**	**100.00**	

The constraints in using internet services were reported in Table 20. It is obvious that lack of trained staff (17.54%) was the predominant constraint while insufficient number of terminals (14.62%) and lack of print out facility (12.87%) were considerable.

Issue on availing ICT facilities

Table 21: ICT – Constraints

S.No	ICT – Constraints	No of Users	Percentage (%)	Rank
1	Lack of availability of suitable personal computers	75	43.86	**1**
2	Lack of information about how to use ICT resources	36	21.05	**2**
4	Lack of time to acquire skills needed to use ICT	21	12.28	**3**
5	Unfamiliarity with the search methods	15	8.77	**5**
6	Lack of support from the library staff	20	11.70	**4**
7	Others	4	2.34	**6**
	Total	**171**	**100**	

Focusing on the problems faced for ICT facilities, unavailability of personal computer (43.86%) and while lack of information concerning use of ICT applications (21.05%) and lack of time to acquire ICT skills (12.28%) being predominant issues. The responses were shown in Table 21. **Bohrer *et al.* (2004)** focused on the challenges faced by public libraries in U.S. They said that advancements in the information technology

sector and the communication industry have affected the usage of public libraries. The reduction in funding from U.S. government has also emerged as a big challenge in maintaining public libraries.

Opinion on the present status of ICT facilities and services in public library

The overall opinion of the respondents about the ICT facilities and services in their library was recorded in Table 22 and Figure 4. More than half of the respondent has good opinion (56.14%) 27.49% had satisfactory opinion and only 16.37% had poor opinion. In an earlier study, **Bar-IIan and Fink (2005)** observed that more than 80% of respondents irrespective of age or rank preferred electronic format. But, in another study **Newton and Laura (2014)** observed that 79.6% respondents preferred print form. However, in the same study, 81.7% preferred e-books for checkout if the library purchased e-books.

Table 22: Over all opinion of ICT-Infrastructure

S.No	ICT-Infrastructure	No of Users	Percentage (%)
1	Good	96	56.14
2	Satisfactory	47	27.49
3	Poor	28	16.37
	Total	**171**	**100**

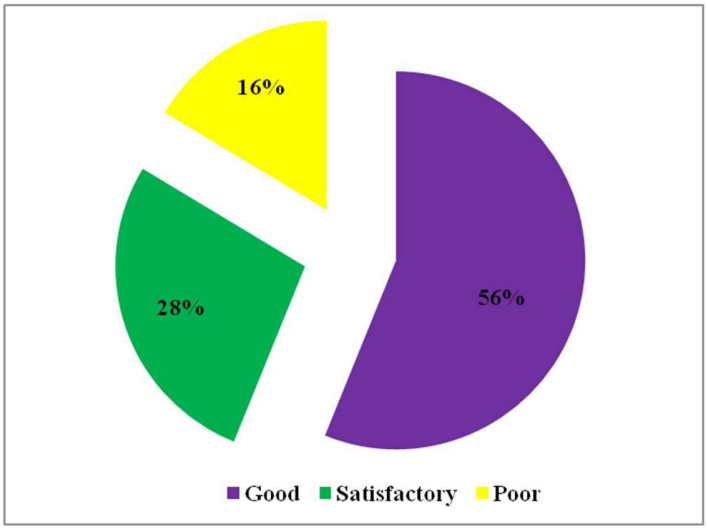


Figure 4: Over all Opinion

Durrani *et al*. in **Emojorho and Daniel, (2010)** explored the use of information and communication technology (ICT) and collection management in public libraries of

Nigeria **(**. The study found that ICT reached only a few libraries in South-South Nigeria and majority of the respondents opined that only a few ICT facilities were available.

CONCLUSIONS

Majority of users of public library under study were retired men of 56 years and above who mostly visited once a week spending more than 2 hours per visit. Reading newspapers, magazines and seeking employment information seems to be significant criteria for visiting library. Book lending service and reading room services were most frequently utilized services whereas photocopying is the least preferred service. Dissatisfaction against library services seems to be an essential constraint preventing users from visiting the library. With respect to availing ICT facilities, lack of ICT resources and knowledge were the major problems faced by the users. In conclusion, digitalization of library and implementation of ICT is essential to improve user compliance as majority of the respondents had positive opinion.

REFERENCES

Bar-Ilan, J., & Fink, N. (2005). Preference for electronic format of scientific journals-A case study of the Science Library users at the Hebrew University. *Library & Information Science Research*, 27(3), 363-376. doi:10.1016/j.lisr.2005.04.011

Bertot, John Carlo; McClure, Charles R.; Jaeger, Paul T. (2008).The Impacts of free Public Internet Access on Public Library Patrons and Communities. *Library Quarterly*. 78(3).285-301.

Bird, Angela; Tedd, Lucy A (2004). Reader development and ICT: an overview of projects in Welsh public libraries. *Journal of Librarianship & Information Science*. 36(4).159-174.

Bohrer, Clara N. (2004). Libraries at Risk? *Public Libraries*. 43(6).311-311.

Bon, Milena. Knjiznica (2013) Information and Communication Technology (ICT) in Public Libraries: the Analysis of a Survey Undertaken in 2010.57(2/3).65-94.

Bradburn, J. (2006). Virtual or traditional: the impact of change on information services. Refer, 22(3).4-7.

Carlsson, Hanna. (2012).Working with Facebook in Public Libraries: A Backstage Glimpse into the Library 2.0 Rhetoric. *Libri: International Journal of Libraries & Information Services*. 62(3).199-210.

Change P.L (1996). Public Library Finance. *IASLIC Bulletin*. 10(1).1-23.

Digital Library Project Available at: http://publiclibraries.ap.nic.in/dpl.aspx Retrieved at: 10.08.2014.

Emojorho, Daniel (2010). ICT and Collection Management in Public Libraries: A Survey of South-South Zone of Nigeria. *Library Philosophy & Practice.* 1-5.

Gautam J.N (1994). The role of a modern public library in society. *Lucknow Librarian.26 (1-2).*2-65.

Glorieux, I, Kuppens, T and Vandebroeck, D. (2011). Límites sociales a la eficacia de la biblioteca pública. (Spanish). *Boletin De La Asociacion Andaluza De Bibliotecarios,* 26(102).20-48.

Glorieux, I., Kuppens, T., & Vandebroeck, D. (2007). Mind the gap: Societal limits to public library effectiveness. *Library & Information Science Research.* 29(2).188-208. doi:10.1016/j.lisr.2007.03.003

Granfield, D., & Robertson, M. (2008). Preference for Reference: New Options and Choices for Academic Library Users. *Reference & User Services Quarterly*.48 (1).44-53.

Greyling, Elizabeth; Zulu, Sipho. (2010). Content development in an indigenous digital library: A case study in community participation. *IFLA Journal*.36(1).p30-39.

Haruki Nagata; Kanako Sakai; Tetsuya Kawai. (2007). Public library and users' lifestyle in a changing context. *Performance Measurement & Metrics*. 8(3).197-210.

Heitzman J (2000). Evaluation of Public Libraries in India: The case of Karnataka. *Information Development*. 16(3).142-153.

Hooghe, M., & Vissers, S. (2009). Reaching Out or Reaching In? *Information, Communication &Society*.12 (5).691-714. doi:10.1080/13691180802483062

Information communication technology details Available at: http://publiclibraries.ap.nic.in/dpl.aspx. Retrieved at: 10.08.2014

Iwhiwhu, B. E. (2012). Public Library Information Resources, Facilities, and Services: User Satisfaction with the Edo State Central Library, Benin-City, Nigeria. *Library Philosophy & Practice*.51-65.

Janes, Joseph. (2010). Technology: Internet Librarian. As the Web Fades Away: Users are gravitating toward special-purpose utensils like apps, gadgets, and widgets. *American Libraries*. 41(10).35-35.

Jefferson, Theresa. Vine (2007). Knowledge/Information Technology Engineering Management: The use of ICTs in regional conflicts, war, and terrorism. *The Journal of Information & Knowledge Management Systems*.37 (1).14-17.

Khan, Amjid and Ahmed, Shamshad. (2013).The impact of digital library resources on scholarly communication: challenges and opportunities for university libraries in Pakistan. *Library Hi Tech News*. 30(8).12-29.

Map Source Details Available at:http://meritplace.in/category/gk-material/ Retrieved at 10.08.2014

Newton Miller, L. (2014). Preference for Print or Electronic Book Depends on User's Purpose for Consulting. *Evidence Based Library & Information Practice*.9 (3).95-97.

Parker, Stephen. (2006).Editorial East is East .*IFLA Journal*. 32(2).91-92.

Roselli, M. (2013). Die Bibliothek, eine Frauenwelt. (German). *Bibliothek Forschung Und Praxis*, 37(3).322-330. doi:10.1515/bfp-2013-0047

Rutkauskienė, Ugnė. Informacijos Mokslai (2009). Impact of Public Libraries of Lithuania on Diffusion of Information Technologies in Society. *Information Sciences.* 50.51-56.

Sawaya, Janet; Maswabi, Tshepo; Taolo, Resego; Andrade, Pablo; Grez, Máximo Moreno; Pacheco, Pilar; Paberza, Kristine; Vigante, Sandra; Kurutyte, Agniete; Rutkauskiene, Ugne; Jeżowska, Jolanta; Kochanowicz, Maciej. (2011). Advocacy and evidence for sustainable public computer access experiences from the Global Libraries Initiative. *Library Review*.60(6).448-472.

Zaman Shuva, Nafiz. (2005).Implementing information and communication technology in public libraries of Bangladesh. *International Information & Library Review*.37(3).159-168.

APPENDIX – A: QUESTIONNAIRE

Current status of Information and Communication Technology in Public Libraries of Andhra Pradesh: A User Survey

Part-I: Demographic Information

Name	:
Sex	:
Age	:
Educational Qualification	:
Occupation	:
Address	:
Phone/Mobile No	:
E-Mail	:

Part-II: General Information

Q.1:Time Spent During each Visit

S.No	Time Spent	Yes	No
1	15 Minutes	( )	( )
2	30 Minutes	( )	( )
3	Less than an Hour	( )	( )
4	Between One and Two Hours	( )	( )
5	More than Two Hours	( )	( )

Q.2: Reasons for Visiting Library

S.No	Reasons for Visit	Yes	No
1	To read Newspaper & Magazines	( )	( )
2	To Borrow and Return non-Fiction	( )	( )
3	To find information about Employment	( )	( )
4	To Prepare for competitive Examinations	( )	( )
5	To Improve general Knowledge	( )	( )
6	For Serious Reading	( )	( )
7	For Reading Personal Reading Materials	( )	( )
8	To Find Information for research	( )	( )

Q.3: Use of Library Services

S.No	Use of Library Services	Yes	No
1	Books Lending Service	( )	( )
2	Reference Service	( )	( )
3	Reading Room Service	( )	( )
4	Photocopying	( )	( )
5	Book Reservation Service	( )	( )
6	Watching TV News	( )	( )

Part-III: Information Communication Technology

Q.4. Do you prefer Library Automation

S.No	Library Automation	
1	Yes	( )
2	No	( )

Q.5: Library Automation Service

S.No	Use of Library Services	Yes	No
1	Circulation Control	( )	( )
2	OPAC	( )	( )
3	CAS	( )	( )
4	SDI	( )	( )
5	Serial control	( )	( )
6	Renewal of books	( )	( )
7	Printout service	( )	( )
8	Online database service	( )	( )
9	CD-ROM database service	( )	( )
10	Others	( )	( )

Q.6: Status of Internet Service

S.No	Internet Service	Yes	No
1	Good	( )	( )
2	Satisfactory	( )	( )
3	Poor	( )	( )

Q.7: Using Internet Browsers

S.No	Browsers	Yes	No
1	Mozilla Firefox	( )	( )
2	Internet explorer	( )	( )
3	Google chrome	( )	( )
4	Safari	( )	( )

5	Opera	( )	( )
6	Neo planet	( )	( )
7	Others	( )	( )

Q.8: Using of Search Engine

S.No	Search Engine	Yes	No
1	Alta Vista	( )	( )
2	Google	( )	( )
3	Lycos	( )	( )
4	MSN search	( )	( )
5	Yahoo	( )	( )
6	Hot boot	( )	( )
7	Exite	( )	( )
8	Others	( )	( )

Q.9: Web Based Services

S.No	Web Based Services	Yes	No
1	Email	( )	( )
2	Chatting	( )	( )
3	E-resource search	( )	( )
4	Use of OPAC/web OPAC	( )	( )
5	Web page design	( )	( )

Q.10. Prefer for Digital Library

S.No	Digital Library	
1	Yes	( )
2	No	( )

Part-IV: Constraints

Q.11. Reasons for not Visiting Library Frequently

S.No	Reasons	Yes	No
1	Library Working Hours are Inconvenient	( )	( )
2	I don't need Library	( )	( )
3	Library is far away from my home	( )	( )
4	Lack of Transportation Facility	( )	( )
5	I am not a Member of the library	( )	( )
6	Lack of Adequate Collection of Books	( )	( )
7	I use School/College Library	( )	( )
8	I collect required information from other Sources	( )	( )
9	Services are not satisfactory	( )	( )
10	Lack of Time	( )	( )

Q.12: Reasons for not using Internet Service

S.No	Internet Service	Yes	No
1	Insufficient Number of terminals	( )	( )
2	Low bandwidth	( )	( )
3	Lack of printout facility	( )	( )
4	Privacy problem	( )	( )
5	Virus transfer	( )	( )
6	Power fluctuation	( )	( )
7	Lack of training	( )	( )
8	Time slots are not sufficient	( )	( )
9	Others	( )	( )

Q.13: Reasons for not using ICT's

S.No	Information Communication Technology	Yes	No
1	Lack of availability of suitable personal computers	( )	( )
2	Lack of information about how to use ICT resources	( )	( )
3	Lack of time to acquire skills needed to use ICT	( )	( )
4	Unfamiliarity with the search methods	( )	( )
5	Lack of support from the library staff	( )	( )
6	Others	( )	( )

Q.14: Over all Opinion of ICT-Infrastructure

S.No	Opinion	Yes	No
1	Good	( )	( )
2	Satisfactory	( )	( )
3	Poor	( )	( )

APPENDIX – B: SURVEY AREA

S. No	Library Details
1	District Central Library, Anantapur, 515001.
2	District Central Library, Chittoor, 517 001.
3	District Central Library, Kakinada, E.G Dist, 533 001.
4	District Central Library, ELURU, W.G. Dist: 534 006.
5	District Central Library,5/3 Arundalpet, Guntur- 522 022
6	District Central Library, Kadapa- 516 001
7	District Central Library, Kurnool 518 001
8	District Central Library, Machilipatnam, Krishna Dist: 521 001.
9	District Central Library, Stone House pet, Nellore – 524 002
10	District Central Library, Ongole, Prakasam district
11	District Central Library,Srikakulam-532 001.
12	District Central Library, Near TTD Kalayana Mandapam, Vizianagaram-535-202.
13	District Central Library, Visakhapatnam

LIBRARY AND INFORMATION SCIENCE EDUCATION IN THE 21ST CENTURY: REFORMS OR RESTRUCTURING?

Olu Olat Lawal
Department of Library and Information Science, University of Calabar, Calabar

INTRODUCTION

In the Library world, the commencement of the new millenium fifteen years ago had been marked with increased tempo in technological applications and innovations, in ensuring quality service delivery and sustaining relevance of the profession in information dissemination in social and economic dispensation of the global citizenry. While there has been considerable progress in the developed world such as the UK, USA, Australia, and most Western European countries in developments in e-books, e-journals and full ICT-integrated library services, there have been collateral closures of public libraries especially in the UK due to dwindling financial resources to sustain the high level of services.

In West Africa, libraries are still predominantly traditional in outlook and function with some semblance of library automation and computerized information in academic libraries and an emerging scenario of e-libraries in Public/State library services. The vacillation in progress derives from poor logistics of power supply which is epileptic, user apathy for self-direction in the use of computer for information, and the rather poor pace of Information Literacy in tertiary and public institutions. The resultant effect in library and information services is a millennial nap on the part of library authorities and tertiary educational development problems in general.

This situation has led to a reverberating effect on library schools with a clamour from the profession for a restructuring of the library school curriculum. However, most of the times there have been calls for curriculum review, the programme in focus is usually at first degree Bachelor's level. Whereas section 10(1) of the Education (National Minimum Standards and Establishment of Institutions) Act, Cap E3, Laws of the Federation of Nigeria 2004, empowers the National Universities Commission to lay down minimum standards for all programmes taught in Nigerian universities, the main focus has been on undergraduate programmes.

With due consultation with critical stakeholders in the universities, the Commission put in place the mechanism for the merger of the Benchmark – style statements with the new documents referred to as Benchmark Minimum Academic Standards (BMAS). The resultant documents, an amalgam of the outcome-based Benchmark statements and the content-based MAS clearly enunciates the learning outcomes and competencies expected of graduates of each academic programme without being overly prescriptive while at the same time ***providing the requisite***

flexibility and innovativeness consistent with institutional autonomy (emphasis mine) Okojie (2014). We will amplify on this later in the section on ***standards***.

Reform Factors:

- *The Librarians' Registration Council of Nigeria (LRCN).*
  The struggle by the Nigerian Library Association (NLA) to attain legal status of public recognition through appropriate legislative instrument had been momentous (Lawal, 1983). Some critical pressures were put on the government (Dipeolu, 1969, Agidee, 1970, Lawal, 2002) culminating in the ultimate realization of legal backing from government through Decree 12, 1995 titled "The Librarians (Registration, etc.) Council of Nigeria Decree". The Council was inaugurated on 28th May 2002. The LRCN has since taken giant strides in organizing workshops, conferences, registration and certification on librarians and maintenance of standards through accreditation activities.

- Structure of LIS Programmes:
  The fundamentals of programme content of Nigerian library schools are greatly aided by the varying levels of degrees offered:
  - Professional certification
  - Postgraduate
  - Undergraduate

In the above structure, professional certification is authenticated by the LRCN with the mission statement "to pursue the attainment of professional excellence by determining who are Librarians; the standard of knowledge and skills required for registration and practice…" The CLN (Certified Librarian of Nigeria) is awarded to qualified practicing librarians. The 1st conference of certified librarians was held in 2014 at Abuja, FCT, Nigeria with the theme: 'Transforming Librarianship for national growth and development".

- **Standards**
  In Undergraduate/Postgraduate programmes as stated earlier, the National Universities Commission regulates standards by accreditation and approval of programmes. For first degree, the Benchmark Minimum Academic Standards (BMAS) is a template for programme design as the document contains suggestions of the status of each course in terms of ***compulsory***, ***required*** and ***elective***. Universities are encouraged to take due cognizance of the BMAS while bringing necessary innovation into the content and delivery of their programmes towards achieving their overall objectives and goals. Programmes are to be structured in such a way that a typical student does not carry less than 30 credit units or more than 48 credit units per session. Those librarians or other professionals usually clamouring for reforms sometimes fail to take the restrictions into account. The

debilitating aspect is that ever since the application and use of Information Technology in libraries burgeoned there have been panic stricken calls for curriculum renewal in library and information practice. Usually, the reason advanced for the renewal is to take account of IT requirements and skills expected of graduates. Hence, knowledge, skills and competencies interplay in professional objectives and goals.

However, there are some inherent problems engendered by the technological innovations development. First, the backgrounds of students presenting themselves for admission in universities are usually blank about what librarianship is all about. Admission problem exacerbates this situation whereby students who could not be accommodated in other faculties' programmes are added to Library and Information Science Programmes.

The non-screening of Library Science students and average abilities of those who eventually gained the admission, defines the parameters of low educational standard and professional affinity in LIS programmes.

In considering postgraduate programmes, the Teaching Methods are not uniform in Pedagogic terms of professional skills acquisition sequencing. The internship requirements need streamlining especially for first professionals with degree qualifications from other disciplines. A situation where the postgraduate students of library and information science become knowledgeable but deficient in professional practice is not only worrisome but condemnable.

The Masters and Doctoral Programmes of library schools can be rated as standard for now following reforms in the programmes' content. The philosophy of MLS and PhD programmes in LIS is therefore geared towards training of high level personnel in Libraries in educational and research institutions, Government establishments, Industries, Archives, Record Management Offices and public sector Information services.

Curriculum Review:

Curriculum review in Nigerian universities is not a recent phenomenon. At the commencement of the new millennium, after more than a decade of using the Minimum Academic Standard (MAS) documents as a major instrument of accreditation, the NUC in 2001 initiated a process to revise the documents. The curriculum review was necessitated by the fact that the frontier of knowledge in all academic disciplines had been advancing with new information generated as a result of research. The impact of ICT on teaching and learning and the competitiveness engendered by globalization were also compelling reason for the curriculum review. In the LIS field, a more compelling reason is the constant agitation by Librarians and Heads of library

institutions on standard and relevance of library education and the performance output of its products particularly in the application of new technologies for library development and effective service delivery. (Lawal, 1993; Lawal, 2009).

Consequently, the NUC considered the merger of the Benchmark style Statements and the revised MAS into new documents to be called Benchmark Minimum Academic Standards (BMAS) as an amalgam that crisply enunciates the learning outcomes and competence expected of graduates of each academic programme. In September 2014, Professor Julius Okojie, Executive Secretary, NUC, in a momentous occasion at a Workshop, produced the Draft of NUC BMAS for undergraduate programmes in Nigerian Universities. It was heartwarming to work through the documents (BMAS) for ***Library and Information Science*** in a Panel under the direction of the present writer and experts such as the Registrar, LRCN and some expert curriculum Professors from other Universities. The elements of the proposed curriculum can be summarized as follows:

- **Core/Compulsory Courses**

  All students will be required to take the following core/compulsory courses.

			Units
i.	Libraries in its social and cultural setting	3	
ii.	Introduction to Libraries and Information Resources	3	
iii.	Bibliography		2
iv.	Organisation of Knowledge I		3
v.	Historical Development of Libraries in Nigeria	2	
vi.	Organisation of Knowledge II		3
vii.	Collection Management		2
viii.	Reference and Information Sources and services	2	
ix.	Technical Services in Libraries	2	
x.	Introduction to Information Science		2
xi.	Management of Libraries and Information Centres	2	
xii.	Indexing and Abstracting	2	
xiii.	Information and Communication Technologies in Libraries	3	
xiv.	Library and Information Services to Rural Communities	2	
xv.	Knowledge Management	2	
xvi.	Indigenous Knowledge		2
xvii.	Infoprenuership		2
xviii.	Research and Statistical Methods	3	
xix.	Research Project		4
xx.	Field Experience (SIWES)	6	
			52

It can be noted from the above that additional subject areas include ***inter alia,*** Introduction to Preservation of Library and Archival materials, Knowledge Management, Digital Libraries, Infopreneurship and ICT in Libraries and Information Centres.

The MLS and PhD programmes are developed quintessentially by University institutions offering the postgraduate courses in LIS without prescriptive models from the NUC although future accreditation visits to library schools would surely cover postgraduate programmes.

CONCLUSION

Digital literacy will be a key plank in assessing the merits of higher education outcomes, especially in Library and Information Science (LIS) in the 21st century. We may not be able to exert the pace of technological development in the developed countries but the level of attainment in relating the library profession to technological development would be high. In tackling obstacles to effective service delivery in libraries and information centres, it is imperative to instill the importance of the dichotomy of digital literacy and student employability. In improving digital skills amongst students there will be less urge to do so (including staff and library users) in the already crammed programmes of University libraries. Students' background on entry to library schools is crucial in determining level of knowledge of librarianship, and driven by the expectations of some of the students having a wide range of technological backgrounds on entering higher education.

Joint Admission Matriculation Board (JAMB) entry and Post-UTME examinations have gone digital thereby enkindling the requirements of employers and professional bodies. Government and other library authorities should prioritize funding the Higher Education sector. The challenges posed are wide and varied but the impact of digital technologies on University experience, library and information work experience for both staff and students, have positive implications for the quality of learning and teaching as well as service delivery. The future is bright for the 21st century.

REFERENCES

AGIDEE, D. (1970). Legal provisions for library development in Nigeria, 1948 – 1968. ***Nigerian Libraries,*** 6(1&2): 53 – 64.

DIPEOLU, J. O. (1969). Library legislation and public library development, ***Nigerian Libraries,*** 5(1): 11 – 15.

LAWAL, Olu Olat (2002). ***The Library Profession in Nigeria.*** Calabar: University of Calabar Press. 234p.

Lawal, O. O. (1983). ***Professionalism in Nigerian Librarianship,*** 2vols. PhD Thesis, Longhborough University, Leics., UK.

Lawal, O. O. (1993). Indigenization of the Curriculum in Nigerian Library schools: a survey of its impact on practitioners, ***African Journal of Library, Archive and Information Science,*** 3(2): 141 – 150.

Lawal, O. O. (2003). ***Professional Education for Librarianship: international perspectives.*** Ibadan: Spectrum books. 213p.

Lawal, O. O. (2009). Current status of Library and Information Science Programme in Nigeria, ***Nigerian Libraries,*** 42: 1-19.

Okojie, Julius ***In:*** National Universities Commission: BMAS for Undergraduate Programmes In Nigerian Universities. Library and Information Science (September, 2014).

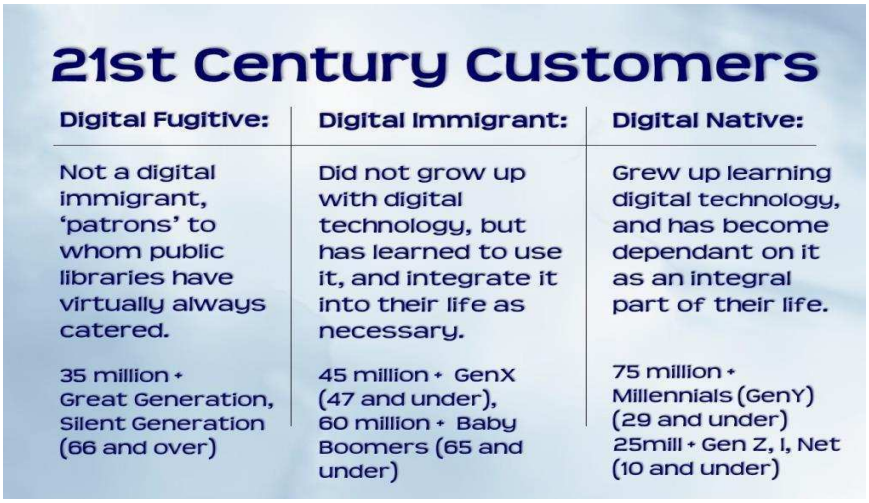
Jane Aba[1] and Nkechi Anthonia Idoko[2]
[1]Francis Suleimanu Idachaba Library, University of Agriculture Makurdi Benue State, Nigeria. [2]Nnmadi Azikwe Library, University of Nigeria, Nsukka.

INTRODUCTION

The 21st Century falls within the epoch called the Information Age. The concept of Information Age/Society epitomizes change brought about by technological advances and globalization toward the end of the 20th Century (Dike, 2007; Oladele, 2008; Ogunsola, 2005). This epoch is characterized by speed and precision in the production, transfer, access, and use of knowledge (Chakrabarti, 2001). The information society sums up the new world order where the position of nations, their power, wealth and influence, increasingly depends on their access to and ability to use information (Dike, 2007). In fact, the skill for any individual or group to navigate effectively in this increasingly complex age information is essential (Kochen and Donohue, 1976).

Changing Users Needs

Users' information needs are influenced by the rapid changes in ICTs. With the advent of technology users are familiar with latest trends in information environments and this has led to major impetus for change in libraries. Library users have high expectations from the librarians than before to access the right information and knowledge in the right format and at the right time from wherever they are (Jain, 2013). In the past libraries had only one type of traditional users, who had no other choice but to come to libraries. According to Matthews (2011), in twenty-first century academic library users can be grouped into major three categories as explained in Figure (1):



SOURCE: Matthews (2011)

Figure 1: Types of Customers in 21st Century Libraries

Figure 1 displayed users from diverse background and librarians have to satisfy all their information needs according to their levels. Similarly, various terms have been used to denote ways of imparting knowledge on how library users can effectively utilize library resources. Some of the terms includes: reader instruction, user instruction, library orientation, library instruction, use of library, library and information skill, user and staff education, information literacy and so on. Though, these terms are used interchangeably, what is common is that, they refer to formal and informal library programmes of educating and enlightening users on how to maximally utilize library resources. This paper addresses the current and future global trends in library and information services in the area of changing users' needs, globalization of information services; emergence of social media, changes in scholarly communication and professionals' skills and challenges of the 21st century librarian.

Libraries all over the world are experiencing changes. These changes have affected the way librarians discharge their duties. The world has turned into a global village; hence professions and professionals are adjusting their activities to accommodate and be accommodated in this change. Accordingly, libraries and librarians are caught in this web of change; hence, the need to prepare Nigerian librarians for the challenges ahead (Owabor, 2012). With the development of information and communication technology (ICT), libraries are no longer seen as physical books that are kept in a building for users to access. Users are no longer required to visit a library physically in order to access it. Despite changes in the roles and functions of libraries, their cultural role has not changed. Libraries remain responsible for acquiring or providing access to books, periodicals, and other media that meet the educational, recreational, and informational needs of their users. They have continued to keep the business, legal; historical and religious record of any civilization. Libraries are places where a toddler can hear his or her first story and a scholar can carry out his or her research. New technologies are increasing accessibility of information and librarians are adapting to sophisticated information needs of users as a result of these technologies. Technological advances have presented an opportunity for automating some aspects of traditional libraries.

Libraries worldwide have witnessed a great metamorphosis in recent years both in their collection development and service structure. As pointed out by Mulla (2006), over the years, a significant transformation has been noticed in collection development policies and practices. Print medium is currently giving way to electronic form of materials. For instance, an electronic journal is one of the major cornerstones of digital library that have grown steadily. Furthermore, online databases are also available on the web. Several digital library projects provide digital access to materials that already exist within traditional libraries in printed media. Acquisitions are done in the computers, with online selection, payment, and subscription (Olaosun, 2007). All these developments make library services less cumbersome. Consequently, technology has

made acquisition, processing, storage, indexing, and retrieval of information faster, cheaper, and more efficient.

Currently, libraries have become a technologically-driven system. In Nigeria, this change has manifested only in the new millennium. That is why Ogunsola (2011) described it as a cyclone that has enveloped the library and is taking it to unprecedented heights in knowledge acquisition, management, and communication. Similarly, Akintunde (2004) revealed that the vocabulary of librarianship is changing: 'dissemination' is being replaced by 'communication' 'repository' by 'data', 'literature' by 'knowledge', 'search' by 'navigation', etc. This reflects the current approach to packaging and the tools used for managing knowledge. Knowledge itself has become more common than was ever imagined twenty years ago. The library has become globalized. It cannot be overemphasized that the library today is a technologically driven and uses the principles of traditional library services to organize knowledge and communicate with users in the global community.

In developed countries, traditional libraries exist side by side with digital libraries because people continue to publish both in printed and electronic forms (Ogunsola, 2011). According to Alasa and Kelechukwu (1998), libraries are now situated in cyberspace while library services are no longer constrained by time of opening and closing hours. Library users can access services in libraries beyond their country and continent and the virtuality of information resources means that millions of users can access one resource at the same time. In supporting this view, Jain (2013) summaries the major impetus of change, key paradigm shifts, new roles, opportunities and challenges for academic librarians as stated in Table 1.

Table 1: Traditional Versus 21st Century Academic Libraries

	In Traditional academic libraries	21st Century academic libraries
1.	Selection and acquisition of library information materials (books and journals) was from the publisher catalogues	Selection is based on users' demands and dealing with issues such as, journals licensing and publishers' big deal offers for open access journals.
2.	Main collection included books and journals	Today there are institutional repositories, online databases, multi-media information resources
3.	Librarians worked as collection specialists Management of information systems was limited to a four-walled physical library	Librarians work as faculty liaison In modern age, there are digital libraries, digital repositories and cloud information management system
4.	Information model was scarcity and limited access of information Manual interlibrary loan system High dependence on print resources	There is information explosion in both quantity and formats of information Electronic interlibrary loan High dependence on e-resources and digital resources
5.	Availability of services only in library opening hours	Most services are available 24/7
6.	Use of card catalogues to retrieve Information	Use of Online Public Access Catalogue (OPAC) to retrieve information
7.	A traditional reference desk service	24/7 online and virtual reference services
8.	Traditional cataloguing	Resource Description and Access (RDA)
9.	A library as a quiet reading place	Information/knowledge/digital commons to make learning common
10.	Library users had easily identified information needs	Library users have diverse information needs
11.	Use of library budget mostly to buy books	To buy e-resources including hardware and software resources
12.	Librarian mediated searching	Web-based searching
13.	Print journals	e-journal and open access journals
14.	Preservation of mainly books, serials and grey literature	Digital curation
15.	Traditional broacher	Media marketing
16.	Traditional library users, who had no other choice but to come to libraries	Diverse library users and assorted options to access information
17.	From MARC and circulation desk	To metadata and web information
19.	From book keeping	To support education

From Table 1, it is evident that twenty-first century academic libraries are transformed into a different information world. The major changes have impact on selection/acquisition; cataloguing; archiving; reference desk; outreach programming; accessibility of resources; special collections; technology management (Kurt De, 2013). There is explosive growth of mobile devices and applications to drive user demands and expectations (Smart phones, iPads, and other handheld devices) and they are changing the way information is delivered and accessed (Murphy, 2012).

Globalization of Information services

Globally, the symbolic heart and blood of an essential resource of any academic institution, is its library. Although some individual are pessimistic about the future of libraries, many envisioned future library services that incorporate new philosophies, new technologies and new spaces to meet the needs of library users (Hendrix, 2010). According to Creth (2006), the values that are the foundation of library profession such as service, quality, universal access and cooperation, should remain same in the next century. It is the way in which these values are translated into operations and activities that ought to undergo a substantial change. The current trend in many libraries today is deployment of computer technologies in rendering efficient and effective services to their users. With the invention of Information and Communication Technology, libraries now use various types of technologies to aid the services they render. Everyday new technological advances affect the way information is handled in libraries and information centres. The impacts of new technologies are felt by libraries in every aspect. Computing technology, communication technology and mass storage technology are some of the areas of continuous development that reshape the way that libraries access, retrieve, store, manipulate and disseminate information to users (Krubu and Osawaru, 2011).

Relationship Between Globalization And Information Communication Technology

Globalization is a process leading to greater interdependence and mutual awareness among economic, political and social units of the world. It is the "accelerated compression of the contemporary world and the intensification of consciousness of the world as a singular entity" (Guillen, 2000), This process is a combination of economic technological, socio-cultural and political forces, hence Akanni (2008) asserts that globalization is a broad term with several dimensions such as economic globalization, globalization of education globalization of sporting events, globalization of Library services etc. The special library Association cited by Akanni, (2008), enumerated the characteristics of globalization as follows:

1. A world in which people interact with their colleagues around the globe, exchange information and messages and coordinate activities through variety of technological and communication means;
2. World problems have become interconnected;

3. An emerging globally integrated society that is demanding increased use of technology and information obtained through technology;
4. Information has become the most important ingredient in decision making anywhere in the world;
5. The exchange of information worldwide has become imperative;
6. An increasingly interdependent society where information services has increased the need for networking across national boundaries;
7. Information professionals will be able to communicate, not only as a global community but also create global information marketplace with opportunities to participate in changes, not only of information but of employment opportunities worldwide.

According to Okiy (2010), ICT is a major factor in the actualization of globalization. With the use of ICT, it has become possible to access a variety of information and knowledge sources in a manner that would be simple, easy and independent of time, place and subject discipline. According to the University of Winconsin, Madison (2008) cited in Omekwu and Echezona **(**2008)**,** ICT revolution is seen as the central and driving force for globalization which has widened the imagination and the abilities of library and information professionals to produce, access, adapt and apply information in their organization and institutions. Globalization scenario emerges not only in terms of evolution of cyberspace but also in the traffic of information across geographical boundaries and at all times (Omekwu, 2006). Shrinking of time and space, the volume and speed of access to worldwide information in a network environment are the clear evidence of globalization of information.

Benefits of Globalization

A cursory look at the benefits of globalization to information profession and libraries by various scholars such as Alasa and Kelechukwu (1998), Akanni (2008), Omekwu and Echezona (2008) and Okiy (2010) revealed enormous benefits. There are transformations of traditional libraries to virtual migration of information to electronic format. These include;

a. Quick and convenient information exchanges;
b. Access to experienced and expert individual in thousand fields;
c. Access to regular updates on topics of interests;
d. Enhancement of team work across geographical distance;
e. Access to archives information worldwide;
f. Transfer of data between machines and provides a great platform to have fun and be entertained.
g. As a reference tool, the internet provides wealth of up-to-date resources unavailable in bond volumes;

h. The internet gives personal access to specialization and experts in hundreds of disciplines;
i. It enables you to reach your fellow librarians with messages and documents independent of the constraints of mails, telegraph or even fax;
j. One can collect news and facts which can be stored in one's computer for later use in reference;
k. Resources in the internet allow libraries to provide better services to their patrons by giving on-line access to information that will be difficult to locate in any other manner;
l. The internet provides access to bibliographic records of millions of books and the details of the holdings of academic and research libraries around the world. Electronic journals and newsletters are made available on a regular basis;
m. Librarians can make the selection of books required in their institutions and order them without going from one bookshop or publisher to another;
n. The Computer Read Only Memory (CD ROM) is another versatile facility made available in academic libraries through the presence of information technology.
o. Libraries are now situated in cyberspace;
p. Library services are no longer constrained to time of opening and closing hours;
q. Library users can access services in libraries beyond their own, country and continent and the virtuality of information resources means that millions of users can access one resource at the same time.

Consequently, the benefits of ICT and globalization are irreversible global trends that cannot be overemphasized for academic purposes. Thus, efforts must be made to embrace them by Nigerian libraries. Embracing them will automatically make library users and academics in Nigeria, members of the global information community. Apart from tapping from the global information supply, libraries in Nigeria can also contribute local content to the pool of global information through the digitization of local content from sources such as theses and dissertations, rare books, newspapers and special manuscripts of indigenous knowledge.

Emergence Social Media in the Library:

Another change in 21st century libraries is social media or web 2.0. This is the use of digital media, including Internet and mobile, for collaborating to create user generated content and form self-organizing communities. Habib (2006) referred to Web 2.0 or lib2.0 as new service models; methods and technologies that can now be adapted to improve library services. According to Maness (2006), Library 2.0 is the application of interactive, collaborative and multi-media web-based technologies to web-based library services and collections. This is characterized by the use of Wikis, RSS, blogs, social network, Flicker, Instant Messaging (IM), podcasting, etc to disseminate library and information services. Fuchs, Hofkirchner; Schafranek, Raffl; Sandoval and Bichler, (2010) provided a theoretical understanding of Social Software by outlining a model of

the Web as a techno-social system that enhances human cognition towards communication and co-operation. According to this understanding, three qualities of the Web was identified, namely Web 1.0 as a Web of cognition, Web 2.0 as a Web of human communication, and Web 3.0 as a Web of co-operation. The terms Web 1.0, Web 2.0, Web 3.0 were not used in technical sense rather describing and characterizing the social dynamics and information processes that are part of the Internet.

Social media network is an internet service used by librarians to provide effective library services. Olasina (2011) described social media as a shift in how people discover, read and share news, information and content. Social media (SM) are interactive, collaborative and dynamic technological space. Matthew (2011) added that libraries can also use Social web to find people who `like` the library and allow them to express it. Ezeani and Igwesi (2012) observed with the exponential growth in the use of social media such as Facebook, MySpace, Twitter, YouTube etc. It is inevitable that librarians must learn the use of these tools to keep abreast with the ever growing sophisticated library users. Social media is designed to collaborate, exchange ideas and achieve commonly-shared goals (Jain,2013). Librarians are using SM to collaborate with library users. For example, as a pedagogical tool, blogs can be used as a means of communication among librarians and library communities such as faculty members and students to provide discussion forums on subject-related topics and current awareness. A wiki can be used for social interaction among librarians and library users. Academic librarians are using RSS feeds for Syndicating blog content (on Web sites – including Facebook, into online courseware, etc.), for creating OPML packages for library patrons, for subject guides, for RSS feeds from the ILS, for new books feeds, search feeds, feeds of checked-out books and holds (Oshea, 2008).

CHANGES IN SCHOLARLY COMMUNICATION

The new scholarly communication comprises of digital scholarship, institutional repositories and open access. New scholarly communication and publishing models are developing at an ever-faster pace, requiring libraries to be actively involved or be left behind in sharing and disseminating intellectual outputs (Murphy, 2012).

Open Access: According to Ukah (2013), it is a free online access to scholarly information materials. Open access facilitates discovery, broadens access; increase use of citation and impact scholarly work such as articles and results of research. The primary advantage of open access journals is that the entire content is available to users everywhere regardless of affiliation with a subscribing library. The main motivation for most authors to publish in an open access journals is increased visibility and ultimately a citation advantage (Suber, 2006). Researcher citations of articles in a hybrid open access journals has shown that open access journals articles are cited more frequently or than non-open access articles (Antelman, 2004)

Proprietary Software and Free Open Source Software (FOSS): There is a paradigm shift from proprietary software to free open source software (FOSS). Open Source Software are computer software that are produced by Programmers and distributed under a licensing arrangement which allows the source code to be openly shared, viewed and modified by others to suit their purpose of usage. Proprietary software is software that is owned by an individual or a company (usually the one that developed it). There are almost always major restrictions on its use, and its *source code* is almost always kept secret. It was also discovered that there is a rapid increases in the number of companies migrating to Free Open Source Software (FOSS) for mission critical activities (Asian Technology Information Program (ATIP) 2010). Likewise, libraries now subscribe to FOSS due to dwindling budgetary allocations as proprietary software are capital intensive. Libraries which are yet to adopt the use of Software in their library management should consider the use of OSS against proprietary software as quite a number of studies have shown that they are reliable, stable, auditable, cost effective and flexible (Ukachi, 2012).

The above functions and relevance of electronic libraries are seriously eroding the usefulness of traditional libraries. One can be tempted to agree that technology has virtually made traditional libraries as well as the librarians working in them to be irrelevant; however, both librarians and traditional libraries must remain in the scene. They will be more relevant if only they understand what goes on around them. According to Ogunsola (2011), if librarians re-educate themselves as information managers, able to sift information, filter bad information abound in many websites, facilitate human-machine interaction, so as to hold their share in the race. Although, libraries use new technologies and services and reconfigure spaces for current and future users, some things remain constant. As noted by Okerson (2003:280-281), eight "eternal verities" exist with regard to library collections and services:

1. Content is selectable
2. Content is collectible
3. Content is valuable and libraries retain it for the long-term
4. Collections grow and provisions must be made for storing content
5. Collecting can be the equivalent of long-term preservation
6. Libraries and their collections are meant to endure
7. Libraries exist to meet the information needs of users
8. Information is global, and libraries preserve and provide access to information world-wide.

Skills and Challenges of the 21st Century librarian

Librarianship has undergone a radical change in recent years. Libraries have changed and the role of librarians has greatly been affected. Consequently, there is a paradigm shift in librarianship from analogue to digital services. Librarians now have assumed the role of educators to teach their users how to find information both in the

library and from electronic networks. Similarly, public librarians have expanded their roles by providing local community information through publicly accessing computing systems. Some librarians are experts on computer hardware and software. Others are concerned with how computer technologies can preserve human cultural records of the past or how to ensure that library collections on crumbling paper or in old computer files can still be used in the future. Besides, the roles of librarians have moved outside library walls. They now work in information industry as library entrepreneurs, designers of new information systems, researchers, and information analysts. Librarians are also found in such fields as marketing and public relations and law firms, where staff needs rapid access to information.

External environment has impacted on professional practice. As pointed out by Aina (2004), library and information science borrows from a number of disciplines, such as sociology, psychology, computer science, business, management, mathematics, statistics, marketing, etc. Thus, anything that affects any of these disciplines has a direct influence on library and information science. Library and information science is one of the fastest growing professions in the world. In countries such as the UK and US, information is one of the largest industries. Consequently, researches are ongoing to improve library and information science and professional librarians are expected to keep pace with the new findings and products in the profession.

Librarians and information professionals of the future must be equipped with a wide range of personal and transferable skills in order to manage changing environment in which they work. This skill of information technology is to make librarians proactive. Management and interpersonal skills will make librarian more effective managers of networked resources and services. Among other things, librarians would be expected to:

1. possess expert knowledge of the content of information resources, as well as the ability to critically evaluate and filter them;
2. provide excellent instruction and support for library and information service users;
3. use appropriate information technology to acquire, organize and disseminate information.
4. critically analyze the professional domain and where it is heading to.

Hashim and Wan Mokhtar (2005) focus on the challenges of operating in the digital platforms and the emerging roles of librarians from the digital perspective. The crux of the argument is that:

> "The new era librarian will become guardian of digital information and will be the vehicle to preserve democratic access to information. The role of digital librarian will offer consultancy to users in providing digital reference services, electronic information services, navigating, search and retrieval of digital

information through web documents that span the universal digital library or the global digital library. The new era librarian will be an embodiment of a digital information professional or digital knowledge worker, who will ensure that digital libraries are used effectively and with ease."

Omekwu (2002) discusses the challenges of information system in modern libraries and observed that hi-tech information systems have influenced all spheres of human endeavour. They are used in high-speed supersonic jets, warplanes, industrial machine, weather forecasting, medical research, food processing, warehouse control, space travel etc.

Another challenge is the integration of ICT into all spheres of education, such as online courses, tele-education, telemedicine, distance education, virtual learning, virtual laboratory etc. Hence, the digital libraries and visual universities are also trends in the use of ICT for higher education faced with low unemployment rate among IT professional.

In the area of application of scientific principles and theories of management, library and information processing is a vital activity. Thus, librarians and managers should be conversant with basic managerial functions of planning, organizing, staffing, directing and control. Proper application of managerial principles will not only enhance administrative activities but also increase productivity and output.

The introduction of better public relations and communication strategies with library users both potential, actual and funders is very crucial for the development and survival of library and information systems. According to Ochogwu (2014), we need the support of these groups if we are to secure a political base for the library profession. This is required to enable librarians to socio-culturally, politically and economically integrate themselves into the system and render effective and efficient services.

The key challenges facing the twenty-first century libraries were identified by Jain (2013) as follows:

1. Transition from print to digital Content
2. Continuing education and training of library staff
3. Intellectual capital management
4. Technological–trauma and infrastructure
5. Change management to respond to increasingly changing library community needs
6. Adopting Just-in-case to just-in-time approach
7. Continuous budget decline
8. Negativity towards libraries because of other competitors
9. Book keeping expert to research expert

10. Multi-format data curation:
11. New scholarly communication
12. Growing demands for service and increased expectations
13. Staff resistance to change
14. Gaining and sustaining competitive edge over the competitors

CONCLUSION

The developments in library and information technologies have continued to evolve to meet the world challenges. These trends have broken the limitations and cost which library users and management face daily. These trends are continuous and never-ending. It has also brought about a paradigm shift in librarianship from what used to be to what is, in other to meet users' demands and keep librarians relevant. Web-based and digital services are the backbone of current and future. In order to provide the right information at the right time in the right format to information seekers, librarians must embrace the new information environment to provide customized services to their users and co-op with the current trends in the profession. Therefore, libraries should make consistent efforts to fit in twenty-first.

REFERENCES

Aina, L.O. (2004). Coping With the Challenges of Library and Information Services Delivery: The Need for Institutionalized Professional Development. Paper Delivered At The Nigerian Library Association 42nd National Conference and AGM at Akure, Nigeria June 20-25, 2004: 5.

Alasa, M. and Kelechukwu, I. (1998). Internet and Academic Library Services Development in Nigeria. *Nigerian Libraries* 33(1): 17 30

Akintunde S.A. (2004). Libraries as Tools for ICT Development. Paper Delivered at The Nigerian Library Association 42nd National Conference and AGM at Akure, Nigeria June 20-25, 2004: 10.

Antelman, K. (2004). Do Open Access Articles Have a Greater Research Impact? Available: http://www.socoar.com/man/newupload/20072694837527.pdf

Chakrabarti, B. (2001). Over The Edge of Information In The Information Age: Informational Behaviour of the Totos: A Small Marginal Trial Community In Sub-Himalayan North Bengal, India. One Individual Perspective *Intl. Information & Library Rev.* 33: I

Asian Technology Information Program (2010). Open Source Software (Oss) In Asia-Pacific: Available at http://atip.org/atip-publications/atip-reports/2010/7965-atip10-021-open-source-software-oss-in-asia-pacific.html

Creth, S. D. (2006). The Electronic Library: Slouching Toward the Future or Creating a New Information Environment. Follett Lecture Series. 28-31, 38-40.

Dike, V. W. (2007). "Constructing Knowledge Societies for Sustainable Development". A Keynote Address at The First Annual Conference of the Association for Promoting Life-Long Learning in Nigeria (APPL), Held at ESUT, Enugu On August 16. P. 3

Ezeani, C.N. And Igwesi, U (2012). Using Social Media for Dynamic Library Services Delivery: The Nigerian Experience. *Library Philosophy and Practice* Available at http://unllib.unl.edu/lpp/

Fuchs, C; Hofkirchner, W.; Schafranek, M.; Raffl, C.; Sandoval, M and Bichler, R. (2010).Theoretical Foundations of the Web: Cognition, Communication, and Co-Operation. Towards an Understanding of Web 1.0, 2.0, 3.0 *Future Internet.* 2, 41-59; Available at www.mdpi.com/journal/futureinternet.

Guillen, M.F (2000). Globalization and Social Problems Available caliber.ucpress.net/doi/pdf/10.1525/sp.2001.4814.

Habib, M.C. (2006). Towards Academic Lib 2.0: Development and Application of a Library 2.0 Methodology. A Master Paper Submitted to the Faculty of the School of Information Science, University of North Carolina at Chapel Hill in Partial Fulfillment for the Degree of Master of Science in Library Science

Hendrix, J.C. (2010) *Introduction to* Checking Out the Future: Perspectives from the Library Community on Information Technology and 21st- Century Libraries. Policy Brief No. 2. Chicago: Ala Office for Information Technology Policy. P. 3.

Jain, P. (2013). A Paradigm Shift In The 21st Century Academic Libraries and Librarians: Prospectus and Opportunities. *European Journal of Academic Research*, *1* (3), 133-147.

Kochen, Manfred. (1976). *Information for the Community/* Edited by Manfred Kochen and Joseph C. Donohue, P. 8

Krubu, D.E and Osawaru, K.E (2011). The Impact of Information and Communication Technology (ICT) in Nigerian University Libraries *Library Philosophy and Practice Available at* http://unllib.unl.edu/lpp/

Lalili, H., Haliza, W.N. and Mokhtar, W. (2005). *Trend and Issues in Preparing New Era Librarians and Information Professionals.* In: International Conference on Libraries (ICOL 2005), 13-16 March 2005, Universiti Sains Malaysia, Penang. (Unpublished).

Manness, J.M. (2006). Lib 2.0 Theory: Web 2.0 and Its Implications for Libraries Webology, 3(2): 10 – 23.

Matthews, S. (2011) *Five Challenges Every Librarian Must Face.* Available From World Wide Web:Http://21stcenturylibrary.Com/2011/10/12/Five-Challenges-Every-Librarian-Must-Face/

Matthew, B. (2011). Why Does My Library Use Social Media? Available At http//www.comscore.com.

Mulla, K.R. (2006). E-Resources and Services in Engineering College Libraries: A Case Study. *Electronic Journal of Academic and Special Librarianship* 7(1): 24 – 56.

Ochogwu, M.G. (2009). Educating Library and Information Science Professionals To Bring Library Services To All. Paper Presented At the Nalise Conference Held at the University of Nigeria, Nsukka, June 2-5, Pp. 5-7

Ochogwu, M.G. (2007). The Internalities and Externalities of Library and Information Delivery Services in Nigeria by the Year 2015. *Nigerian Libraries 40:15-26*

Ogunsola, L.A. (2004). Nigerian University Libraries and the Challenges of Globalization: The Way Forward. *Electronic Journal of Academic and Special Librarianship* 5(2-3): 34-45.

Ogunsola, L.A. (2005). Nigerian University Libraries and the Challenges of Globalization: The Way Forward. *J. Soc. Sc*. 10 (3): 199-205

Okerson, A. (2003). Asteroids, Moore's Law, and the Star Alliance. *Journal of Academic Librarianship* 29(5): 280-285.

Oladele, B. A. (2008). "Globalization and African Libraries: The Challenge of Self-Discovery in a Digital World". A Paper Presented at the World Library and Information Congress: 74th IFLA General Conference and Council Quebec, Canada, 15-14 August, 19p.

Olasina, G. (2011).The Use of Web 2.0 Tools and Social Networking Sites by Librarian, *Information Professionals and Other Professionals in Workplaces in Nigeria* (PNLA) Quarterly 11-43.

Olaosun, M.A. (2007). The Librarian is Dead, Long Live the Librarian. A Valedictory Lecture by Michael Adebayo Olaosun at OAU Ile-Ife, Nigeria, Wednesday, 11 April, 2007: 1-14.

Omekwu, O.C. (2002). The Challenges of Information Systems in Modern Libraries. In Madu E.C. And Dirsu M. Information Science And Technology for Library Schools in Africa, Ibadan: Evi- Coleman Publication.

O'shea, D. (2008). *Blogging, Rss & Academic Libraries.* [Accessed 6th April 2013] Available From World Wide Web: http://www.slideshare.net/denoshea/blogging-rss-academic-libraries

Owabor C. E. (2012). Current and Global Trends in Library and Information Services. Available: http://www.slideshare.net/etranex2/current-and-global-trends-in-library-and-information-services

Suber, P. (2006). An Introduction to Open Access. Available: http//www.blurtit.com/Q72848.html.

Ukachi, N.B. (2012). Awareness, Availability and Utilization of Open Source Software in Nigerian Libraries: The Way Forward. *International Research Journal of Library, information and Archival Studies.* 1(1):001-009. Available Online http://www.interesjournals.org/irjlia

Ukah, E.O. (2013). Understanding Open Access Model of Scholarly Communication and Implication in Nigeria Tertiary Institution. In Issa, A.O, Igwe K.N and Uzuegbu C.P (Eds). *Provision of Library and Information Services to Users in the Era of Globalisation.* Lagos: Waltodanny Visual Concept. 478-490

Wheeler, D.A. (2007). Why Open Source Software / Free Software (oss/fs, floss, or Foss)? Look At the Numbers! Available At ttp://www.dwheeler.com/contactme.html.

ENTREPRENEURSHIP EDUCATION FOR LIBRARY AND INFORMATION SCIENCE PROFESSIONALS: PANACEA FOR SELF-RELIANCE AND JOB CREATION IN NIGERIA

Chorun, Matthew Terfa (*CLN*), Beetseh,Kwaghga and Rebecca Ameh
Francis Sulemanu Idachaba library, University of Agriculture Makurdi.

ABSTRACT

The present situation in Nigeria poses serious threats and challenges to both government and well-meaning citizens. The problems facing the country centre on high rate of poverty; youth and graduate unemployment; over-dependence on foreign goods and technology; low economic growth and development; among others. The objective of this study is to emphasize the need and importance of entrepreneurship education for library and information science profession which will serve as Panacea for Self-reliance and Job Creation in Nigeria. This study, therefore, argues that entrepreneurship education will equip the students with the skills to be self-reliant. It also adopts psychological theories of the Refugee and Schumpeter effects as its frame work of analysis. The study recommends among others that educational programmes at all levels of education should be made relevant to provide the youths the needed entrepreneurial skills to function effectively in Society.

KEYWORDS: Entrepreneurship, Economic Growth, Self-reliance, Job Creation, Library and information science professionals.

INTRODUCTION

Entrepreneurship education seeks to prepare people particularly the youths: to be responsible, enterprising individual who became entrepreneurs or entrepreneurial thinkers by immersing them in real life learning experience whereby they can take risks manage result and learn from the outcome (Suleiman2010). Entrepreneurship education is teaching people that they can either take or create a job. This will enable them to be self-employed and not relying on other job security. Often, it creates new job for others at the same time.

Entrepreneurship education training could be given to interested individuals both adults and students through workshops, classes, and conferences thereby learning basic ideas of starting their own businesses and keeping it running. Entrepreneurial education is a specialized training given to students of vocational and technical education to acquire the skills, ideas and managerial abilities and capacities for self-employment rather than being employed for pay. Osuala (2010) defines entrepreneurship education as a programme or part of a programme that prepares individuals to undertake the formation and or operation of small business enterprises

which also includes franchise operations for the purpose of performing all business functions relating to a product or service with emphasis on social responsibilities, legal requirement and risks for the sake of profit involved in the conduct of private business enterprises. From the above definition, it is evident that entrepreneurship education could turn around the economic fortune of librarians by providing jobs and reducing the unemployment rate amongst librarians hence reducing the poverty level of Nigerians. It could also help an individual to identify investment opportunities and help them to harness untapped natural resources in Nigeria in order to produce the information goods and services needed in the country. These will no doubt reduce or eliminate poverty and help to increase per capita income in the country which is one of the cardinal points of the Millennium Development Goals (MDGs).

The theoretical foundation of this paper is based on the psychological theories of the Refugee and Schumpeter effects." These theories posit that the ability to make good judgment about the future leads an individual to become a successful entrepreneur. The need for achievement psychological approach of McClelland was particularly dominant in driving people for entrepreneurship. According to McClelland (1987), Arch motives seem to influence the individual to select entrepreneurial career. He opines that "the presumed mechanism by which achievement level translate itself into economic growth is the entrepreneurial class. If the need for achievement is high, there will be more people who behave like entrepreneurs" (Islam, 1989; Raimi, 2010).

Entrepreneurship Education Defined

Entrepreneurship education seeks to provide students (especially those in tertiary schools) with the knowledge, skills and motivation to encourage entrepreneurial studies in a variety of setting (European Union commission, 2010). The commission emphasizes that different aspects of entrepreneurship education are offered at all levels of schooling from primary or secondary schools through graduate university programmes. The growth of entrepreneurship as a recognized profession in the United Sates was visible in the 1990s. In that professional approach lays the secret benefit of entrepreneurship education, which is, to help decrease the chances of failure by stressing a consistent and proven set of practices. In modern entrepreneurship, the idea of professionalizing the process of entrepreneurship is another great commonality. Emeraton (2008) described entrepreneurship education as that which deals with attitudes and skills that are necessary for the individual to respond to his/her environment in the process of conserving, starting and managing a business enterprise. This implies that entrepreneurship education prepares the individual to be properly equipped to acquire saleable skills which could be used to manage his own business or that of other persons, (Oduwaiye, 2005). Entrepreneurship education is therefore that education which assists students to develop positive attitudes, innovation and skills for self-reliance rather than depending in the government for employment. This will in turn, produce graduates with self-confidence and capacitie s for

independent through to discover new information leading to economic development (Emeraton, 2008, Beetseh and Ahima, 2012).

Entrepreneurship education is the type of education designed to change the orientation and attitude of the recipients and the process will equip them with the skills and knowledge to enable them start and manage a business (Agu, 2006). Agu agreed with Emeraton (2008), opined that entrepreneurship education aims at developing the requisite entrepreneurship skills, attitudes, competencies, and disposition that will predispose the individual to be a driving force in managing a business. Akpomi (2009) also holds the view that entrepreneurship education focuses on developing understanding and capacity for pursuit of entrepreneurial behaviours, skills and attitudes in widely different contexts. He continued that this type of education is open to all and not exclusively doming of the acclaimed business gurus. He concluded that these behaviours can be practiced, developed and learned therefore it is important to expose all students to entrepreneurship education. These authors hold the same view.

Aig-Imoukhede (1988) has identified ten of the attitudes and skills that would-be entrepreneurs should develop. These skills and attitudes include positive attitudes:

i. High aptitude for rational critical thinking and timely decision making
ii. Clear vision, generation of progressive ideals, drive and passion of success.
iii. Ability to convert vision in concrete reality
iv. Creativity, innovativeness, courageousness and self confidence
v. Ability to assume reasonable risk
vi. Mercurial ingenuity, resourcefulness, patience and / or opportunities insight
vii. Confidence and good judgment which involves taking decisions and making choices.
viii. Prudence which means due care in the management of resources especially financial
ix. Willingness to lean and should develop a disposition pick-up, store knowledge and use it
x. Hard work which is an indispensable ingredient of successful entrepreneur.

Entrepreneurship and Job Creation in Nigeria:

The Nigerian government seems to have woken up to the reality that the country needs to break away from the vicious cycle of poverty, infrastructure neglect, corruption and other problems, the reason being that, after 52 years of achieving colonial independence, it cannot be argued that Nigeria has attained her optimum level of development. According to Kolawole and Omolayo (2006), many individuals have difficulties in translating their business ideas to realities and creating new business ventures because of lack of necessary information and skills to achieve their targets. To

him, the university curriculum was in the past oriented towards making graduates suitable only for white-collar jobs. This underscores why millions of our youths and a lot of University graduates roam about the streets of the major cities and towns in search of white-collar jobs. It is necessary and possible to position Nigerian universities to stimulate economic growth through a deliberate agenda of production of entrepreneurial graduates.

In many countries, including US, high schools offer entrepreneurship education forLife-long trade and many of them offer courses that enable students to meet their general academic requirement while learning a trade. However, because of these recent challenges in world economy, many schools have shifted emphasis to training in computers, information technology, and related fields. Public schools work closely with willing industries to establish curriculum and programmes to meet their skill demand. Where is Nigeria in this history of entrepreneurship education? While career education has continued to thrive in many societies, it is unfortunately an area that is neglected in Nigeria (Emeruwa, 2004). The neglect of entrepreneurship education is robbing the nation of the contribution their graduates would make to the development of the economy. It is therefore socially injurious to neglect this important area or look down on its graduates. The society needs competent auto mechanics, and truck drivers, plumbers, electricians, electronics and computers, database, web and network technicians, book-keepers and clerks, medical technicians, and nursing assistants, (and other personnel in this category) to function well. These are some of the skills in short supply in Nigerian. The half-baked roadside mechanics in the society of cause more damage to vehicles when they are contracted to service them and because of poor training some of the commercial drivers on the road and nurse assistants in the hospitals have sent many people to their early death. Given these facts, it is a disservice to the society to neglect entrepreneurship education. In Nigeria, graduates of vocational and technical institutions are highly skilled entrepreneurs, but the society does not seem to encourage the youths to have value for technical education. Unfortunately, those who influence education policy in the society (legislators, educators, the media, etc) feel that graduates of technical and vocational institutions are not equal to university graduates; hence there is need for effective strategies for entrepreneurship education in Nigeria.

Entrepreneurship outlets for librarians and other information science professionals.

These are the outlets through which librarians can create jobs for themselves and even employ others. These outlets constitute opportunities of entrepreneurship that can be very profitable to information professionals. Below is a list of some of the emerging and existent entrepreneurial opportunities for the information profession.

- Library equipment business.
- .Publishing and printing business.
- Information brokerage business.

- Courier service business.
- Library consultancy business.
- Rural information provision business.
- Stationary business.
- Reprographic and allied business.
- Art gallery business.
- Vendor business.
- Freelance information business.
- ICT business. Etc.

Challenges of Entrepreneurship in Nigeria

Nigeria as a growing economy is not exempted from the challenges peculiar with growing economy and nations. Entrepreneurs or small-scale businesses are normally faced with daunting and surmountable challenges which at times, are too much for many of them to succeed. Entrepreneurial ventures are saddled with lots of challenges such as enumerated and explained by Ayodele, (2006) as found below:

Insecurity: Nigeria has a porous security system where lives and properties are not safe and thereby leave the citizens to live in perpetual fear. In recent times this insecurity has taken another shape ranging from kidnapping to ethnic and religious militia. Theft, stealing and broad day light robberies are on the increase (Beetseh and Akpoo, 2014).

Lack of Stable Power Supply: It is sad to note in this 21st century, for a country as blessed as Nigeria to still grope in darkness which has become a way of life. The epileptic nature of power makes business owners resort to alternative sources of power thereby contributing to the cost of business which is in turn passed over to consumers in form of high prices.

Incessant Change in Government Policies: There are political problems in all the geo-political zones of the country as a result of changes in government policies. No stability in the government policies, constant changes of government policies affect entrepreneurs and entrepreneurial spirits.

Technological Problems: Any nations that is not technologically driven lives at the mercy of other nations. Developed nations dictate what and how to produce depending on the needs of the nations and its targeted consumers as well as developmental policies.

Infrastructural Decay: Bad roads and other amenities that enhance business activities have all collapsed. This situation hikes the cost of transportation which in turn, increases the cost of goods at location thereby creating inflation.

High Tariff/Inflation: Another challenge of entrepreneurs in Nigeria is high tariff. Most sates of the country in order to boast locally generated revenue impose high tariff on investors. A good example is the advent of MTN Nigeria. The then Nigerian government heavily tasked the communication services providers (MTN) as operational permit and they in turn charged the consumers accordingly.
Economic Problems: Most business owners hardly can access loan facilities from banks and therefore left to raise money either by personal savings or sale of their assets. Moreover, corrupt practices of the banks by hiking the interest rates against the directives of the central bank affect entrepreneurship in Nigeria. Entrepreneurship:

Seeming Benefits of Librarians Entrepreneurial Outings.

Curbing poverty in Nigeria via Entrepreneurship constitutes a vital engine for economic, political, social, practical and all round development of any country. Entrepreneurship has been identified by many both globally and nationally as a tool for a sustainable, virile and stable economy as well as solution to crisis and conflicts created by poverty. This is why successive governments in Nigeria attempted to strengthen relevant agencies in order to achieve this position. The government of today perhaps, looks more serious than ever in sustaining a few of the agencies such as NAPEP, NDE, and NEEDS.

Buttressing this fact, Akpomi (2009) opined that no country can as a matter of truth, move forward technologically, industrially and economically without developing strong private partner initiated programmes in the creation wealth, poverty reduction and employment generation, with required skills. These skills include managerial comparative advantage, communication, technical, human and special skills to cope with the challenges of the future. Since entrepreneurship is vital to the sustainable advancement of any nation, entrepreneurship thus holds the key to curb with ethno religious conflicts in Nigeria. It can achieve this through the following strategies.

Transformation Centre

Entrepreneurial skills and education can be used to transform the youths by training in entrepreneur skills centres. Entrepreneurship education and training centres serves as learning and training centres for the translation of dreams and ideas into successful ventures.

Creates Jobs

Entrepreneurship skills and education create more jobs per unit of invested capital and per unit of energy consumed. As people establish more business ventures, more people are employed. This places the economy in the hands of the people and reliefs the government as the only employer of labour.

Mobilizes Resources

Entrepreneurs mobilizes resources that ordinarily would have remained idle in the hands of people and employ them productively and by doing so, capital formulation is encouraged and more jobs created which in turn, wipes out idleness and the tendency to commit suicide or being used by others.

Technological Advancement

Entrepreneurship leads to technological advancement. Necessity is the mother of invention. Investing in the local technology and copying the advanced technologies of the world will lead to perfection and boasting the economy. Bu so doing, entrepreneurship strengthens locally produced products for perfect competition.

Reduces Poverty and Idleness

Most of the conflicts in the country are as a result of idleness and poverty. Entrepreneurship holds the sway to engage both the youths and the adults in meaningful enterprise thereby, reducing the risk of conflicts. Entrepreneurship alleviates and eradicates poverty.

Creates Employment

The Nigeria's teeming population plagued with unemployment can drastically be reduced through entrepreneurial explosion. Research has shown that 70% of the entire work force is employed by entrepreneurial ventures.

Provides Economic Linkage

Entrepreneurship links up the various sectors of the economy and constitutes that market for agricultural extractive and industrial output as well as provide source of material and labour input for big industries.

Builds Skills

Entrepreneurship builds skills such as managerial, human, technical, conceptual skills in the individuals by teaching and allowing them to start businesses with little or no money for themselves.

CONCLUSION

This study has made an exposition on the vitality of entrepreneurship education for library and information science professionals as a potent tool for equipping beneficiaries to emerge as job creators in the crucial Nigeria's business and economic environment. The study however, is of the strong opinion that for the programme to attain these very critical objectives the challenges affecting the scheme must be optimally acknowledged with a view of addressing them.

REFERENCES

Agu, C. N. (2006). Pedagogy of entrepreneurship in a contemporary society. *Enterprise International Research Journal of Development.* 8 (1): 18 – 32.

Aig-Imoukhuede, I. I. (1988). A word about entrepreneurship. Your business: A guide to self-employment. Academy Press Ltd, Lagos.

Akpomi, M. E. (2009). Achieving millennium development goals (MDGs) through teaching entrepreneurship education in Nigeria higher education institution (HEIs). *European Journal of Society of Science*, 8 (1): 154 -4 157.

Ayodele, J. B.(2006). *Obstacles to entrepreneurship development in Nigeria*. In F. Omotosho, T.K.O Awko, O.I. Wala-Awe and G. Adaramola (Eds). Introduction to Entrepreneurship Development in Nigeria. Aso-Ekiti: UNAD Press.

Beetseh,K and Ahima S.E (2012*)*.Entrepreneurship Education: A panacea for Self-reliance and Job Creation in Nigeria. *Journal of Research in Education.Vo. 3 No. 3.Dece. 2012. p69-71.*

Beetseh,K and Akpoo,T. (2014).*Good Governance and Credible Elections: A panacea for Conflict Resolution in Nigeria,* Journal of Good Governance and Sustainable Development in Africa.Vol.2 No2 May 2014.P 147.

Emeraton, U. G. (2008). Re-thinking higher education management for poverty reduction among the youth in Africa. Paper presented at the third regional conference. Higher education for youth empowerment, opportunities, capabilities and second change. Organized by higher education research and policy network (NERPNET) at IITA Ibadan.

Emeruwa, C. O (2004, December 12). *Capacity building entrepreneurial development. Nigerian Vanguard.*

EUC, (2010). Entrepreneurship: The world economic driver. London: European Union Commission.

Islam, M. Mainul(1989).*Theories on Entrepreneurship*. In Rahman A.H.M.Habibur (ed). In Bangladesh: University Grand Commission of (English version).

Kolawole, O. and Omolayo, B.(2006*). Entrepreneurship in theory and practice*. In F. Omotosho, T.K.O Awko, O.I. Wala-Awe & G. Adaramola (Eds). Introduction to Entrepreneurship Development in Nigeria. Aso-Ekiti: UNAD Press.

McClelland, D. C.(1987). Characteristics of Successful Entrepreneur. *The Journal of Creative Behaviour.* 21 (3): 219 -223.

Osuala, E. C. (2010). *Principles and methods of business and computer education*. Enugu: Cheston Agency Ltd Pub.

Raimi, L.(2010). Entrepreneurship education: An imperative for sustainable Development in Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies.* 2: 1.

Suleiman, H. (2010). *Youth entrepreneurship education for national development*. *International Journal of Education Studies*. 1 (1): 47-50.

LIBRARY AND EDUCATION REFORMS IN THE 21ST CENTURY

Omolade Susan Ademilua and Alice Mofesola Akomolafe
Federal College of Agriculture Library, Akure Ondo State, Nigeria

ABSTRACT

This study shows the relevance of library and education reforms in the 21st century, its potential creative impact, the structure of education and the training of library professionals and challenges for the involvement of libraries in creating literate environments for lifelong learning. It also shows that investing in books and libraries is at the heart of educational reform, literacy enhancement and sustaining literacy skills for life, leading subsequently to development and poverty reduction. By providing equitable access to information for all, libraries encourage critical citizenship in a global democratic society. Essentially, the reluctance to learn the operations or manipulations of the new information technologies which has restructured the work of the library to creating access to information and knowledge irrespective of its location in the world through the virtual nature to make librarians relevant in the world of information and knowledge acquisition is of contention. The challenge is now for library professional to synchronise their professional responsibilities in the claim of professionalism in communication theory and knowledge management practices. Library services are our core need in the knowledge acquisition and development which has been acknowledged and Libraries must continue to be supported by specific legislation with adequate financing by national and local governments.

KEYWORDS: *citizenship, Library services, professionalism, communication*

INTRODUCTION

A library is an agency, which engages in the collection, processing, preservation and dissemination of recorded information in the various formats most convenient to its target users. It can also be defined as a building established for the purpose of storing books and related materials for reading and research. The word library which is from the Latin word "liber" signifies a place set aside for reading or reference and by extension, a collection of books. Thus a Library can also be described as a collection of books and other forms of records housed, organized and interpreted to meet broad and varying needs of the people such as information, knowledge, recreation and esthetic-values (Oriowo, 2002).

Education improves the development of any society and the youths who occupy significant positions in that country should be properly educated in order to improve the society (Adegbesan 2010). Therefore, schools at various levels are expected to educate

future leaders and develop the high level technical capacities needed for economic growth and development. The utmost importance attached to education in Nigeria was clearly underscored in the National Policy on Education. The Federal Republic of Nigeria, in this policy, adopted education as an instrument "par excellence" for effecting national development. But despite the government's commitment to education, the quality of education in our schools has been declining steadily, thereby giving successive government's serious concern.

People all over the world have accepted education as an essential .instrument for human development, and various means (such as schools and seminars) have been put in place to extend the benefits of education to all. Another means that has attracted little or no attention is the public with the development of civilization there is a need to transmit concepts more widely than is possible through the medium of the human voice and memory. Information on various aspects of literacy programmes in Nigeria abounds in journal publications and such is in form of research reports and bulletins. Libraries have the capabilities to identify and acquire library materials through purchase and exchanges. This type of information is needed by adult educators, community workers, researchers, politicians, educational planners, teachers, supervisors, evaluators, and civil servants who are involved in educational development programmes. These resources should not only be acquired and made available, they should be professionally organised so that library users spend less time trying to locate relevant information from them.

The multi-disciplinary and multi-dimensional nature of the library and information science profession in the 21st century has created opportunities and challenges for information professionals, particularly in developing countries, including Nigeria. The Librarians' Registration Council of Nigeria (LRCN) was established as a parastatal of the Federal Ministry of Education by Act 12 of 1995. The Council is charged with the responsibility of pursuing the attainment of professional excellence by determining who librarians are; the standard of knowledge and skills required for registration and practice; guidelines for accreditation and minimum standards for librarians, and maintenance of professional discipline among librarians in Nigeria. In 2010 in order to achieve these mandates, the Council developed a Strategic Plan: 2010-2013 to deliver the mandate of LRCN.

The strategic plan includes the review of the content of knowledge and skills of courses offered by library and information institutions; develop and run mandatory continuous professional development programme for librarians; design and develop library and information special skills acquisition programmes in response to changes in the national and international socio-economic, political, educational and technological scenes. In order to achieve the afore-mentioned development, the Council has been involved in various collaborative activities on accreditation development of standard

and continuous professional development (CPD) in library and information science profession in Nigeria. LRCN developed a model for the CPD of librarians in Nigeria and established an annual calendar for the training of information professionals. Accreditation of LIS programmes in related institutions in the country is also being done through collaborative efforts of LRCN and the National Universities Commission (NUC). Other collaborative activities involving both local and international organizations were carried out. Through these collaborative works, the capacity of librarians has been improved, LIS programmes in institutions are being accredited and the quality of information services in Nigeria libraries is improving gradually.

Conceptual Framework

The realization of the enormous power of information has made libraries and information resource centres inevitably present in all sectors of a nation's economy. Hence today, libraries are found in all the three levels of our educational system including public libraries, research institutions and private organizations such as banks, insurance companies, etc. Libraries have always served as tools for educational advancement at all levels of education. This is because libraries contain information which is a vital tool for the pursuit of academic excellence at all levels of education.

Libraries at all levels of education in Nigeria should be well stocked with books and other information materials as a stepping stone to the provision of computers and their associated technological facilities. Government will need to put in place suitable policies to enable Nigerian children to possess the skills to effectively use libraries and the present day information and communication facilities to apply information to their daily endeavours and hence be able to function effectively and compete favourably with their counter parts in other advanced countries of the world.

At present, the Nigerian educational system is not geared towards giving children a good understanding of the functioning and significance of libraries and other information media and their uses. Knowledge of the importance of libraries will enable children to learn to use, react to, select, reject, classify, check, interpret and search for information. Pupils and students should be taught how to navigate their way through libraries and the world of information and obtain knowledge from them. They should be taught not simply to reproduce knowledge from information sources but to construct knowledge in new and creative ways. They also need digital literacy. This is the ability of an individual to identify any information required to satisfy a need, know how to use computers and digital systems to source the information as well as know how to use the information collected to solve a felt need. These are the skills that would empower the products of our educational system to fit well into the modern industrial system to which highly skilled manpower has become indispensable.

The present world now depends to a large extent on information transfer by means of Information Communication Technologies (ICT). Therefore Nigerian pupils / students must be given the kind of training that would impart sufficient understanding of the technology that powers the information society. An information literacy programme should be incorporated into the curriculum of schools to provide students with a wider range of information handling skills which encompass accessing, processing and retrieving relevant, timely, accurate information for identified need. Such skills will empower students to be conscious of the power of information in all spheres of life and hence be able to apply the same in decision making and the construction of structures that make for enduring political, social and economic development of a nation.

The Nigerian Universities Commission, the Nigerian Library Association, the Librarians' Registration Council of Nigeria, and other stakeholders, should be properly sensitized and coordinated to carry out this exercise. Government should put policies in place to promote the provision of adequate library facilities and resources at all levels of the educational system in Nigeria this being the primary place where the pupils and students are given the opportunities to experience well stocked libraries that would develop the spirit of independent inquiry and the manipulation of information to obtain knowledge. Information consciousness coupled with skills in handling ICT facilities to obtain quick and relevant information for decision making are the hallmarks of the highly skilled manpower required for national development in this highly information dependent global world of the 21st century.

The types of libraries required in Nigeria in this 21st century which is an information driven age are libraries which will provide up-to-date information resources in both print and electronic media to support teaching and learning at all levels of education so that the right caliber of people with the right stock of knowledge that would transform the nation can be produced. The electronic libraries will also place at the disposal of pupils and students at all levels of education the relevant information in both remote and immediate data bases all over the world, that would enable them undertake in depth and effective teaching and learning.

The concept of ownership has been left behind with emphasis shifting from building strong local collections for long term use to accessing for current use of electronic materials made available by providers anywhere in the world. Furthermore, libraries in many parts of the world now maintain 'hybrid libraries' in order to make provision for both traditional (book) and digital collections to meet the information needs of library users in this era where Information and Communication Technology facilities have forced changes in access to information. The necessity for electronic libraries at all levels of education in Nigeria, paints a gloomy picture of the availability of information technology facilities in most libraries in Nigeria.

"The libraries have minimum automation mostly bibliographic database on personal computer application software with only very few notable exceptions,… there is a slow pace in automation, individual libraries are autonomous in many respect each tailoring its collections and services to a local clientele … Nigerian libraries are oriented towards collections than access. There is no single on-line shared cataloguing system in Nigeria not even between federal universities."

The present day Nigeria is a country which has been ranked among the lowest in the world in information and communication technology infrastructure. The emphasis worldwide is shifting from book collections to the provision of electronic information services. Therefore, libraries of all types in Nigeria should conform to this trend so that all library users can have access to information in their local libraries as well as collections located in other remote libraries and data bases to facilitate well-grounded education.

School Libraries

Education is an instrument par excellence for national development. It involves the development of the whole person intellectually, psychologically, socially, vocationally, religiously or morally. This is the reason why education is seen as an integral part of national development. Education is a process through which people are formally and informally trained to acquire knowledge and skills. The formal training comes from established schools from the basic level to the tertiary level.

School libraries have been essential in supporting the design, development, and deployment of curriculum in schools across the nation. With the current shift towards the Common Core Standards as the framework for curriculum development, school librarians can be called upon to provide the tools and resources necessary to make curriculum accessible to all students and teachers. Professional development opportunities for teachers, which school libraries and library staff can lead or participate in, serve as a means to explore curriculum and develop clear Plans for successful implementation.

Dynamism of Library Education for Professionalism

Dynamic and stimulating literate environments at home, in the classroom, in the workplace and in the community are essential to literacy acquisition, development and lifelong use. In many countries, people cannot imagine daily life without written information. They start the day reading the newspaper, they pass many posters and advertisements on the way to work or while running errands, they read and write e-mails and reports at work, they look through the daily mail and enjoy an interesting magazine or a good book in the evening, but in many countries of the developing world there is a serious lack of reading materials and hence a lack of reading culture. UNESCO states that "the goal of Education for All" also involves the development of

literate societies in the developing world, and cannot be attained solely by providing quality learning materials to schools. If people are to stay literate, the must have access to a wide variety of written materials and continue the habit of reading in their adult lives" If literacy is not placed within a functional framework of relevance and if newly acquired literacy skills are not constantly used and improved upon, there is a real danger that those who have acquired literacy skills will relapse into illiteracy and the huge investment in school education and adult literacy classes will be wasted. In India, "Most of the ongoing literacy programmes do not provide long-term support to neo-literates. Unless they are provided effective support through reading and learning materials, the may again fall in the category of illiterates. Here libraries play a vital role by providing reading and learning materials to them" (Singh, 2003: viii). Some of the requirements and challenges for creating a literate environment will be discussed in the following sub-chapters on oral societies, the local publishing industry, the home environment, and the school environment.

Role of Educational Reforms in Improving Library and its Profession

The most important factor in a child's acquisition of literacy is the reading practices of the parents. This has been shown in numerous studies, including the 2001 Progress in International Reading Literacy Study (PIRLS), which showed that, the amount of books and reading material in a family was the deciding factor influencing the reading scores of pupils. Similarly, a study of the German Foundation Stiftung Lesen on "Reading Behaviour in Germany in the new Century" revealed that the positive attitude of parents and the availability of reading materials at home are the most important factors in creating positive lifelong reading motivation in children. Children have different reading needs at different stages of their lives, but they need access to enjoyable reading materials from the very beginning. Parents have to be encouraged to read to their children while they are small, sing with them and play creative language games with them as part of their everyday life. Furthermore, parents have to be a good example by being active readers themselves.

Children who grow up in a literate home environment are at an advantage when entering school and are more likely to be successful throughout formal. The federal government of Nigeria knows the importance of libraries to educational development, hence as far back as 1981, it stressed the need for school libraries in the Nigerian educational system in the national policy of Education and reiterated this further in the revised National Policy of Education, (1998) as follows: "As libraries are one of the most important educational services, proprietors of schools shall provide functional libraries in all their educational institutions in accordance with the established standards. They shall also provide for training librarians and library assistants for this service."

Impact of Library Education in the 21st Century

All over the world libraries are dedicated to providing free and equitable access to information for all, be it in written, electronic or audiovisual form. They play a key role in creating literate environments and promoting literacy by offering relevant and attractive reading material for all ages and all literacy levels and by offering adult and family literacy classes. They embrace the social responsibility to offer services that bridge social, political and economic barriers, and traditionally make a special effort to extend their services to marginalized people. Libraries assist in finding, using and interpreting appropriate information that opens up opportunities for lifelong learning, literacy enhancement, informed citizenship, recreation, creative imagination, individual research, critical thinking, and ultimately, empowerment in an increasingly complex world.

Acquisition of basic reading materials that support literacy based on local knowledge are therefore attractive to neo-literates. Such material facilitates the transition from an oral culture to a literate and culturally enhanced environment. If students and neoliterates do not learn to associate their spoken home language with books and reading, they will most likely see the very act of reading as a foreign activity.

In Nigeria, libraries at the primary and secondary school levels have been found to be tools for all round development of the child; it is the intellectual centre of the school. Ibrahim (1999), sees the school library as a place in the primary and secondary schools where a full range of materials and accompanying services are accessible to both teachers and students. It represents the unified programme involving the use of audio-visual, printed resources and tools necessary to satisfy the educational needs and recreational interests of pupils, students and their teachers. This includes a variety of information resources such as textbooks, journals, reference books, multimedia, selected systematically, organized and disseminated to pupils, students and teachers with the sole aim of supporting and enriching the school curriculum.

In tertiary institutions of learning which include colleges of education, polytechnics, universities, research institutes, libraries have been the centre of intellectual activities, a convergence for both staff and students. The libraries in many tertiary institutions have either earned the institutions accreditation or failed them because libraries are regarded as tools for academic excellence. The libraries in the tertiary institutions assist users in the discharge of their functions by acquiring all the varied and relevant indepth information resources necessary for pursuing the teaching, learning research and public services functions of these institutions which enable them to produce high caliber graduates into the labour market to further national development. Thus the academic institutions play a major role in the manpower development of any nation providing the high as well as middle level manpower for the acceleration of social, economic and political advancement of a nation.

The general functions of public libraries are as follows: National and public libraries are regarded as the people's university being the local gateway to knowledge, providing opportunities for lifelong learning, independent decision making and cultural development of individual and social groups. The public library is a worldwide phenomenon. It attempts to meet a wide variety of reader's needs, providing varied information resources such as text books, journals, literary books, etc. The collections also contain information on social sciences, reference work; recreational information and extension services. In this way, the public library functions as a ready source of information on all activities in all walks of life for people to take advantage of in decision making for development activities and for educational advancement.

Special libraries are libraries established in governmental and private institutions to help manage information resources for the benefit of workers and the institution so that the goals of these special libraries can be attained. Special libraries can be grouped into the following categories: private educational institutions, inter-national organizations, foreign governments, in the governmental and professional associations, etc. Special libraries contribute to national development by providing in depth and relevant information resources for scientists, researchers, government officials, business executives, lawyers, etc, so that they can have the necessary information at the right time to effectively and efficiently carry out their research and the duties that would impact positively on the development of the nation. This category of people is in constant need of quick and relevant information to resolve issues and take decision.

In this regard, special libraries house information resources such as books, periodicals, newspapers, magazines, pamphlets, documents, manuscripts, pictures, maps, musical scores, non-print media such as transparencies, slides, records, audio-cassettes, microfiches, microfilms, filmstrips, motion pictures, video cassettes and in recent times, computers and the associated peripherals.

The foregoing review of the role of various types of libraries in education and national development present the invaluable contributions of libraries to national development.

State of Library and Education Reforms in the 21st Century

Books and libraries are often seen as redundant in societies that are mainly based on oral traditions and practices. In such societies, people stop reading once formal education is completed as "they derive more pleasure from the oral and performing arts – talking, singing, dancing, socializing – than from the rather private and individual reading of a book. Since the majorities are illiterate, they affect the minority who can read, with the result that the oral mode remains prevalent"

In order to express and record local culture, knowledge and research and to translate relevant material into indigenous languages, it is important to have a strong

local publishing industry. Unfortunately, in many countries the complex book chain, linking author to reader, via publishers, booksellers and librarians, is often small and struggling. The situation is particularly complicated in countries that have several local languages, especially if it is government policy that pupils should be taught in their mother tongue for the first few years of primary schooling.

Africa produces a mere 2% of the world's books, despite having 12% of the world's population. It is estimated that sub-Saharan Africa imports close to 70% of its books.

In countries where people struggle for daily survival, it is beyond their purchasing power to afford reading materials. One practical solution and useful tool for promoting literate communities, despite a lack of local publishing capacity, are local newspapers in indigenous languages. These can be produced by libraries, NGOs or community centres. An example of this is provided by CODE-Ethiopia, a local NGO, which operates a programme of local newspaper generation in conjunction with their network of 62 community libraries in the north and west of Ethiopia.

Although the importance of school libraries enjoys a consensus view of experts, yet it is generally denied the attention it deserves in major educational plans. This has culminated in the acute shortage of funds to prosecute library programmes at both national and state levels. Recognition of its importance is therefore nothing short of lip service." The inadequate provision of libraries in schools is a general shortcoming of education in Nigeria. From north to south and from east to west of the country schools are generally without libraries to support teaching, learning and the curriculum. There is no clear cut policy on funding school libraries and so these libraries are generally few and ill equipped, lacking proper accommodation, qualified staff, relevant information resources such as books and other educational materials. "Some primary and secondary schools were visited to see physically the condition of the libraries in such schools. The findings showed that libraries are almost non-existent in primary schools while few secondary schools have what could be referred to as reading rooms. While evaluating school library services since the inception of the library profession in Nigeria, there were more inspections of the school libraries than the actual supply and processing of library materials. In the case of public library services in Nigeria, there is no doubt that public library service today in Nigeria is still at its rudiments like in most African countries.

"Public libraries in most countries in tropical Africa rarely provide relevant materials and hence they are ineffective. They are stocked mainly with foreign literature that is both out of date and irrelevant to the information needs and interests of the people that are expected to read them." The general poor attitude of the Nigerian government towards development of libraries has also adversely affected the development of public library services in Nigeria. Enough funding is not made

available to the public libraries to be stocked with the necessary information materials or provide adequate services to their clientele. There was the general practice by governments of releasing to the public library boards an amount far less than what was approved for a given year. The statutory annual approvals do not always reflect the actual needs of the boards. The effect being that the quality and quantity of materials acquired and the levels of services rendered are adversely affected. For instance, the poor state of funding compelled the some states library board to abandon their mobile library services. The general poor state of funding public libraries has forced many head librarians to reduce library services being rendered to their clientele in areas such as staff reduction (rationalization), redeployment, reduction in book budgets, reduction in the number of programmes and services rendered.

The poor state of provision of library services is also being experienced in the special libraries in Nigeria. the poor financial state of research libraries in Nigeria, noting that the federal Government whose duty it is to fund research institutes is yet to see libraries or the information they provide as an essential and important commodity for commerce and industry which is essential for national development. It is only in university libraries that there is a definite funding policy from government. They are being allocated 10% of the recurrent annual budget of their respective universities. That is as a result of the federal government and Academic Staff Union of Universities (ASUU) agreement of 2nd September, 1992. This agreement is not being fully implemented especially in the state universities in Nigeria. This has resulted in inadequate provision of library resources and services in most libraries in Nigeria especially in this 21st century characterized by electronic library services. State university library in Nigeria lamented about gross under funding and its adverse effects on growth of library collection and services with the entire library system suffering from large-scale decadence and neglect.

The general poor state of funding libraries in Nigeria and the subsequent inadequate provision of library resources and services is a great handicap towards using libraries as effective tools for education and national development in Nigeria. This brings into focus the need to examine the types of libraries required for education and national development in Nigeria in this 21st Century.

CONCLUSION

The role of libraries in the educational system has been examined and the importance of education as a central feature in national development process highlighted. The present state of various types of libraries in Nigerian is highlighted. Most types of libraries in Nigeria including libraries in educational institutions are not adequately equipped with appropriate resources and facilities thereby making them inadequate to effectively serve as tools for education and national development in Nigeria.

The types of libraries required for education and national development in Nigeria in this 21st century are libraries that are well stocked with up-to-date books and other library resources in addition to libraries equipped with present day ICT facilities typical of the electronic libraries of the 21st century. These are the type of libraries that would empower the educational system in Nigeria to provide manpower skilled in information handling and utilization capabilities necessary for decision making in this information driven 21st century. There is the need for Nigerians in all walks of life to be conscious of the importance of information and hence take steps to utilize libraries effectively in obtaining information regularly for use. The Nigerian government is enjoined to take up the challenge and make adequate provision of funds and other resources to equip all types of libraries in line with the present day type of electronic libraries. Students are in need of the learning experiences and support that school libraries offer, such as the effective utilization of media and the development of information literacy.

In Summary, the roles of the library in education are ever growing because an attempt to educate a man invariably is an effort towards educating the society. Based on this argument put forward the library is the store house of these knowledge/development. It therefore behooves on the library professionals to possess the requisites competencies to be able to collect, process, store and disseminate information effectively so that knowledge and information management will not only affect communities but the society at large.

RECOMMENDATIONS

The following are recommended

1. Libraries must be supported by specific legislation and must be adequately financed by national and local governments.
2. Libraries offer a unique and cost effective means of providing access to information for all by sharing resources.
3. Libraries have to be based on a community needs analysis and constantly make their services relevant to community needs.

REFERENCES

Adegbesan, S.O. (2010). Establishing quality assurance in Nigerian education system: Implication for educational managers. *Educational Research and Reviews* 5(7): 380-384, Available: http://www.academicjournals.org/ERR2 Retrieve August 20, 2010

Ibrahim, U. (1999). Strategies for Effective Funding and Management of School Libraries in Nigeria. *Nigeria Libraries,* 31, 1 - 10.

National Policy on Education (1998). National Policy on Education. Lagos: Federal Government Press.

Oriowo, O.T. (2002). Staffing Needs and Requirements for Effective Library Services in Academic Libraries. In Quadri, R.F., & Gbadamosi, B.O. (eds.). *Issues in Library and Information Services*. Emola Joy: 1-10.

Singh Harvey (2003): Building Effective Blended Learning Programs. Issue of *Educational Technology*, Volume 43, Number 6, Pages 51-54.

LIBRARY AND INFORMATION SCIENCE PROFESSIONALS AS MANAGERS: A COMPARATIVE ANALYSIS

Chorun, Matthew Terfa, Beetseh, Kwaghga and Michael T. Upev
Francis Sulemanu Idachaba Library, Federal University of Agriculture, Makurdi.

ABSTRACT

This paper assesses the Library and Information Science (LIS) professionals as managers of organizations. In this paper we have done a comparative study of Library and Information Science (LIS) professionals and managers of organizations was conducted. Findings indicate more similarities than differences. This paper outlines and discusses the professional skills and necessary technological skills needed for library science professionals and managers.

KEYWORDS: *professionals, Library and Information Science, organizations, Management*

INTRODUCTION

'Management' has suddenly become a magic word in librarianship. But what is library management that has not hitherto been taken for granted by senior librarians as their essential role as administrators of their libraries? Have senior librarians not in effect been 'managers' since time immemorial, for what is librarianship other than managing collections so that they may be exploited to maximum effect by those requiring recourse to them? No part of librarianship can be divorced from the concept of management - not even the more recondite aspects of professional activity such as paleography or the bibliography of early printed books, for these, too, are concerned with the efficient control of such materials to make them readily accessible to readers. Every librarian – certainly every senior librarian - has always been ipso facto a manager, even if he has not descended, as he might well say, to thinking of his duties in such mundane terms. In recent years, however, attention has increasingly been given to the need to analyze the ways in which a librarian can more effectively carry out his role of making his resources available to his readers.

This is not merely a question of the bibliographic control of the material itself, but also that of ensuring that the library staff are better equipped to ensure that this aim is achieved and that consequently readers are provided with the best possible service. In other words, the emphasis on management is now concerned particularly with methods of improving the efficiency of libraries. New factors have arisen which require a librarian to take cognizance of matters which are more demanding of administrative acumen than was previously the case. One primary factor is, of course, the introduction of computer-based procedures to facilitate practical bibliographical work and thereby

improve the technical efficiency of a library. Another important factor is the recent evolution of industrial relations practices which require a librarian to become familiar with the legislation concerning staff relationships which dominates the contemporary scene to an extent not hitherto envisaged – though it is to be hoped that librarians never failed to recognize the need for satisfactory relationships with their staffs in the interest of making their libraries happy places in which to work and therefore effective in providing the human and physical environment in which their resources could be exploited. One must take account also of the adoption of new methodologies such as the introduction of feasibility studies to determine the best methods of achieving particular aims and of surveys designed to measure the success of individual programmes in fulfilling their purposes.

Objectives of This Paper

This paper is out to show case the library and information practitioners as managers not only of collections but also of personnel and other assets of their parent bodies. Specifically, the paper makes a comparative analogy of library and information professionals as managers in the following areas

- The Library and Information Science (LIS) professionals' as managers.
- An understanding of the technical, human, conceptual skills, and communication skills between Library and Information Science (LIS) professional and manager.
- Appreciate the different uses of skills to suit your position in an organization, and
- Appreciate what skills could mean in building up an organization for manager and a Library and Information Science (LIS) professional for library.

The Managerial Skills at Various Levels

A manager exercises a unique set of skills. Similarly at various levels you require different types of skills. Let us start by mentioning the skills required at the technical skill, human skill, conceptual skill, leading skills, planning level, organizing skills, controlling skills, decision-making skills. These skills refer to the personal ability put to use by the manager in specific position that they holds in the organizational hierarchy. Moves, up in the hierarchy of the managerial positions, increases the responsibility. The fundamental functions of a manager such as planning, organizing, leading, controlling and decision-making are the skills required to be mastered by the managers. In order to exercise these functions, one has also to keep in mind, the type of job, the size of organization, the skills and experiences of the people one works with and the time available at his or her disposal to do these management functions.

Katz (1974) talks of three types of skills that are recognized by all managers. These are the technical, the human and the conceptual skills. The use of these skills differs for various levels of managers. An analogy of the skills is first made and then

how much each skill is used at various levels of managerial hierarchy and what importance each has in the career growth of a manager is also discussed.

Technical Skill

It is the ability to work with resources in a particular area of expertise. Without the technical skill, one is not able to manage the work effectively. The first line supervisor in a manufacturing industry needs greater knowledge about the technical aspects of the job compared to the top boss. In a small manufacturing organization, even the top boss who owns the company needs to know a lot of technical skills.

In an age of specialization, technical skill is perhaps the most familiar one, required of the greatest number of people. Katz pointed out that mostly the vocational and on-the-job training programmes are concerned with developing this specialized technical skill. In your desire to become an efficient administrator, particularly at the first level, this skill becomes indispensable to efficient operation. As a supervisor of a set of workers, you would like to ensure if your workers have sound grounding in the principle, structure and processes of their individual specialty along with actual practice and experience during which your workers are watched and helped by you as a superior. This appears to be the best way to develop the technical skill. A workshop superintendent knows how to ensure that his or her technician is well equipped with the technical skill required for the work. An office superintendent ensures that persons working with him or her are having adequate technical skill for typing, shorthand, preparing draft etc. for doing their job. Same is the case with library and information science professionals as they too have to acquire the technical skills the technical duties in the library. Quite a lot of training programmes for equipping the people with technical skills are going on all over the country in industries, hospitals, banks and educational institutions. As you move up in the managerial hierarchy, perhaps this skill becomes relatively less important than the human and conceptual skills.

Human Skill

Human skill is the manager's ability to work effectively with group members and to build cooperative effort within the team he or she leads. Every managerial level requires interaction with other people, whereas technical skill is primarily concerned with working with things (processes or physical objects). The first level manager is involved on a regular basis with the personal problems and life events of many non-managers. It is therefore natural that he or she must be able to work through these personal situations and effectively lead subordinates. He or she has to perceive and reorganize the perception of his or her superiors, equals and subordinates and his or her own behavior subsequently.

Human skills can be developed without any formalized training for some. Many others are to be individually aided by their immediate superiors who themselves

should possess the human skill in order to be able to impart that. An important part of the procedure is the self-examination of the individual's own concepts and values which may enable him or her to develop more useful attitudes about himself or herself to mentor others. With this change in attitude, there may also develop some active skill in dealing with human problems. Library and information science professionals do observe subordinate's ability to work effectively with others. And may probably improve their own human skill of rating people for their effectiveness as they become more experienced in this art.

Conceptual Skill

Conceptual skill means the ability to see the organization as a whole and it includes recognizing how the various functions of the organization depend on one another. It also makes the individual aware how changes in any one part of the organization affect all the others. It extends to visualizing the relationship of the individual business to the industry, the community and the political, social and economic forces of the nation as a whole. Thus the manager gains insight into improving the overall welfare of the total organization.

As a manager one should have the ability to coordinate and integrate a variety of factors. One needs to view situations and determine the inter-relatedness of various factors. The success of any decision depends on the conceptual skill of the people who make the decision and those who put it into action. For example, you are trying to introduce some change in the working policy in your manufacturing organization. It is very important to know the effect of such a change on production of goods, control, finance, research and people involved in these processes. Finally, it is equally important right down to the last executive who must implement the new policy. So at every level of the management, no matter which level you belong to, you have to recognize the overall relationships and significance of the change in order to be an effective manager. With this the chances of your success as a manager are greatly increased. Look at the organization as a whole and try to understand the inter-relationship of its parts while introducing a change in policy. It is a known fact that library and information science professionals do not take chances on this in their service to patrons and parent bodies.

Presentation Skills

Management is the art of getting things done. A Presentation is a fast and potentially effective method of getting things done through other people. Presentations are used as a formal method for bringing people together to plan, monitor and review its progress.

First; it puts you on display. Your staff needs to see evidence of decisive planning and leadership so that they are confident in your position as their manager. They need to be motivated and inspired to undertaking the tasks which you are

presenting. Project leaders from other sections need to be persuaded of the merits of your project and to provide any necessary support. Senior management should be impressed by your skill and ability so that they provide the resources so that you and your team can get the job done.

Second; it allows you to ask questions and to initiate discussion. It may not be suitable within the presentation formats of your company to hold a discussion during the presentation itself but it does allow you to raise the issues, present the problems and at least to establish who amongst the audience could provide valuable input to your decision making.

Finally, presentations can be fun. They are your chance to speak your mind, to strut your stuff and to tell the people what the world is really like. While you hold the stage, the audience is bound by good manners to sit still and watch the performance.

Communication Skills

As a manager (concerned with getting things done) your view of words should be pragmatic rather than philosophical. Thus, words mean not what the dictionary says they do but rather what the speaker intended. Suppose your manager gives to you an instruction which contains an ambiguity which neither of you notice nor which results in you producing entirely the wrong product. The greatest source of difficulty is that words often have different meanings depending upon context and or culture. As with all effective communication, you should decide (in advance) on the purpose of the conversation and the plan for achieving it. There is no alternative to this. Some people are proficient at "thinking on their feet" - but this is generally because they already have clear understanding of the context and their own goals.

Time Management Skills

Time management is one of those skills no one teaches you in school but you have to learn. It doesn't matter how smart you are if you can't organize information well enough to take it in. And it doesn't matter how skilled you are if procrastination keeps you from getting your work done. The time management is very effective for supervisory positions.

Supervisory positions can be very stressful and overwhelming when specific deadlines need to be met. Leaders need to be able to handle tasks and assignments in a timely manner. Time is similar to finances and both need to be budgeted wisely.

Leading Skills

Leading people requires that the leader must understand the values, personality, perception and attitudes of the people. As an individual you act differently from another individual because of your values, personality, perception and attitudes. This is

a very important factor to be understood in relation to the other person who may be your superior or subordinate. Without an appropriate understanding of these there may be friction in the organization that may lead to goals not achieved.

Planning Skills

As part of the management process you attempt to define the future state of your organization. You are not trying to predict the future, but rather to uncover things in the present to ensure that the organization does have a future. Hence planning skills will include:

- Ability to **think** ahead,
- Ability to **forecast future** trends,
- Ability to **state** organization objectives,
- Ability to **choose** strategies that will help in attaining these objectives with respect to future trends, and managers are expected to acquire skills to interact with intermediate planning systems such as using a computer.

Organization Skills

As you have seen, planning specifies the future course of direction of an organization. This agrees with one of Raganathan's law of librarianship "the library is a growing organism" The organizing process follows the planning process. While planning specifies **what** will be achieved **when**, organizing specifies **who** will achieve **what** and **how** it will be achieved. All of these are possible only when there is good thinking in the planning process.

Controlling Skills

The skill of controlling consists of actions and decisions which managers undertake to ensure that the actual results are consistent with desired results. In planning for the organization the management sets the objectives, which are the desired results for the organization to attain. Any deviation between the actual and the planned results must be corrected by the management by taking appropriate actions and decisions. In this skill therefore, management has a predetermined standard, the information about the performance of the organization and a corrective action in case the standard set by the organization is not fulfilled.

Decision-Making Skills

Decision-making skills are present in the planning process. They pervade all other areas such as organizing, leading and controlling. You will appreciate the simple difference between a manager and non-manager in so far as managers make all the decisions at all levels in the organization. Think for yourself at the level you are, and whether you take a good or a bad decision, it will ultimately influence in a big or a small way your performance. Hence, management skill of decision-making for routine or non-routine problems is a time consuming activity and certainly poses a challenge to

the manager for making a number of important decisions, good in quality and satisfactory in producing solutions to a problem. A manager's effectiveness lies in making good and timely decision. Again, remember, in the decision-making process, you may like to decide on repetitive or routine problems. Processing admission applications in a college or preparing a patrons information needs in the library are examples of routine problems. Such routine problems are different from complex, novel problems.

Core Professional Competencies for Librarians

Continuing Professional Development is an essential part of the modern library and information professional's successful career planning & prospects**.** The library and information science Professionals with better personal, professional and technological competencies have great opportunities and bright future in the modern libraries. Application of new ICT in to the libraries immediately requires improvement of different kinds of skills and knowledge in library and information science professionals. Continuous staff training on emerging technologies is essential to learn, improve and develop various kinds of professional skills, knowledge and competencies.

Professional competencies can be thought of as flexible knowledge and skills that allow the librarian to function in a variety of environments and to produce a continuum of value-added, customized information services that cannot be easily duplicated by others. They relate to the librarian's knowledge in the areas of information resources, information access, technology, management and research, and the ability to use these areas of knowledge as a basis for providing library and information services.

Technology is complex and librarians are just developing the skills to understand it, exploit it or create it. Those few who do have such skills find that they have a very marketable commodity and can make a better living elsewhere. There is an urgent necessity to learn a great variety of professional competencies to accomplish the role of professional librarian in the constantly changing and challenging web environment. Professional competences enable librarians to respond effectively and efficiently to the constant development of new technologies. Some of the unique competencies of the Library and Information Science Professionals are discussed in the following sections.

Acquiring Technical Skills

In the era of ICT driven information service, Library and Information Science Professional must be aware of emerging technologies. It has become increasingly important that librarians keep up with technology and have certain basic skills. In the current scenario library professional must have the knowledge of HTML, Networking, scripting languages, the ability to deal with the back-end of the OPAC, the ability to translate library services into the online medium, the ability to troubleshoot basic

computer and printer problems, or just a good healthy knowledge of emerging technologies.

Online medium: Library and Information Science Professionals need to do so much online these days, way beyond basic catalog and database searching. Librarians have to be able to use search engines and use them well. They need to be able to find quality online resources. They need to help patrons set up e-mail and teach basic Internet skills. They need to be able to troubleshoot problems which users are having in accessing online library resources, at least to the extent where they can figure out if the problem is on the library's side or the user's side. It is only by so doing that the saying "if you are lost in a web of information, consult a librarian" be worth the while.

Ability to troubleshoot new technologies: It is just a part of the good user service we provide in libraries. Most of the time when you are working in library our user facing problem in using the scanner, fix the printer, and troubleshoot any other technology problems they may be having. As we get new computers, printers, scanners, etc. then we will need to learn how to troubleshoot those. The key is just being able to have a decision-tree in your head of what to ask or try when there is a problem. Many librarians cannot troubleshoot this stuff. Most of the time when we troubleshoot any technical problem, we would just throw up an "out of order" sign because probably we just didn't have enough computer knowledge to figure out what the problem was. It was really bad user service. Librarians should be able to play with the technologies in the library, to learn what problems commonly come up, and to fix them if necessary, because it *is* often our responsibility to fix them.

Ability to easily learn new technologies: Most of the time people comment that there are so many new technological things at the library that they can't keep up. Whenever we are intimated to use new gadget in library we always asked the IT team of that organization to send an expert to the library to teach library professional how to use it. It is hard to learn to use first time that when a user asking you to use it. Learning about new technology is definitely a skill. People need to learn how to learn about new technologies without having to ask other people for help all the time.

All the above stated are presently pursued vigorously by the Nigeria Library Association (NLA) and the librarians Registration Council of Nigeria through workshops and seminars like any other professional body.

Time Management Skills

Time management refers to a range of skills, tools, and techniques used to manage time when accomplishing specific tasks, projects and goals. This set encompass a wide scope of activities, and these include planning, allocating, setting goals, delegation, analysis of time spent, monitoring, organizing, scheduling, and prioritizing.

Initially time management referred to just business or work activities, but eventually the term broadened to include personal activities also.

With regards to the fourth law of library science which is "save the time of users". This also has become more important that librarian muse developed the time management skills. Because to provide better or effective services to our user time also a factor suppose if we do not provide a desired information to a user on its requires time so our whole effort to search that information would be useless if we could not provide their desired information on time. So library professional also need to developed time management skills also.

Presentation Skills

This is a huge one. Library and Information Science Professional must have highly effective presentation skills. Suppose when he wants to implement a new technology or service for Library clients firstly he must create a proposal for management he must show that what would be the consequence of this new technology which tool to use to train staff, market the service etc. he must show the role of that new technology in currently being used in libraries. He can develop & practice reader's advisory skills to promote reading habit among all level of users. Through his presentation skills he can increase awareness of the role of libraries & librarians in promoting information literacy. For that he can use variety of presentation techniques to convey information to his users with different learning styles.

Communication Skills

Communication has a great importance in providing better services to users. He communicates the value of library service to decision makers, staff and users. When he provides information to the user he must communicate clearly and respectfully with customers and colleagues. Always Demonstrates active listening skills with customers and colleagues in his workplace. Communication is not only must be effective with users only but must have ability to negotiate effectively with publishers, customers, management & vendors.

Customer Service

Nowadays librarians must be customer oriented. We can demonstrate a sincere commitment to customer service. Always we must try to observe customer needs and try to provide their desired information on time. Through continual design and improve user oriented information products and competencies we can provide them better customer services. Always show them confidence and competence to deliver perfect customer services .This can be made possible via a diagnosis and customization of patrons information needs.

Evaluation and Assessment Skills

Library and Information Science Professionals need to understand how any changes in the way the library provides services will affect all stakeholders. Sometimes we focus on the needs of one group and ignore the fact that the changes that will benefit one group will not benefit another. With any change, librarians should create a list of all of the different stakeholders and actually discuss how it will affect each of them. When we say "stakeholders" we must mean not only our patrons but staff, IT, and administrators. If you implement a project that library staffs don't support, the likelihood of success is poor. For that continually analyzes, investigates and assesses the information service needs of the users and according to our stakeholders needs we can designs and deliver specialized value added information products and services. Time to time we can evaluates the outcomes of the use of library and information resources and services for which we can conducts research to find solutions to the identified information management problems.

Managerial skills

In managerial skills we include technical, human and conceptual skills. Technical skills involve process or technique knowledge and proficiency in a certain specialized field. These skills are more important for Librarian also because library professional also dealing with a huge no. of staff doing the organization's work. The technical skill involves the Librarian's understanding of the nature of job that people under him have to perform. Human Skills involve the ability to interact effectively with people. Librarian interacts and cooperates with employees & staff also. Because Librarian deal directly with people, this skill is crucial. Librarian with good human skills is able to get best out of their people. Conceptual Skills involve the formulation of ideas, conceptualization about abstract and Complex situations levels. Conceptual skills refer to the ability of a Librarian to take a broad and farsighted view of the organization and its future, his ability to think in abstract, his ability to analyze the forces working in a situation, his creative and innovative ability and his ability to assess the environment and the changes taking place in it. Thus, technical skill deals with things, human skills concerns people, and conceptual-skill has to do with ideas.

Knowledge of Policies, Procedures, Issues and Standards

- Maintains current awareness of professional issues impacting libraries. This is evident in the Librarians Registration Council of Nigeria's fight against employing authorities for employing non-librarians to work as librarians.
- Demonstrates knowledge of library policies, procedures and service standards

Knowledge of Information Sources and Services

- Develop specialized subject knowledge about the purpose of the organization
- Identify materials appropriate to customers' requirements and their abilities

- Expert knowledge in the content of information resources and ability to critically evaluate and filter them
- Develop and deliver convenient, easily accessible and cost effective information services to the users (CCFR)

Commitment to Life-Long Learning

- Take responsibility for the development of one's own professional career
- Remain knowledgeable in current events and technologies
- Pursues learning opportunities, personally or through formal training
- Flexible in adapting to new situations, systems, tools, environments
- Anticipates accepts, adapts and manages change effectively

Other Skills

- Marketing and promotion of library services
- Project management skills
- Digital rights management
- Knowledge management skills

CONCLUSION

From time immemorial, Library and Information Science Professionals have been creatively managing the information and research resources of their libraries on behalf of parent bodies and clients. The evaluation, acquisition, organization, sharing and distribution of information in all formats, including books, periodicals, online services, internal work product documents and database resources, is an integral part of their expertise. Similarly, providing comprehensive research services utilizing a wealth of literature resources is a service of long standing. In addition, librarians have extensive experience in training patrons and paraprofessionals in the use of the full range of information resources to minimize the amount of time involved and maximize the quality of the result. A manager's aim…

A manager's aim is marketing and promotion of their products but the Library and Information Science Professional should aim at marketing and promotion of library service. It can therefore be deduced that Library and Information Science Professional is playing the role just as manager of any other known human organization.

REFERENCES

Blair, Gerard M. (2009.) "Presentation Skills." *Basic Management Skills*. University of Edinburgh, School of Engineering. Web. 06 May <http://www.see.ed.ac.uk/~gerard/Management/art1.html>.

"Features - Law Librarians and their Evolving Role as Information Technology Managers | LLRX.com." *LLRX.com | Legal and Technology Articles and Resources for Librarians, Lawyers and Law Firms*. Web. 05 May 2009. <http://www.llrx.com/features/evolving.htm>.

Gordon, Moran, (2001): "Ethics, strengths and values: a review article", *Journal of Librarianship and Information Science,* 33 (2): 98-101.

Gordon-Till, Jonathan, (2002): "Ethics: the professional challenge", *Business Information Review,* 19: 46-54.

Hannabuss, Stuart, (2008): "Book Review: Librarianship and Human Rights: a Twenty-First Century Guide by Toni Samek 2007, Oxford: Chandos Publishing", *Journal of Librarianship and Information Science,* 40 (1): 59-60.

"Managerial skills/competencies." *Get Satisfaction - People-Powered Customer Service*. Web. 10 May 2009. <http://getsatisfaction.com/smutel/topics/managerial_skills_competencies>.

Muirhead, Graeme A., (1993): "The role of the systems librarian in libraries in the United Kingdom", *Journal of Librarianship and Information Science,* 25 (3): 123-135.

NJLA:(2009)New Jersey Library Association. Web. 01 <http://www.njla.org/resources/competencies.html>.

O'Connor, M.J., (1981) "Review article: The librarian as manager", *Journal of librarianship and information*, 13 (2): 131-135.

Oswitch, Pauline A., (1990): "The role of the information professional in development", *Information Development,* 6 (1): 28-33.

"10 tips for time management in a multitasking world." Web log post. Penelope Trunk's Brazen Careerist. 10 Dec. 2006. Web. 9 May 2009. <http://blog.penelopetrunk.com/2006/12/10/10-tips-for-time-management-in-a-multitasking-world/>.

Venkata, Ramana, P. (2006). The changing role of librarian in a challenging dynamic web environment. 4th International Convention Caliber-, Gulbarga, 2-4 February, Inflibnet Centre, Ahmedabad.

KNOWLEDGE MANAGEMENT FOR LIBRARY AND INFORMATION PROFESSIONALS IN THE 21ST CENTURY

Anthony Agena Igbashal, Precious Doo Akpe and Upev, Michael Tever
Francis Sulemanu Idachaba Library, Federal University of Agriculture, Makurdi, Benue State-Nigeria

ABSTRACT

Owing to rapidly changing information and communication technology (ICT), library and information science has been incessantly evolving. The internet has further transformed the information society into a global village. The knowledge explosion and ICT tools have equipped information and library science with immediate access to practically limitless sources, plus quick storage, retrieval and sharing tools. In this knowledge economy age, information professionals' roles have changed profoundly at both library practitioner and library school educator levels. On the library practitioner side information professionals have evolved from traditional cataloguers and research and reference service providers to value added service providers, teacher librarians and, most recently, knowledge managers. On the library school educators' side, there is the constant challenge to review and update the school curriculum, This paper examines the definition and importance of knowledge management for 21st century information professionals; their evolving new roles, skills and challenges, and recommends what is important to have in place for information professionals to be part of this knowledge management economy.

KEYWORDS: *Librarians, Library school educators, Information professionals, Knowledge management*

INTRODUCTION

Knowledge management (KM) is a collection of processes that govern the creation, dissemination, and utilization of knowledge in an organization (Newman, 1991). It involves the management of explicit knowledge (i.e. knowledge that has been codified in documents, databases, web pages.) and the provision of an enabling environment for the development, nurturing, utilization and sharing of employees' tacit knowledge (i.e. know-how, skills, or expertise). Information technologies, such as intranets, web portals, and groupware, are often used to facilitate the sharing of knowledge among a group of workers (commonly referred to as a community of practice) in an organization because of their capabilities in extending the reach as well as enhancing the speed of knowledge transfer. The implement nation of an appropriate knowledge management program in a business organization has the potential of improving customer services, continually improving business processes, quickly

bringing new products to markets, and bringing innovative new ideas to commercialization (Heisig and Vorbeck, 2001).

In most organizations, the key professionals involved in knowledge management activities are human resource managers, process & product developers, and information technologists (Taylor, 2001). This assertion was partly corroborated by a bibliometric analysis of the field of knowledge management that showed that the field's popularity was largely due to the dominance of information technology applications (Wolfe, 2003). However, of late, there has been increased interest in knowledge management activities by information professionals. To demonstrate the relevance of the profession to knowledge management, various articles have discussed the roles of information professionals in the knowledge management process (Albert, 1998; Balcombe, 1999; Broadbent, 1998; Duffy, 2000; Marshall, 1997; Milne, 2000; Ponelis and Fairer-Wessels, 1998; Schwarwalder, 1999; Yeh, 2001); special issues of professional journals have been devoted to knowledge management issues; a book on knowledge management for the information professional has been published (Srikantaiah and Koenig, 2000); special sessions on knowledge management have been held at professional conferences; seminars on knowledge management are being organized regularly; some library and information science schools now offer courses on knowledge management, such as "Knowledge Management in Organizations" at the School of Communication, Information and Library Studies at Rutgers University; and a few schools have even gone a step further by offering specialization in knowledge management, such as the Innovative Master of Science in Information Architecture and Knowledge Management at Kent State University, United States of America, or the Master of Science in Knowledge Management at the School of Communication and Information,

Sarrafzadeh *et al*. (2006) noted an increased awareness among library and information science (LIS) professionals of their potential contribution to knowledge management, with a high level of agreement on its positive implications for both individuals and the profession. Many library and information science schools now include courses on knowledge management. The University of Botswana for instance now offers, as of August 2008, "Knowledge Management for the Information Professional". Increasingly conference themes are set on knowledge management. In the African context recent examples are the Standing Conference of Eastern, Central and Southern Africa Library & Information Associations (SCECSAL) 2004, the theme of which was 'Towards a Knowledge Society for African Development'; and SCECSAL 2006 'Libraries as a bridge to an information and knowledge society in eastern, central and southern Africa'. SCECSAL 2008's sub-theme was, 'Knowledge Management in the Context of the MDGs'. All of this reflects the growing recognition and awareness of knowledge management among information professionals, as well as the diversity of knowledge management. Progressively, it is being acknowledged that knowledge management is no more an optional extra or luxury for 21st century information

professionals but a mandatory discipline if they want to survive or at the least remain effective, in the digital era. The underlying argument for knowledge management is that organizations benefit from identifying intellectual capital whether internal or external, necessitating capturing, organizing and sharing knowledge within the organization.

Theoretical Perspective

Concept of Knowledge Management for Information Professionals

Many people can still become confused between the terms 'information' and 'knowledge'. The force behind the origin of knowledge management was the information explosion. Typically for example, every organisation generates large amounts of data and information. Without effective management it is difficult to identify and locate the information required in a specific situation. As the next step knowledge management came as a strategy to develop organisational knowledge and capacity to derive relevant knowledge from information. That is why knowledge is portrayed as the transformation of information: information is a building block of knowledge which is the refined, relevant and actionable output of information society.
Knowledge management has several definitions. According to Taylor (1999:33), "knowledge management is a journey that moves an organization from a knowledge chaotic environment which is where many organizations are now to a knowledge centric enterprise that is supported by a comprehensive knowledge system". This definition emphasises the end-product of knowledge management. Taylor described the journey of knowledge management as a process of five stages: knowledge-chaotic, knowledge aware, knowledge enabled knowledge managed and knowledge-centric. According to Davenport et al. (1998; pp. 44), "Knowledge management is concerned with the exploitation and development of the knowledge assets of an organization with a view to furthering the organization's objectives. The knowledge to be managed includes both explicit, documented knowledge, and tacit, subjective knowledge. Management entails all of those processes associated with the identification, sharing and creation of knowledge". This is an inclusive definition, which focuses on exploitation and development of knowledge to achieve organizational goals.

Knowledge management is defined as a focused management process to capture, exploit, share and apply both implicit and explicit knowledge for the benefit of the employees, organisation and its customers. Focus in the context of IPs at the library school educators side is on capturing, storing, exploiting, sharing and applying both implicit and explicit knowledge which can inform and assist them to review/ curriculum to fit to the market demand and deliver in most innovative ways. They need to focus managing customer & stakeholders knowledge, who come for learning or who are potential learners, organisational knowledge, subject knowledge, curriculum around the other universities to benchmark themselves, ICT/innovative knowledge how other educators are teaching innovatively using ICTs.

On the library practising side, information professionals need to focus on their customers' knowledge demands and remain updated in their professional knowledge in order to provide value adding services to their customers, anywhere and anytime and in desired formats. They need to manage all types of organisational knowledge to maximise its utilisation and align it to the provision of information services.

The major characteristics of knowledge management are: a holistic approach, its action-oriented, on-going process, ever-changing, people-oriented, emphases on organisation performance improvement, and value-adding and goal-oriented and visionary perspectives.

Position/Fit of Information Professionals in Knowledge Management

Knowledge management has provided ample opportunities for information professionals. A decade ago, Milne (2000:140) had raised the question that "the opportunities are there, but are information professionals ready?" He further raised a concern, "do they recognise too, that their attitudes must be in tune with the needs of this new (information) order if they are to become strategic partners in the knowledge processes within their own organizations?" and again "what are the messages for library schools as they prepare the information professionals of the future?" It is true that knowledge management is "a vehicle for enhancing the professional image and role of the information professional" (Southon and Todd, 2001). What is less clear is how eagerly and effectively information professionals have embraced this vehicle. We might ask ourselves, are we in fact changing our attitudes in keeping with the knowledge age; are we catalysing or pioneering change in our organisations? Or are we just enduring challenges before us because we are forced to survive? One critical development is that information professionals have begun to realise that they have a critical role to play in initiating knowledge management and its success in their parent organization.

Ferreira *et al*. (2007) observed the close relationship between teaching schools and formation of information professional skills and stated that if 21st century skills were more commonly taught in library, archival, or information studies courses, this could help bridge the gap between the skills acquired in classrooms and those required by labour markets. This would help librarians, archivists, records managers and others to maintain their significance in an ever-changing and knowledge-intensive world". Clearly this makes sense. But it brings into perspective the irony of library and information school (LIS) educators trying to teach 21st century skills which they have not in their turn had the chance to practice maturely in an organisational environment. This is an issue that requires consideration. Who is qualified to teach the new professional skills? The challenges facing LIS educators are articulated later in the paper.

Within the higher education environment there is often a close relationship between LIS practitioners and LIS educators; thus jointly they can add value to their parent organization in numerous ways and create a cycle of continuous professional development. Librarians and archivists add value by managing organisational knowledge in the most efficient and accessible manner and LIS educators by training future professionals in all the necessary skills and promoting importance of holistic knowledge management. Practicing librarians, for example, need to possess "an ability to offer the value-added service of analyzing and repackaging information to meet specific client needs (Milne, 2000:147), whilst LIS educators as innovators have the responsibility to provide a strong base to make their organisation innovative by undertaking a number of academic and research activities in an extremely complex information environment. To ensure their students' success educators must continuously evolve their teaching and learning pedagogy adopting quality assurance mechanisms and achieving standards of excellence in adopting best practices and creating competition in the global market (Rath, 2006).

Therefore information professionals can contribute to knowledge management in the following ways:

Empowering Knowledge Workers: Today, the ICT facilities have empowered knowledge workers by removing intermediary levels and facilitating direct access to knowledge anywhere and anytime. Empowering knowledge workers has been brought about through providing necessary tools, system and services.

Bridging the Gap between the Skills Acquired and Job Market: Library and Information Science School Educators can bridge the gap between classroom theory and professional practice, by improving classroom practice making their skills more marketable and reducing unemployment.

Leading in Ethical and Legal Issues: One other excellent way Knowledge Management can be enhanced is by playing a leading role in devising and implementing standards for the ethical and legal issues and appropriate use of information, thereby also engendering professional respect for unique skills possessed.

Leading in Knowledge Management Skills Impartation: Library and Information School Educators can become leaders in imparting their Knowledge management skills organisation- wide as well as externally, and internally 'putting them in the good books' of management executives'.

Innovative Teaching for Greater Collaboration and closer Interaction: Providing web-based/online education opportunities using multi-media educational resources. Information professionals can thus make education more interactive and personalised.

Collaborative effort is critical in order to prosper in today's information age because there is so much information and knowledge out there and no one knows everything. The University of Botswana, for example, launched Web CT in 2000. More and more teaching staffs are encouraged to look at teaching through Web CT, embracing e-learning facilities, or at least supporting conventional classroom teaching in this way. In an indication of the importance it is accorded, the use of Web CT has been linked with the university's performance management system. The potential is there to expand learning opportunities to non-university students and lifelong learners, with the quality of the content thus becoming paramount. Effective use of technologies to make learning more accessible does not make information content of the material any less crucial. All information professionals will appreciate this.

Knowledge Management Awareness: More often than not, Information Professionals can be resistant to new ideas or initiatives and the knowledge management concepts can still be new for many. So, by promoting and raising awareness of the benefits of knowledge management amongst the student community, teaching faculties and all the other stakeholders, in order to encourage them to buy in to it, information professionals (in this case particularly LIS educators) can have an immense impact on organisational performance and competitive power.

Recognition of and Contribution to Maximising the Potential of Organizational Knowledge Management: This has been a serious issue in the library and information profession. Within higher education for example, when institutional management documents like Learning and Teaching Policy, Research and Development Policy, or University Research Strategy are referred to as information professionals particularly in libraries for discussion and commentary, those staff members may fail to appreciate them or associate a direct relevance to the library. They seem to believe that such documents are more relevant to teaching staff. This attitude serves as a hindrance in the proper alignment between information services and achieving the parent organisational goals. It is important for information professionals to look at all organizational documents, policies and procedures in order to customize their services accordingly. For instance, a Learning and Teaching Policy would have implementation implications for adequate library facilities and services.

Knowledge management is an approach based on the central role of knowledge in organisations, with the objective being to manage and support knowledge work and to maximise the added value of knowledge for the organisation (Tissen *et al*, 1998). This is one of the major characteristics of knowledge management. It presents a major shift in focus regarding the development and use of knowledge and information in increasing the effectiveness of any organisation. It is a great opportunity for information professionals to make themselves relevant to their parent organisations in a much more vital way than has generally been the case (Southon and Todd, 2001). According to

Owen (1999), knowledge management is to add value for the organization at three distinct levels: Improvement of existing business processes and cost reduction; developing new products and services and improving organisational strategic position by developing unique knowledge, applying knowledge to innovative products and services, strengthening the competitive position, creating an attractive work environment etc. Balcombe (1999) inspires information professionals by saying, "our mindset as information professionals is to share; to further the accessibility to and usage of knowledge. We can influence our organizations to see sharing as vital to every job". Information professionals play a unique role in gathering, organizing and coordinating access to the best available information sources for the organization as a whole. They are also leaders in devising and implementing standards for the ethical and appropriate use of information (Abels *et al*., 2003). Knowledge management offers them a wonderful opportunity to get out of the box of the library or information centre and into the strategy areas of the organisation (Balcombe, 1999:91).

Thus, information professionals need to understand the role of knowledge in every area of the organisation. Understanding organisations is as useful to the information professional as understanding information and knowledge (South on and Todd, 2001). It is "a major challenge to information professionals to engage with issues that have not generally been regarded as their task, either by themselves, or by those for whom they work. It is clear that the phenomenon implies a broader and more organisationally directed thinking on the part of information professionals if they are to engage successfully in this area" (South on and Todd, 2001). Also, information professionals at library schools should bear this in mind when developing a knowledge management oriented curriculum. Then only would they be able to train and educate current and future practising information professionals to create knowledge links between organisational policies, resources, activities and outcomes and consequently contribute to and enhance organisational performance, image, visibility and competitive urge.

New Roles of Knowledge management Professionals

The 21st century brings with it new roles and requirements for different competencies and skills for information professionals, beyond those traditionally practiced and understood, thus requiring increased intellectual flexibility. Information professionals now need to be equipped as, or capable of performing or adapting to, the following new roles:

- Technology experts both in operation and training of others in technology transfer.
- Knowledge mappers/engineers: representing or mapping tacit and explicit knowledge to enable its classification, dissemination and identifying the gaps in the knowledge.

- Knowledge gatekeepers: acting as subject experts and familiar with evolving vocabulary (taxonomies, metadata, metatags and filtering etc.).
- Knowledge management editors and experts that repackage digital knowledge into the most useful, accessible and appropriate formats for the 21st century organizations.
- Networking and Knowledge Brokers, with good networking abilities and contacts within and outside the organisation.
- Web designers to display and share knowledge in the most attractive and eye-catching ways.
- Availability of programmers to customise digital instructions and services according to customers' needs.
- Production of knowledge and information disseminators rather than custodians of information.
- Training researchers for personal and professional development and for providing up to date assistance to patrons.
- Knowledge consultants to provide expert advice beyond the usual operational zone.
- World knowledge content experts to keep updated with international news in their specialised areas
- Metadata specialists able to describe and dictate management and preservation strategies for digital information
- Knowledge Asset Managers to identify, evaluate advice upon and manage a portfolio of knowledge assets, such as patents, trademarks, copyrights, etc. (Chase, 1998).

New Competencies and Skills of Knowledge management Professionals

Clearly, to take on these new roles effectively information professionals need to equip themselves with new skills and values.

Personal Competencies are a set of attitudes, skills and values that enable practitioners to work effectively and contribute positively to their organizations, clients and profession ranging from strong communication, to demonstrating the value-add of their contributions in the ever-changing environment. Specific jobs and markets might require certain sets of unique competencies at various skill levels (Abels, et al, 2003). Literature reveals the following skills vital for 21st century knowledge management professional:

- Good communication and interpersonal skills;
- Understanding flexible needs of customers and employers and developing creative solutions;
- Ability to market the concept of knowledge management and its benefits;
- Negotiation skills, for dealing with suppliers and licensers;
- Creativity, intelligence, use of new tools and long term vision;

- General management skills: Information management, human resource management, project management, change management, strategic planning, financial management, Liaison and negotiation skills (Halvegar & Tabuchi, 2014).
- Analytical and lateral thinking ability fit for the new age;
- Cultural adaptability skills for Knowledge management professionals;

Challenges for Knowledge Management Professionals in the 21st Century

To summarise, Library School Educators, Library and Archive Practitioners as well as Information Professionals are all confronted with several challenges. Educators for example must design courses to develop generic and specific skills for future librarians and prepare them for the real world of 21st century.

Some of the major challenges faced by information professionals would include:

- Content development in digital format: Information professionals must widen the scope of information management, identifying information sources and providing effective, relevant and accessible information services and capitalize on the library and information environment of the 21st century (Rath, 2006).
- continuing Education & Training Programmes: developing professional skills through refresher courses, conferences, workshops, seminars etc;
- Financial Support: developing appropriate infrastructure/resources;
- Intellectual capital management eg the brain, intellect etc;
- Technological –growth trauma and infrastructure;
- Change management;
- capturing of track knowledge;
- Introduction to multi-disciplinary growth of subjects in other disciplines;
- Need Based Curriculum: Education curriculum needs to be conceived in relation to market needs and employer perceptions about the competencies of professionals (Rehman, 2008).
- Balancing both tradition and technology while designing knowledge management curricula;
- Ability to adopt a 'just-in-time' rather than a 'just in-case' approach to knowledge management (Jones, 2008);
- Creating innovations with methods of teaching, learning and research to improve the transfer of technology;

Future of Information Professionals

The future of information professionals is full of opportunities as well as challenges. The new knowledge era has provided tremendous opportunities to shine and cement a special niche in the ever evolving information world. Information professionals need to carve out a place for themselves within the core business processes of organizations rather than being content to offer a traditional service from the sidelines (Milne, 2000:149). The challenge is to constantly keep abreast with the

latest technology developments and subject knowledge. Due to information overload, information professionals are needed more than ever to quality filter and provide required information in an actionable or usable form (Abels *et al*., 2003). Wilson (2002) also observed knowledge management as an opportunity for enhancing professional status and career prospects; the flipside being the potential risks of non-involvement. Envisioning the future of information professionals, Southon and Todd (2001) emphasised that "it will be a difficult but essential task for information professionals to contribute their skills and understanding of information and knowledge processes and roles to enable organisations to appreciate the role that technology is able to play. Information professionals will, however, require a strategic view of the organisation and the ability to work co-operatively with a range of other professionals with whom they are potentially in conflict". Information professionals are therefore in the forefront of the digital revolution; they should be leading the transformation into knowledge-based enterprises. It is now up to them how they make their future.

CONCLUSIONS

From the foregoing debate it is apparent how information professionals are challenged to move from librarianship to the cyberianship; from traditional classroom-based face to face teaching to online, e-teaching and e-learning. To keep the pace with the knowledge economy age and facilitate assisting the parent organization's competitive edge, it is important to appreciate and practice knowledge management. "Librarians and information professionals are in a position to transform themselves into value-adding knowledge professionals. However, this will require a radical change in how they view their roles and jobs within knowledge-based organizations. It will require them to visualize a world of rapid change, instantaneous communications, and the transformation of organizations from those based on identifiable boundaries to networks of business relationships" (Chase, 1998). The thrust of knowledge management in relation to information professionals is to enhance accessibility of information, to promote strong relationship with customers and relevant stakeholders by strengthening knowledge flow, offering value adding services and training cost and time-effectively, customized to organisational needs. Creativity and innovations in teaching, learning and research are essential in the transfer of knowledge. Since, there is a close relationship between teaching schools and practising information professionals, together they can contribute considerably to knowledge management. It is essential for 21st century information professionals to acquire the above discussed competencies and skills. These require a total dedication to professional development, training and re-training, and changes of attitude to adapt and adjust.

Referring to 21st century skills, (Ferreira *et al*., 2007) stressed, "if these were more commonly taught in library, archival, or information studies courses, could help bridge the gap between the skills acquired in classrooms and those required by labour markets. Although it is a major shift, it can make information professionals more

relevant to their parent organisation. This paper concludes with Abell and Oxbrow's (2006:150) suggestion that, "the ability to work across organisational boundaries and the willingness to take opportunities to try different roles and ways of working are essential for information professionals in knowledge environments, but it requires an understanding of organisational dynamics and a particular mind-set".

RECOMMENDATIONS

In order to contribute and catch-up with 21st century knowledge economy information professionals need to have in place the followings:

- Balance education, research and practice
- Balance between people and technology
- Internationalisation of library and information school syllabus to fit in global digital market
- Constant learning for all information professionals whether LIS practitioners or educators
- Conducive working environment to render it a global centre
- Putting appropriate infrastructure in place and the constant up-dating of same

REFERENCES

Abels, E., Jones, R., Latham, J., Magnoni, D., Marshall, J.G. (2003). *Competencies for Information Professionals of the 21st Century*. Available at: http://www.sla.org/pdfs/cometencies2003revised.pdf (Retrieved on 2.1.09).

Balcombe, J. (1999). *Getting out of the box: the Role of the Information Professionals in Knowledge Management.* The Law

Best Practices in Europe. Berlin: Springer-Verlag.

Broadbent, M. (1998). *The Phenomenon of Knowledge Management*: What does it mean to the Information Profession ?

Chase, R.L. (1998). *Knowledge Navigators.* Available at: http://www.sla.org/pubs/serial/io/1998/sep98/chase1.html

Davenport, T.H., DeLong, D.W. and Beers, M.C. (1998). *Successful Knowledge Management Projects.* Sloan Management Review, 39(2), 43-57.

Duffy, J. (2000*). Knowledge Management*: *what every information professional should know. Information Management*

Ferreira, F., Santos, J.N., Nascimento, L., Andrade, R.S., Barros, S., Borges, J., Silva, H.P., Jambeiro, O. (2007). *Information professionals in Brazil: core competencies and professional*

development, Information Research, 12(2) paper 299. Available at: http://InformationR.net/ir/12-2/paper 299.html (Retrieved on 2.1.09).

Heisig, P. and Vorbeck, J. (2001*). Benchmarking survey results*. In Mertins, K., Heisig, P. and Vorbeck, J., ed., *Knowledge management Best Practices.*

Jones, D. (2008). *Knowledge Management from the Information Professional Perspectives: Identifying Partners in your Organizations.* Available at: http://factiva.com/infopro/resource8.asp?node=right1 (Retrieved on 2.1.09).

Malhotra, Y. (2000). from information in K. Srikantataiah and M.E.D Koening (Eds.), knowledge management for the information professional. Medford, N.J. information Today Inc., 37-61.

Marshall, L. (1997*). Facilitating Knowledge Management and Knowledge Sharing: new opportunities for information professionals.*

Mline, P. (2000). *Information Professionals and the Knowledge aware, Intelligent Organization: Skills for the future. Australian*

Newman, B. (1991). An open discussion of Knowledge Management. [Online]. Available at: http://www.kmforum org/what_is.htm *Offline, 21* (5), 92-98. Outlook, *2* (5), 23-36.

Owen, J. M. (1999). Knowledge Management and the Information Professional. *Information Services and Use*, 19 (1):7-16.

Ponelis, S. and Fairer-Wessels, F.A. (1998). Knowledge Management: a literature overview. *South African Journal of Library and Information Science*. 66(1): 1-9

Rath, P. (2006*). Preparing Library and Information Professionals for the 21st century: Issues and challenges for library and information science educators in India*. Available at: http://www.dlist.sir.arizona.edu/1358/01/06.Pravakar%5FRath%5Fpp35-40%5F.pdf (Retrieved on 3.1.09).

Sarrafzadeh, M., Martin, B, and Hazeri, A. (2006). LIS professionals and knowledge management: some recent perspectives. *Library Management*, 27 (7):621-635.

Schwarzwalder, R. (1999*).* Librarians as knowledge management agents. *Econtent*, 22 (4), 63-65.

Srikantaiah, K. and Koenig, M.E.D., ed. (2000). *Knowledge management for the information professional*. Medord, NJ: Information Today.

Wolfe, M. (2003). Mapping the field: knowledge management. *Canadian Journal of Communication*. 28: 85-109.

Yeh, N. (2000). Knowledge management and the future of libraries. *Journal of Information, Communication and Library Science*. 6(3): 81-94

APPLICATION OF FREE AND OPEN SOURCE SOFTWARE IN LIBRARIES: AN OVERVIEW

Olu Olat Lawal
Department of Library and Information Science, University of Calabar, Calabar.

Keynote Paper delivered at the National Workshop on *Application of Free and Open Source Software in Libraries.*
e-library, University of Calabar, 5th – 9th November, 2012
Sponsored by LRCN/NITDA

INTRODUCTION

Library service and its scientific study of access to information and effective service delivery are currently undergoing drastic transformation through application of Information Technology in its operations. Changes in the system of academic support for various clientele in different library types have been phenomenal globally. ***Information*** as a conduct for research and management of the knowledge content of books, journals and media outfits, have presented great challenges to library practice and information professional in particular. The age-long expectation of the demise of books as contractual access to information for researchers in the theme of "information explosion" and the "paperless society" have dogged service delivery, challenged professionalism, but failed so far to eclipse the vital role of libraries in what had been ascribed in the past two decades as the 'information age': knowledge arises from information and according to Aina *et al.* (2008) owing to the importance of knowledge in societies and organizations, particularly in providing competitive advantage, knowledge management (KM) has emerged as a separate discipline. More realistically White (2004) had earlier defined knowledge management as a process of creating storing, sharing and re-using organizational knowledge to enable an organization to achieve its goals and objectives.

Some Basic Definitions

- As we know, the ***Internet*** is an open worldwide communications network, linking countless thousands of computer networks, through various telephone lines, or through radio links.

- **Databases** on the Internet are information warehouses. A database may thus be broadly defined as a collection of interrelated data of different types.

- **World Wide Web** (www), *i.e.* the web, is an online service allowing users to access information from various internet sites. Search engines include Google, Yahoo, *et cetera*

- **Software** is the term used to describe the program support provided to enable the computer hardware to operate effectively. The term embraces the operating systems and application programs supplied by the computer manufacturer.

Conceptual framework of Free and Open Source Software:

- Free software or for disambiguity, free/libre/open-source software is software that is both free software and open source. The concept FOSS is liberally licensed to grant users the right to use, copy, study, change, and improve its design through the availability of its source code. The source code (SC) constitutes a program which is usually held in one or more text files stored on a computer's hard disk. Usually these files are carefully arranged into a directory tree, known as a ***source tree***. Source code (SC) can also be stored in a database or elsewhere.

- However, in the context of FOSS, **Free** refers to the freedom to copy and re-use the software, rather than to the price of the software. The "Free Software Foundation", an organization that advocates the free software model, suggests that to understand the concept, one should think of free as in free speech, not as in free beer". Consequently, free software is defined as "a matter of liberty not price"[2].
  For instance, FS is when a program's users have four essential freedoms:

- The freedom to run the program for any purpose (freedom O)

- The freedom to study how the program works and change it so it does your computing as you wish (freedom 1) Access to the source code is a precondition for this.

- The freedom to redistribute copies so you can help your neighbor (freedom 2)

- The freedom to distribute copies of your modified versions to others (freedom 3).

  By doing this, you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.

- FOSS is therefore an inclusive term that covers both free software and open-source software, which despite describing similar development models, have differing cultures and philosophies. Arguably, Free Software focuses on the fundamental freedoms it gives to users, whereas open source software focuses on the perceived strengths of its peer-to-peer development model.

- Free software licenses and open-source licenses are used by many software packages. While the licenses themselves are in most cases the same, the two terms grew out of different philosophies and are often used to signify different distribution methodologies.

The Open Source Software (OSS)

- OSS definition is used by the Open Source Initiative (OSI) to determine whether a license can be considered "open source", i.e. to mean something close (but not identical) to FS. The word "Open" never refers to freedom. Recently, Ukachi (2011) however submits, that OSS offers more flexibility and freedom than software purchased with license restrictions. According to the author :

> "Both the OSS Programmers and the user community share and promote open standards and believe in sharing. OSS are very often developed in a public, collaborative manner. These softwares often provide greater freedom of choice and are considered by many as more cost-effective ***as little or nothing is usually paid for their acquisition"***(my emphasis) Ukachi (2011).

- If the cost is next to nothing, it is still considered advantageous to choose an OSS application as it allows change of source code for individual needs in the organization.

- Benefits of applying OSS include: reliability, auditability (source code is published) cost (free of royalties and fees), flexibility and freedom in purchasing other products and freedom to modify software.

V. Application of FOSS in Libraries:

- A recent study on awareness and use of FOSS cited earlier, Ukachi (2011) provides a valuable insight when we consider application of the concept in libraries. The author provided the following data in her OSS study :

Response on Open Source Software Awareness and Use by the Respondents*

Open source software	Aware of existence		Knows what it is used for		Presently being used in my library		Not aware of its existence	
	F	%	F	%	F	%	F	%
Greenstone	12	28.6	3	7.1	3	7.1	24	57.2
DSpace	2	4.8	5	11.9	2	4.8	33	78.5
Fedora	2	4.8	3	7.1	-	-	37	88.1
Eprints	1	2.4	-	-	1	2.4	40	95.2
Joomla	1	2.4	2	4.8	-	-	39	92.8
Drupal	1	2.4	2	4.8	-	-	39	92.8
Plone	2	4.8	1	2.4	-	-	39	92.8
Open Office	4	9.6	3	7.1	1	2.4	34	80.9
KOffice	-	-	2	4.8	-	-	40	95.2
KOHA	5	11.9	7	16.7	5	11.9	25	59.5
Evergreen	3	7.1	1	2.4	-	-	38	90.5
ABCD	2	4.8	2	4.8	-	-	38	90.5
CD/ISIS	11	26.2	6	14.3	7	16.7	18	42.8
Firefox	12	28.6	2	4.8	4	9.6	24	57.1
Chrome	4	9.6	-	-	-	-	38	90.5
PHP	4	9.6	-	-	-	-	38	90.5
Perl	-	-	-	-	-	-	42	100
Python	-	-	1	2.4	-	-	41	97.6
Jabber	1	2.4	-	-	-	-	41	97.6

*Ukachi (2011) Awareness and Utilization of OSS… p.140

From the data provided above, few respondents (7.1%) are applying Greenstone, a digitization software, KOHA an Integrated Library System recorded 11.9% while CD/ISIS had 16.7%. the column on awareness is equally revealing with an overall average of 90% of respondents being totally unaware of 11 out of 19 OSS listed. The explanation for low usage is that a major hindrance to the use of this software is unavailability of Internet access in the libraries to enable downloading of the software.

- The low patronage of the benefits of ICT had been identified by a former NLA President in 2010. According to Dr. Victoria Okojie, now Registrar, LRCN:

  > Libraries in the 21st Century have witnessed a tremendous Paradigm shift from their conventional functions of Acquisition, organizing, storing, preservation and Dissemination to creating hybrid functional libraries where Information and Communication Technologies (ICTs) and Networking technologies run side by side with the traditional Model. This has transformed the manner in which services are rendered to clientele by de-emphasizing the idea of ownership while promoting access and resource sharing. However, the library and information community, especially in Nigeria is yet to fully annex and leverage the benefits provided by ICTs particularly as it relates to providing better access to information resources (Okojie, 2010).

  In order to acquiesce the benefits of ICT, libraries need to enlist the full support of library authorities in our various institutions through their Management and Governing Councils.

- In terms of professional services, Lawal (1991) had provided a Taxonomy of Library Tasks from which a universally applicable integrated system can emerge and adopted with local content.

  Library Tasks*
  Bibliography
  Bindery Preparation and Records
  Budget Preparation
  Cataloguing, Classification and Indexing
  Data Processing
  Filing of cards/forms
  Formal Library instruction
  General Administration
  Informal Library Instruction

Information Work and Assistance to Readers
Inter Library Loan Records
Lending Function (registration and circulation work)
Periodical Checking
Photocopying
Policy Determination
Public Relations
Repairing and Mending of Books
Selection, Acquisition and Withdrawal of Documents
Shelving and Stock Maintenance (Lawal 1991).

For instance, some Information professionals have suggested use of ***cloud computing*** to assist the Library in enhancing its Information Technology capacities. It is argued that it provides efficient and cost effective solutions to problems based on Infrastructure (Iaas); platform (Paas) and Software (Saas) which run existing online applications eg. Google and Microsoft. It is free or paid via subscription.

The library can therefore invest more on research in its operations considering the taxonomy of library tasks in order to enable efficient collaboration with Windows as a platform. It is however advantageous to reap the benefits derivable from OSS as against proprietary software with attendant vendors' cost.

CONCLUSION

- As professionals, we are challenged at this Workshop to explore ways of enriching library integrated system considering available local content. Local content is quite vital in the application of OSS in libraries. For instance, Mr. Tunji Balogun, CEO Brain Technologies, lamented the near extinction of local Original Equipment Manufacturers (OEM) and other ICT professionals due to lack of support. The local content policy in the draft ICT Policy document can be revamped as Nigeria grows its IT industry to competitive level. This is likely to reduce the brain drain of our brightest ICT professionals especially in critical areas of knowledge management and overall Research and Development activities in national development. Balogun lamented that "if you open a Brian, Omatek or Zinox computer, you will find the same thing you find in Dell, HP or Samsung. Local content is very important." (*The Nation*, 2012).

- Capacity building: we can create expertise among the library staff to be effective mediators for users on electronic resources.

- Training of end users on information literacy such as staff (academic/nonacademic) and students

- OSS allows for Data Sharing through peer-to-peer communications and networks for Research and Development.

- The LRCN and NITDA (National Information Technology Development Agency) should be warmly commended for organizing this Workshop which would have great impact on the *new librarianship*. Mine is to provide the appetizer while the main menu truly belongs to the team of expert resource persons whose task is to elucidate key application areas of the theme. Maxwell Anderson the motivator stated that ***"There are some men who lift the age they inhabit, till all men walk on higher ground in that lifetime"***—let us hope Library and Information Professionals belong to that group.

REFERENCES

Aina, L. O. *et al* (eds) (2008) Information and Knowledge Management in the digital age: Concepts, technologies and African Perspectives. Ibadan: third World Inf Services, p.vii

e-Business, *The Nation,* Thurs. March 22, 2012, p.*53*

The Free Software Definition. *GNU.org retrieved 4/2/10*

Lawal, O. O. (1991) A survey of task performance in library and information work: Nigerian perspective, *Afr .Jnl of Lib, Arch. & Inf. Sci., 1(1): 29-36.*

Okojie, Victoria, (2010), *Presidential Foreword* in NLA 48th National Conference and Annual General Meeting, Abuja. Proceedings p.viii

Ukachi, N. B (2011) *Awareness and utilization of Open Source Software in Nigerian Libraries: the way forward.* NLA 49th National Conference and Annual General Meeting, Awka. Proceedings, pp. 132-146.

THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FOR 21STCENTURY LIBRARY EDUCATION

Idachaba, Joy Asibi, Upev, Michael Tever and Samuel Dzever Tion
Francis Sulemanu Idachaba Library, Federal University of Agriculture, Makurdi.

ABSTRACT

The use of information and communication Technology in the 21st century for library education is one major reform carried out by librarian in the 21st century which is aimed at transforming libraries across the world. Information and communication technology (ICT) has contribution the development of academic in Nigerian libraries and the entire world and therefore create jobs opportunities for teeming unemployed youth in the 21st century. In the light of the above, this paper discusses management process of information and communication technology in the 21st century which is aim at transforming the educational sector. It also discusses the role played by (ICT) in enhancing academic growth in our society.

KEYWORDS: Communication technology, library education, development, academic

INTRODUCTION

We need to move our thinking beyond our primary focus on traditional literacy to an additional set of 21stcentury fluencies that reflect the times we live in. That's the essence of the 21st Century Fluencies! Today, it's essential that all of our students have a wide range of skills that develop the ability to function within a rapidly changing society skills far beyond those that were needed in the 20th century. These skills are not about technological prowess. The essential 21st Century Fluencies are not about hardware; they are about *hardware* and *hardware*! This means critical thinking, problem-solving, creativity, innovation, and so much more. These aren't just for the students, though. The 21st Century Fluencies are process skills that we all need, and there is as much benefit in cultivating them within yourself as within your classroom.

There is no doubt that Information and Communication Technology (ICT) has found its niche in education. Developments in the education sector in developed and developing countries attest to the fact that ICT has become a central focus of many countries' educational policies and such, its use and integration has become widespread in the various school systems. The increasing trend of the use of ICT in classroom work across the globe has been necessitated by three major factors:

- Electronic technological devices are being used to prepare the present generation of young people for a future workplace that will undoubtedly be characterized by information technology (IT). Preparing students and the wider citizenry for

tomorrow's world can only be done through a careful use of ICT tools, computers, Internet spreadsheets and databases.

- ICT tools makes schools more efficient in the teaching-learning enterprise. Classroom teachers' personal professional development and academic productivity have been greatly enhanced.
- ICT tools are being used to improve, reform or renovate teaching and learning. Learners are stimulated to learn actively either on an independent basis or working closely with others. (Olorundare, 2007).

With the advent of ICT, library and information providers, especially in the developed countries, have been able to serve patrons not only face to face but also virtually. Library and Information science curricula have been under constant review in order to meet the requirements of ICT in the electronic age. The case is different in Nigeria. Library systems here are largely dominated by conservative and unproductive practices. However, with the wind of reform now blowing across the various sectors and sub-sectors of the economy, library and information science should not be left out.

Objective of the Paper

The following are the main objective of the paper

- To look at the process of ICT.
- To evaluate the use of ICT on Library Schools in the 21st century approach.
- To look at the benefits of ICT to Library Schools in the 21st century approach.
- To look at the justification of ICT to Library Schools in the 21st century approach.
- To look at the challenges of ICT on Library Schools in the 21st century approach

The Processes

It's easy for us to say that kids need exceptional problem-solving skills. But what do these skills look like in the real world? What do they look like in the classroom? How do we teach them? How can students learn them? How can we assess them? We had the same questions, which is what led to the creation of the 21st century Fluencies. These are all structured processes for developing essential skills that our students need to succeed, both today and in the future. Below is a brief overview of the Fluencies, which are outlined extensively in the book *Literacy is Not enough*, (Crockett, Lee *et al*., 2011) and which you can experience in our professional learning opportunities.

Must of necessity find the appropriate and cost effective means to respond adequately to the huge unmet demand for education (Ajadi, Salawu and Adeoyoe, 2008). The cost effective means of providing library education to all would belibrary and information scientist is through ICT. Hence, government efforts at integrating ICT in our library schools need to be visited. In the word of Okojie (2011):"as a quality assurance agency responsible for the development of university education in Nigeria,

the NUCrecognises the need to ensure that our educational institutions are at par with s tandards worldwide, to ensure the production of graduates and research developments that will be globally competitive. It is in this regard that NUC have been emphasizing that technology should play a leading role in mounding our activities and those of the universities".

In addition to this, the Education Trust Fund (ETF) and the National Information Technology Development Agency (NITDA) in 2005 have provided resources in providing ICT to tertiary institutions in Nigeria. Banks and Multinational companies have also contributed their quota to the implementation of ICT in tertiary institutions. For example MTN Nigeria, has computerized some tertiary libraries in Nigeria by constructing ICT compliance library. Aguele (2007) stated that there is a memorandum of understanding with

a private firm to provide staff of tertiary institutions with personal computers un der the Computerize Nigeria Project (CNP). A look at all these, suggest that the library schools are not left out of this development. It is in the realization of these significant roles played by information in the development of a nation that library schools were set up. They are expected to train and produce the needed manpower for the nation's information industry. Udoh (2000) lead credence to this when he observed that there is a great demand for the services of information works (librarians, archivists, document lists , corporate information analyst) in the Nigerian labour market. However, the onus of accomplishing this task lies with our library school ability to incorporate ICT into their curriculum; because "the illiterate of the 21stcentury" according to futurist Alvin Toffler (2007)" will not be those who cannot read and write, but those who cannot learn, unlearn and relearn'.

Benefits of ICT to Library Schools

Information and communication technology is seen as the electricity of the information age and its access to library and information science education as a key to the process of development (Ozioko and Nwabueze, 2010).The pace of change brought by new technologies have had a significant effect on the way people learn, live, work and play worldwide. This challenge the traditional process of teaching and the way and manner library education is delivered. Here resources for teachers and students are expanding as the demand for technology in these classroom increases. There is growing evidence that ICT can enhance the quality of library education providing teachers and students with information and presenting standards that have never been available before. There is a general consensus that ICTs especially computer and internet enable new ways of teaching and learning rather than simply allow teachers and students to do what they have done before in a better way.Tinio (2002) collaborated this by observing that these new ways of teaching and learning are underpinned by constructivist theories of learning and constitute a shift from a teacher- centred pedagogy-in its worst form characterized by memorization and rote learning-to one

that is learner-centred. Besides, the students have also learned that the information highway is so vast and that the web can offer a wider body of knowledge that the teacher and the textbook cannot provide. A cursory literature search revealed the following benefits of ICT to Library schools: enhances access to information, raising of the quality of library education; enhances and amplifies existing library school curricular, promote student information and problem solving capability, recoding and analyzing student achievement, and shifted teachers role in classroom from being the sole giver of information to being a facilitator of learning and manager of instructional resources. With all these benefits it is therefore necessary to advice that library schools in Nigeria must not risk becoming obsolete due to lack of information and communication technology abilities and emphasizes that every library school curriculum must incorporate technology in the classroom and in practice to meet the technology needs of today.

Justification for Managing Library Information Communication and Technology

Library and information science is a discipline concerned with study of the principles and skills required for systematic collection, organization and use of society's information resources in libraries. It is also concerned with the forces governing the flow of information resources and creating ready access to these resources. The aim of the programme is to provide a basic professional course, which will prepare librarians for all types of libraries and related documentation and information centres. The study of another discipline is dictated by the nature of the library profession, which requires both professional skills and a broader academic background for effective practice. It is in the realization of the significant role played by information in the development of a nation, that library and information schools were set up. They are expected to train and produce the needed manpower for the nation's information work. At present, there is a great demand for the services of information workers (librarians, archivists, document lists, corporate information analysts) in the Nigerian labour market (Udoh, 2000).

Most importantly, the application of modern information and communication technology (ICT) in the construction of educational paradigms has irrevocably changed the way in which the teaching, learning and evaluation of library and information science are done in this century. ICT is seen as the electricity of the information age and its access to library and information science education as a key to the process of development. The rapid advances being made in ICT, particularly in the Internet, have very important implications for education, educators and learners. (Anyaegbunam and Anyaegbinam, 2007).

For the Nigerian library schools to face the challenges of the 21st century, the information studies programme in the various Nigerian library schools should undertake reform/innovation, which should emphasize information and communication technology both in theory and practice. (Udoh, 2000). The new breed

information worker needs to be well informed about the tools for practicing his or her profession. This is because the library or information centre has a special role of ensuring that information resources are adequately assembled, efficiently organized and effectively used. This is so because provision of information in a manner most useful to its clients is the ultimate test of all the efforts and funds expended and sustained in maintaining a library or information centre.

Today there is explosion of information which merely reached its peak in the last century but has had its origins centuries earlier. Information explosion in not restricted to the field of technical and scholarly publishing alone. Government departments and agencies also generate and process a vast amount of official documentation. What is required is to assemble, process and organize this mass of information systematically and disseminate them effectively as adequately and currently as possible. This has been made achievable through developments in ICTs. ICTs have drastically changed the way information services are provided, so much that with the Internet, a library can access and organize information and information resources as much as necessary while library and information providers have been able to serve patrons not only face to face but also virtually. Library and information services have developed beyond mere acquisition of books and their provision for use. For instance, reference service, which is an aspect of library services now involves online provision of specific and required information. Consequently at present, the name "reference service" has been overtaken by the name "Information service" in many libraries in tertiary institutions in Europe and America (Nwachukwu and Mole, 2008).

The onus of accomplishing this task lies with our library schools. Furthermore, the teachers handling the training of the students in the Nigerian library schools need to be re-trained in the modern theory and practice of information and communication technologies if they are to meet with the demands of the society and the Nigerian labour market in the next millennium. There is no doubt that in the 21st century, Nigeria will be moving towards an information society. This is a period when people will not take the supply of information for granted for success in their daily activities. The labour market both locally and internationally is likely to become more complex. Therefore, only those expertises can get gainful employment. Library and information science Curriculum should be under constant review in order to meet the requirements of the electronic age. Thus, Vesi (2003) points out that as technology has changed and allowed ever new ways of creating, storing, organizing, and providing information, the public expectation of the role of librarians has increased. The end product of this challenge is the provision of adequate and up-to-date information and research services from information resources to the library patrons. Since the means to this end is faulty, and unsatisfactory, there is urgent need for change. There is an urgent need for a sustainable reform and refocusing.

Considering the role of library and information science education and library services of universities in training manpower and providing library and information services as well as research and scholarship services and their critical role in the overall national development, they are expected to ensure the availability of well-trained manpower, who are capable of providing access to adequate and up-to-date, library and information services for research. Consequently, library and information science education reform in Nigerian universities now is not only indispensable but also timely.

Challenges of Integrity ICT to library schools

Ogunsola (2004) opined that majority of higher institution in Nigeria, even those with good internet connectivity are still at a low level of the integration of ICT in teaching, learning, research, library and information science and managerial services. Hence, the capacity of library schools to lead the process of integrating ICT into education is woefully inadequate in specific terms affordable and sufficient bandwidth, and the human capacity to exploit the technology. According to Federal Ministry of Education (2009), Nigeria experiencing a severe shortage of ICT skills and personnel necessary for taking advantage of new and emerging technologies in the knowledge society. This is compounded by a poor and expensive bandwidth provision, as well as poor and obsolete ICT infrastructure and services in Educational system.

If these are the position of higher institutions in general then the position of library schools in particular are potential candidate for heart attack. The state of unpreparedness of library schools can be traced to over concentration on the traditional courses in the discipline. These traditional courses were approved by the universities and the accrediting bodies coupled with the bottleneck in designing new courses by most of the library schools. Another challenge has to do with issue of qualified academic staff. For the fact that most of these schools are new and may be dominated with young lecturers who have no doctorate degree and little experience of teaching at the university level. Worst still the few qualified lecturers (probably doctoral degree holders) may not be very knowledgeable in the application and adoption of information and communication technology in library education. There is cadre variation in the attitude of academic staff towards ICT. Aguele (2007) in his study of ICT in universities in Nigeria revealed that junior academic staff (Lecturer 1 and below) are more favourably disposed to the use of the computer than senior colleagues. The author reported that in his study of senior academic staff only 16% of the participants indicated that they would like to use ICT tools in teaching and learning, while 84% of them were uninterested in the integration of ICT into teaching and learning. The new breed information worker needs to be well trained and informed about tools for practicing his or her profession. The onus therefore, lies on our library schools in general and our academic staff in particular to produce world class librarians which can only be possible through a world class library education driven by ICT. The collective resolve of library

schools should depend on the extent to which our human capacity is developed and transformed to compete globally.

DISCUSSION

The future prospects are bright; the use of ICT is beginning to get a wider approach in library schools in Nigeria. Today, the use of ICT to teach and plan coursework, undertake projects and homework, and carryout experiments and research or in the use of internet for on-line registration and advisory services is now a common occurrence in our educational system, especially at the tertiary level of education (Aluede, 2011).There is the urgent need for all the curricular of library schools to be revised to incorporate ICT. It is expected that this task of change will not be an easy one as many staff and decision makes are sometimes reluctant to embrace change in curricula and pedagogical approaches. In fact, Nigeria needed a goal-oriented policy as well as well-thought-out plans and strategies to harness the potential of ICTS for national development. A way forward is mandatory training programmes on ICT competencies and proficiencies, and to based promotion of academic staff not only on publications but in addition to cortication in mandatory training in ICT in classroom teaching/learning processes in Library schools. From the school programs studied by the researchers, it was observed that most library schools are yet to introduce ICT related courses in their programs. In the few library schools that they are available, it was observed that most of the lecturers are no ICT compliance, hence their inability to effectively teach ICT related course. The following recommendations therefore will help to enforce complete compliance to the introduction of ICT related courses in library schools. The librarians registration council with its mandate to regulate library education standard should as a matter of urgency enforce the introduction of ICT related courses in Library schools throughout the federation. National University Commission on its part should direct universities which offer library education to train and retrain their lecturers in the library school so as to be able to effectively impact the ICT knowledge to thestudents.ICT knowledge should be one of the qualifications required before one is employed as lecturer in library schools.

CONCLUSION

From the foregoing, it can be perceived the use of information and communication technology (ICT) for 21st century library education is important for the information profession.

An objective and result motivated reform is what is required in library and information science education in Nigerian universities now. Just as reform /innovation is taking place in education programmes generally, library and information science education should not be an exception. The survival of the library profession depends on the ability and willingness of innovation and reform to take place. Library and

information scientist officers and other stakeholders in the information services provision are required to attain the reform objectives.

REFERENCES

Adjadi, T.O. Salawu, I. O. and Adeoye, F. A (2008*). E-learning and distance education in Nigeria.*The Turkish Online ***Journal of Educational Technology.*** 7(4), Article 7.

Aguele, L. I. (2007*). Information and Communication Technology in Universities in Nigeria: Challenges for teaching and learning*. Retrieved from www.ece.salford.ac.uk/proceeding/paper/2007/pdf .

Aluede, O. (2011*). Enhancement of capacity Building in Teaching/Learning in Nigeria Schools through Information and Communication Technology (ICT): issues for the future.* During the international conference on ICT and Education Development in Africa Organised by the Faculty of Education, Delta State University, Abraka.

Ejedafiru, E. F. and Akporhonor, A. B. (2011). ICT and the dynamics of university education.*Approaches in International Journal of Research Development*, 4 (1) 260 – 271

Federal Ministry of Education (2009*). Roadmap for the Nigeria Education Section*, Abuja Nigeria.

Jones, B.,Valdez.,Nowakowski,J and Rasmussen,C. (1994). Designing Learning and Technology for Educational Reform. Oak Brook, IL: North Central Regional Educational Laboratory.

Library and Information Science Undergraduate Programme (2007). University of Nigeria, Nsukka.

Nwachukwu, V.N., and Mole, A.J.C. (2008). *Rationale for reform in library services in Nigerian tertiary institutions*. In Eze, D.N., & Onyegegbu, N. (Eds.). *Education sector reform in Nigeria: What? why? how? and sustainability*. Enugu: Institute of Education.

Obunadike, J. C. (2011*).* Implementation of ICT in Educational Curriculum to enhance Learning in Primary and Secondary schools in Anambra State. *International Journal of Research Development,* 4(1)169– 177.

Ogunsola, L. A. (2004). Nigerian University Library and the challenges of Globalization: the way forward. *Electronic Journal of Academic and Special Librarianship*, V. S. No. 2 -3.pp

Okojie, J. A. (2011). *ICT interventions for the Development of Nigerian Universities*. A paper presented during the International Conference on ICT and Educational Development in Africa organised by the Faculty of Education, Delta State University, Abraka.

Ozioko, R. E. and Nwabueze, A. U. (2010). *Justification for Reform in Library and information Science Education in Nigeria Universities*. Library Philosophy and Practice, vol. 6, No. 30. p 3-5.

Udoh, C. O. (2000). *Information Technology in Library and Information Science Education in Nigeria*. Ibadan NALISE Journal, vol. 3, No 4. p 4-5.

Vesi, S.L. (2003). *Processing of information*. *The New Encyclopedia Britannica 21*. Chicago: Encyclopedia Britannica: 621.