



Key Paradigm Shift and Evolving Trends in Academic Libraries in the Contemporary Time: The Way Forward

Kate Nkechinyere Ogbu

and

Igwebuike Ejike Udensi

Federal Polytechnic Ohodo, Enugu State, Nigeria
kateuba2013@gmail.com onlylyson222@gmail.com

Citation

Ogbu, K. N. and Udensi, I. E. (2025). Key Paradigm Shift and Evolving Trends in Academic Libraries in the Contemporary Time: The Way Forward. *International Journal of Knowledge Dissemination*, 6(1), 46-58
<https://doi.org/10.70118/ijkd.0202506010.6>

Abstract

New paradigms have evolved over the years in the field of library and information science due to information and communication technologies (ICT) impact and digitalization of library resources which has changed the earlier meaning of library from document preservation to knowledge management. Due to the advancement of ICTs, academic libraries have radically transformed today and consequently academic librarians have new roles to meet the incessantly changing needs of library users in order to remain relevant in the highly competitive information world. This paper discussed the major impetus behind the paradigm shift in academic libraries and challenges facing academic librarians, skills and competencies for modern academic librarians to enable them to meet these challenges and finally, a way forward is recommended.

Keywords: Paradigm shift, academic libraries, librarians' roles, digital era, skills and competencies

Introduction

Academic libraries are established to support the mission of their parent institutions to generate knowledge. The main function of all academic libraries is to support the mission, vision and objectives of their parent institutions and the mission of parent institutions is to generate knowledge, and to equip people with knowledge in order to serve the society and to advance the well-being of mankind. Academic libraries are therefore, to support the three main institutional activities teaching, learning and research of their academic community staff, students and researchers. ICT and digital revolution have radically changed the academic libraries in the 21st century. Education system and academic institutions have been dramatically changed because of ICTs revolution. In Verma (2015), the library professionals are facing new challenges because of unprecedented explosion of information and its availability in different forms which are created by globalization, privatization and liberalization of every aspect of human life in one way and emergence of ICT and its application in generation, communication and access of information in another way. To cope with these problems, the modern librarianship needs to change in their philosophy and practices from custodian of document to information provider. There has been a paradigm shift in the way libraries used to manage as traditional store house to access providers. Therefore, the present digital environment has brought a lot of changes not only on the library and information services but also on the roles and expectations of the library professionals to satisfy their user's information demand.

Due to paradigm shift and emerging roles of academic librarians, the twenty-first century academic librarianship gave birth to two schools of thought: one regards librarianship as a dying profession and other consider librarianship as a dynamic profession. Supporters of librarianship as a dying profession believe that librarianship is a dead-end career in twenty-first century and there is a negative association with the word 'library'. There is a belief that the concept of 'library' has certainly become blurred at the edges (Rossiter, 2012). Some believe that there is no place for libraries in the next century as all information will flow direct from its source to the user (Matthews, 2011, Friend, 2013). Proponents of librarianship as a dynamic profession are of the view that library as a career is still viable and provide new opportunities and challenges. Google can bring you back 100,000 answers, a librarian can bring you back the right one" (Gaiman, n.d.).

Since their existence, libraries have been acquiring, organizing, disseminating and preserving recorded human knowledge only. However, inventions enforced through information and communication technologies have brought drastic changes in the medium of information storage, dissemination and use. Now the question is what type of systems, skills and services we need to establish and convert existing libraries into hybrid 21st Century Libraries (Ramzan, Hussain & Ahmad 2019). In this scenario De Belder (2013) pose some more questions as seen below:

Are we indeed moving towards the end of the hybrid library?
Will Google continue to invest in becoming the “world library”?
Will e-books become the norm?
Will open access become a viable model?

Will Libraries Play a Key Role in E-Research?

Thus, “If libraries want to improve the way they serve their users’ needs, they must innovate their services, facilities and courses by building upon what you could call ‘user logic’ and not upon classical ‘library logic’” (Harbo in Jain, 2012). There is a need to put the fundamental transformation of the library on the agenda and create the roadmap by learning new skills and competencies. This is how academic libraries can survive in this competitive information environment.

Artificial Intelligence (AI) technology is drastically changing how libraries function and interact with users. In Hussain (2023), the progression of societies in contemporary times has been significantly aided by the increasing need for access to information, with libraries being a central source for fulfilling this demand. This shift has necessitated libraries to adapt by demanding corresponding technological advancements to effectively provide access to information. Libraries must embrace and integrate new technologies, innovating their approach to information dissemination and service delivery. Failure to do so may result in obsolescence within this era, highlighting the importance of staying abreast of technological advancements and leveraging them to meet the evolving needs and expectations of society (Omame & Alex, 2020).

AI applications in research and education are growing in importance. Products are enhanced, user behaviour is forecasted, inventory is monitored, and artificial intelligence is used to analyse huge data (Trivedi, 2025). Additionally, AI agents are employed to improve search engine and mobile device performance. Among the ways AI is being investigated for applications in libraries include data analysis, remote access to library materials, and transforming the library into a centre for big data study. Enhancing accessibility for persons with disabilities is another application of AI. As a matter of fact, the integration of AI into library systems necessitates substantial investments in infrastructure, funding, and training. Academic libraries, being large-scale entities, have begun adopting AI, albeit at a slower pace compared to major corporations (Harisanty et al., 2022; Cox, 2023).

Historical Overview of a Paradigm Shift in Librarianship in Academic Libraries

A paradigm shift is a change in the existing model, which creates a shift in the existing truth, a worldview that has been accepted as a truth, trend or change in a typical pattern or model. The term paradigm shift was first discussed and popularized in 1962, by Thomas Kuhn, through his book entitled ‘The Structure of Scientific Revolutions.’ A paradigm is defined as “a set of assumptions about the

nature of things that underlie the questions we ask and the kind of answers we arrive at. A book paradigm is defined as “an archetype that identifies knowledge as existing in a physical object of the printed text in a book format, which can be catalogued, and its access controlled by the librarian, as it occupies a particular space in the library model.” A digital information paradigm that is likely to occur, where text, audio, video and all other types of information will be available only in digital format through the internet. The information here will not exist in one tangible place and cannot be owned or controlled like a physical book or journal.

From historical perspective as highlighted in Verma (2015), the librarianship can be divided into four periods of transition from book to the modern era. In the first period of evolution, the focus of librarianship was on the process of production, acquisition, preservation and storage of books. It was the age of the library and librarian as book keeper. In the second period, the focus was on bibliographic organization of records and advancements in reprography created to fulfil educational need of the libraries. The issues of the management of library resources provided a basis for the formulation of the theory of the library science. The third period with growing demands of for library services, awareness of librarians’ social responsibility for their work and their mediating role encouraged the emergence of library standards. This was the phase of the library as a community builder, linking sources of information with people, and it eventually led to the emergence of the global village of library readers. The next phase started with the introduction of computers, which significantly increased the library’s ability to manipulate information records and to expand its services through networking.

These changing library paradigms require new repurposed library physical spaces as well as administrative changes reflecting new innovative services, roles, staff skill set and organizational structures. Emerging role of librarians is of the nature of liaison work and taking on new roles as specialists and facilitators of research and creativity. New emergent approaches in dealing with users must be devised through increased self-service and user-driven programs and processes; more focused towards professional development, and new positions and job categories (Mathews 2014). Library users’ needs for study space are diversified as they need both individual and collaborative study spaces “traditional” library vs. fun informal space, “private or semi-private” vs. open space, and areas for quiet or talking (Andrews et al. 2016).

Library as a place is changing as the nature of information is being transformed through the shift from text-based information environments to the networked hyperlinked environment of the internet. This transformation is demonstrated by an evolutionary shift within the discipline from library science to information science to knowledge management. A number of factors including globalization of information, the information explosion, the revolution in computer technology and the speed of technological changes are responsible for changes in the libraries. Academic libraries are experiencing a rapid transition for print to digital environment. The revolution in the scholarly publishing industry provides direct

access to the end-user by passing the librarians and other intermediaries, so we are experiencing a paradigm shift from a user perspective to a client perspective.

Libraries are working on adopting social media tools to communicate with and engage patrons online in interactive mode. Although the popularity of social media platforms often changes, the importance of the communicative role of social media platform remains the same. Although there are so many social media platforms available nowadays such as Facebook, Twitter, Instagram, Pinterest, Flickr, Snapchat, and blogging platforms, the two most popular for users are Facebook and Twitter (McCallum 2015).

Technology Enabled Paradigm Shift in Libraries

According to Ramzan, Hussain, & Ahmad (2019), the major changes in librarianship began in 1980s, since then three important processes of the scholarly world, generation, organization and dissemination of information/knowledge has been changing constantly. In early 1990's, online public access catalogues (OPAC) originated at Ohio State University in 1975 and at the Dallas Public Library in 1978. During the mid-1990's, CD ROMs appeared. In the late 1990's, the Internet became the life blood of information sharing and e-book reading. At that time e-books were read by downloading Amazon first version of the Kindle and Barnes & Noble's Nook. Today we are in the digital era with the emergence of Web 2.0, Library 2.0, RSS, Blogs, Wikis, SMS, Podcasting, Mashups, Tagging, Folksonomies, OSS, OA, etc., libraries worldwide have been adjusting to the shift from the printed era to the digital era (Nonthacumjane, 2011). Significant changes in the publishing, storage, dissemination, organization and access to information and knowledge are greatly impacted by the use of information and communication technologies. The technology-influenced shifts in the libraries have occurred in three phases. The first is computerization library catalogues, followed by circulation and other library activities. It started in 1960 and was completed by the end of 1980s in the developed world. Libraries in the top academic institutions are using integrated library information management systems to provide one-window access to bibliographic and full-text collections to their on-campus and remote users (Nitecki in Ramzan, Hussain, & Ahmad (2019).

Second major shift was influenced by the communication technologies. The establishment of communication networks was started in 1970s, which allowed transformation of printed resources into digital format. By the mid of 1980 a radical change in the information landscape occurred due to widespread use of the telegraph, telephone, radio and TV in the libraries. In 1985, the optical disc appeared as storage and distribution medium came. Satellite TV was another disruptive technology in communications systems that enabled global dissemination of knowledge. Finally, the tremendous invention of the internet arrived providing excellent storage, and retrieval.

The third major shift started with the conversion of printed abstracts and indexed into digital formats with the advent of CD-ROMs and web technologies in 1980s

and 1990s. Encyclopedias and other large reference works moved to electronic formats in the late 1990s and in the early 2000s. The indexes and abstracts of the journals moved to the Web in the mid-1990s, followed by full text content of journals available online. The first major database of archive of journals was launched in 1999. By the early 2000s in most disciplines, almost all major journals were available in electronic format. Google and OCLC have signed an agreement on 19 May 2008 to exchange data with the OCLC participating libraries and through Google search services including the one million full textbooks (Bell, et al in Ramzan, Hussain, & Ahmad (2019).

3D printing is an emerging technology based on the creation of physical objects from digital files. There has been a decrease in the cost of 3D printing technology which has made it feasible for libraries to begin providing this technology. This service has provided libraries with an opportunity to engage with users in a way that has direct positive impact of library among community of learning. It has helped the library to become a liaison place between the technology, the users, and the skillset required to be relevant in the rapidly changing technology world (Finley 2016). Although library leaders are eager to introduce 3D printing services to their users but there is very little work done about the legal issues and creating best practices in the community to make this service a success. Training and instruction are needed to run the 3D printer and understand how to develop 3D objects that will print successfully (Nowlan 2015).

Libraries have been using various mobile apps including apps for mobile library websites. Online Public Access Catalogue, mobile collections, mobile library instruction, mobile databases, mobile library tours, mobile learning, library SMS notifications, mobile library circulation, and QR codes based applications (Margam & Dar 2017).

In Kurt De in Bawack (2019) the major changes have impact on selection/acquisition, cataloguing, archiving, reference desk, outreach programming, accessibility of resources, special collections, technology management. There is explosive growth of mobile devices and applications to drive user demands and expectations such as Smart phones, iPads, and other handheld devices and they are changing the way information is delivered and accessed (Murphy, 2012).

Major Impetus Behind the Paradigm Shifts in Academic Libraries

The major impetus causing this change can be attributed to rapid advancement in ICT. ICT is the fundamental drive behind all changes. It has affected all walks of life whether education, culture, teaching, learning, research, scholarly communication, libraries and information centre, medical health, agriculture and so on. Everything is now dependent on ICTs and going electronic is a way forward in each sector, hence today we have telemedicine, e-agriculture, e-business, e-Government and so on. Digital technology has further transformed communication,

learning, and work and most recently, cloud computing. Consumers will begin to abandon PCs and embrace mobile devices for internet use. Mini tablets will spur a shift from textbooks to tablets; "Social everything" will create a huge integration challenge for enterprise IT (Gens, 2012). All of this advancement in ICT has huge impact on libraries and information profession. Academic libraries have adopted contemporary technologies to achieve the visible impact of technological applications. They are striving to convert the entire collections into electronic resources and services to e-services especially in developed world.

The emergence of ICTs and the proliferation of information have caused a change of paradigm in academic library operations the major impetus behind this change according to Bawack (2019) can be attributed to the following:

Constant Developments in Information and Communication Technologies (ICTs): ICT revolution has been considered by many as the major drive affecting academic libraries (Chutia, 2015). Academic library services and resources in the digital era are almost entirely ICT dependent.

Global Evolution of the Educational System: ICTs have brought in new methods of teaching and learning such as open and online distance learning, Massive Open Online Courses (MOOCs), virtual campus, flipped classrooms, online education etc. There is an increased in the use and integration of technology in education today, hence the need for highly skilled competitive workforce.

Emergence of Social Media: This is one of the major impetuses of change in the digital era. Social media means the use of digital media including the internet and mobile devices for dissemination and collaboration to create user generated content and form (Jain, 2013). Social media is designed to achieve community shared goals through collaboration and exchange of ideas. Social media tools include blogs, Wikis, Forums, LinkedIn, WhatsApp, Myspace, Facebook, Twitter, Instagram etc. Academic librarians should use social media to collaborate with patrons and stakeholders. It should be used as a pedagogic tool. Social media is widely used today and a teaching, learning and research.

Changes in Scholarly Communication: Scholarly communication is the process through which scholars and researchers communicate the results of research or other creative endeavours to their peers formally and informally. Today scholarly communication has changed comprising of digital scholarship, institutional repositories and open access. Publishing modes are developing at a faster pace, requiring academic libraries to be actively involved or be left behind as far as sharing and disseminating intellectual outputs is concerned (Chutia, 2015). There are changes in the publishing market like open access, changes in public policy like copyright issues and self-archiving, and changes in the way research is conducted like the use of networks and data intensive science.

Changing Needs of Users: Information seekers today are very conversant with latest trends in information environment. Library patrons have great expectations

from academic librarians more than it has ever been, to access the right information, in a specific format, from the right source, at the right time. Modern technology makes it possible for information to be coded, packaged, stored, disseminated and accessed in a variety of formats at a given time, in a required format. This is another major impetus for change in academic libraries. The table below shows a simple discrepancy between the libraries of old and modern academic libraries:

TRADITIONAL LIBRARIES	21 ST CENTURY LIBRARY
Management of information systems was limited to a four-walled physical library.	In modern age, there are digital libraries, digital repositories and cloud information management system
Main collection included books and journals.	There are institutional repositories, online databases, multi-media information resources.
Selection and acquisition of library information materials (books and journals) were from the publisher catalogues.	Selection is based on users' demand and dealing with issues such as, journals licensing and publishers' big deal offers for open access journals.
Manual interlibrary loan system	Electronic interlibrary loan
Use of card catalogue to retrieve information	Use of Online Public Access Catalogue (OPAC) to retrieve information
High dependence on print resources	High dependence on e-resources and digital resources
Use of library budgets mostly to buy books	Use of budgets to buy e-resources including hardware and software resources
Availability of services only in library opening hours	Most services are available at all times
Preservation of mainly books, serials and grey literature. Traditional library users, who had no other choice but to come to libraries	Diverse library users and assorted options to access information from MARC and circulation desk to metadata and web information

Challenges Facing the Academic Libraries in 21st Century

To cope with the changing library trends, twenty-first century academic libraries are facing numerous challenges. Some of the key challenges faced by the academic libraries in this era are enumerated below:

- Transition from print to digital content
- Continuing education and training of library staff
- Intellectual capital management
- Technological trauma and infrastructure
- Change management to respond to increasingly changing library community needs
- Adopting Just-in-case to just-in-time approach
- Continuous budget decline
- Negativity towards libraries because of other competitors
- Book keeping expert to research expert
- Multi-format data curation
- New scholarly communication
- Growing demands for service and increased expectations
- Staff resistance to change
- Gaining and sustaining competitive edge over the competitors

New Skills and Competencies in Academic Libraries

It is apparent from the ongoing that information environment is completely transformed today academic libraries and librarians have to revamp accordingly with new skills and competencies to equip themselves to assume new roles fitting to academic library world. This is not an option anymore but the only way to survive and thrive. As Matthews (2011) has accurately emphasised, “what can libraries do to remain relevant in their communities in the 21st Century environment except become 21st Century libraries?” The familiarization with new gadgets and methodologies of locating and managing multi-formatted and digital information for vast majority of population requires guides and Information professionals can easily fit into these new roles with training. The leveraging of the available information to suit the needs of the clientele is always best done by the librarians and information professionals. In order to play new roles in twenty first century, it necessitates that academic librarians are equipped with new skills and competencies. The major skills and competencies according to Jain (2013) can be highlighted as seen below:

Media Marketing Skills: the new academic library practitioner is expected to be a strong advocate for the library and its central place in the University’s teaching, learning and research mission

General Management and Leadership Skills: As leaders, academic librarians are expected to influence, motivate and challenge their colleagues and their community to advance library and institutional goals and objectives.

Information Technology Skills: 21st Century librarians are expected to be technologically-savvy; thrive in the digital environment and be explorer and hunters in new technologies. They should be good at web page designing and maintenance, database managers and designers; system builders and analysts.

Digital Collection Development Skills: Collection acquisition and management are changing. It is important to understand the issues and methods related to acquisition, preservation, disposition and organization of all types of information resources. This also includes cataloguing and metadata standards for all formats of information resources. Concerning the future of library collection development, Anderson in Jain (2013) posits that serialists can future proof themselves by recognizing the fact that patrons are moving away from traditional collection and focusing on digital resources and services. He further stresses that in future only that library will remain useful to its stakeholders, which “has found new ways of meeting its stakeholders’ needs”.

Digital Curation Skills: This is quite challenging as standards for all types of data continue to evolve; more repositories, many of them cloud-based, will emerge; librarians and other information workers will have to collaborate with their research communities to facilitate this process.

Information Literacy Skills: In this information literate millennial customers’ age, it is vital for academic librarians to have access and evaluate information literacy, numerical and data literacy, knowledge of learning models and strategies and relevant teaching pedagogy, integrating critical thinking and lifelong learning into teaching and instruction methodologies.

Networking Skills: This the network literacy as a skill that goes beyond technical skills and computer literacy but a skill that involves the understanding of the ways in which people read, write and participate actively in the distributed, collaborative environment of the Internet in its current form.

Social Media Skills: Renew social media competencies, advocate for institutional strategies and policies and build evidence base in social media

Blended librarianship skills: Blended librarianship is based on the principle that librarians can and should be integral educational partners as well as a catalyst for students’ knowledge enrichment and intellectual inquiry. Blended librarians combine the traditional skill set of librarianship with the information technologist’s hardware/software skills, and the instructional or educational designer’s ability to apply technology appropriately in the teaching-learning process. Being good in use of Web 2.0 tools and emerging communication technologies they can provide course related instruction in both environment and become partners with faculty and other academic professionals in designing courses and incorporating information literacy and research skills into academic programs to achieve student learning outcomes.

A Way Forward

Base on the discussions, the following suggestions according to Jain (2013) were made as a way forward for academic libraries:

- Prove your value eloquently and constantly to the academic enterprise
- Endeavour continuously to improve and maintain a good image among library community and other stakeholders by showing uppermost enthusiasm, passion and vitality
- Create a new roadmap by learning new skills and competencies
- Blended librarianship should be a way forward for 21st century librarians.
- Sensitize institutional administrators on the central role you play in teaching, learning and research activities in academic communities to source adequate funding.
- Assume and adapt new cultural norm and have proactive attitude
- Use a media marketing campaign to market the services and products
- Introduce new initiatives e.g. informal liaison and consultancy services to your communities and rigorous marketing of your information products
- Improve ICTs such as the Internet, hardware and software as well as Internet band width and your web presence
- Continuous learning of new technologies
- Academic librarians should always be willing to embrace the changes that confront them.

Conclusion

The profession is changing and evolving rapidly. Twenty-first century librarians should be able to harness the changes and use them to fulfil their mission to provide access to information when needed. In addition, academic libraries need to be ready to adopt and adapt to this change by rebranding the profession of librarianship in order to remain relevant and sustainable in this era of highly information competitive environment.

References

- Andrews, C., S. E. Wright, et al. (2016). "Library learning spaces: Investigating libraries and investing in student feedback." *Journal of Library Administration* 56(6): 647-672.
- Bawack, R. (2019): *Academic Libraries in Cameroon in the Digital Age. Library Philosophy and Practice (e – journal)*. 2547.
<https://digitalcommons.unl.edu/libphilprac/2547>
- Chutia, U. P. (2015). *Academic libraries of 21st century: Challenges for librarian. International Peer Reviewed Bilingual E-journal of Library and Information Science*, 2(4), 255-271.
- Cox, A. (2023). How artificial intelligence might change academic library work: Applying the competencies literature and the theory of the professions. *Journal of the Association for Information Science and Technology*, 74(3), 367-380.

- De Belder, K. (2013). *Transformation of the Academic Library*. Available from World Wide Web: www.slideshare.net/kurtdebelder/introduction-leiden-university-libraries-special-collections
- Finley, T. K. (2016). "The Impact of 3D Printing Services on Library Stakeholders: A Case Study." *Public Services Quarterly* 12(2): 152-163.
- Friend, F. J. (2013). *Mission and Purpose of Academic Libraries in the 21st Century*. Available from World Wide Web: <http://www.ucl.ac.uk/scholarly-communication/articles/beij.htm>
- Gaiman, N. (n.d.). *Quotes about librarians*. Available from World Wide Web: <http://www.goodreads.com/quotes/tag/librarians>
- Gens, F. (2012). *IDC Predictions 2013: Competing on the 3rd Platform*. Available from World Wide Web: <http://www.idc.com/research/Predictions13/downloadable/238044.pdf>
- Harisanty, D., Anna, N. E. V., Putri, T. E., Firdaus, A. A., & Noor Azizi, N. A. (2022). Leaders, practitioners and scientists' awareness of artificial intelligence in libraries: a pilot study. *Library Hi Tech*.
- Hussain, A. (2023). Use of artificial intelligence in the library services: prospects and challenges. *Library Hi Tech News*, 40(2), 15-1
- Jain, P. (2013). *A paradigm shift in the 21st century academic libraries and librarians: prospectus and opportunities*. *European Journal of Academic Research*, Vol. 1, Issue 3, 133-147.
- Margam, M. and S. A. Dar (2017). "Mobile Information Services and Initiatives in University Libraries: A New Way of Delivering Information." *DESIDOC Journal of Library & Information Technology* 37(2): 109.
- Mathews, B. (2014). "Librarian as futurist: changing the way libraries think about the future." *portal: Libraries and the Academy* 14(3): 453-462.
- 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/McCallum>, I. (2015). *Use of social media by the library: Current practices and future opportunities*. A White Paper from Taylor & Francis, Taylor & Francis.
- Murphy, K. (2012). *The challenges facing academic libraries in the 21st century*. Available from World Wide Web: <http://www.mhpbooks.com/the-challenges-facing-academic-libraries-in-the-21st-century/>
- Nonthacumjane, P. (2011). *Key skills and competencies of a new generation of LIS professionals*. *IFLA journal*, 37(4), 280-288.

- Nowlan, G. A. (2015). "Developing and implementing 3D printing services in an academic library." *Library Hi Tech* 33(4): 472-479.
- Oname, I. M., & Alex-Nmecha, J. C. (2020). Artificial intelligence in libraries. In *Managing and adapting library information services for future users* (pp. 120-144). IGI Global.
- Ramzan, M, Hussain, A & Ahmad, Z. (2019): *New Paradigm New Practices and New Professionalism Needed to Meet Modern World Library Challenges. Library Philosophy and Practice* (e-journal). 3794.
<https://digitalcommons.unl.edu/libphilprac/3794>
- Rossiter, A. (2012). *Professional development advice for academic librarians*. Available from World Wide Web: <http://www.guardian.co.uk/higher-education-network/blog/2012/mar/22/professional-development-for-academic-librarians>
- Verma, M. K.(2015): *Changing Role of Library Professional in Digital Environment: A Study*. Mizoram University, Aizawl-796004. 13(2)
<http://ceserpublications.com/index.php/IJLS/article/view/89>