The University Library as an Innovation and Knowledge Services Centre: A case from Nigeria

Chinwe Veronica Anunobi
University Library, Federal University of Technology, Owerri, Nigeria.
E-mail address: chiinobis@yahoo.com

Colette Onyebinama
University Library, Federal University of Technology , Owerri, Nigeria.
E-mail address: ocoletteihuoma@yahoo.com

Abstract:

Before the advent of information and knowledge driven economy, industry was the central focus for economic development of any society. However   the turn of century brought about changes which placed information and knowledge at the centre of any development framework. These changes have strengthened the role of the university, and its mandate to produce and inject knowledge through research, teaching and learning. The university's mandate places the library's functions: to acquire, process, organize and disseminate information, at the core of the university's foundation. New pedagogical changes arising from this change as well as mindset of the university community require the library, as the university core subsystem, to step up its operations and services.   The paper is designed to showcase the approach the Library of the Federal University of Technology, Owerri, Nigeria (FUTO) has taken to introduce innovative knowledge services to address the new expectations of its clientele.

Keywords: Innovation knowledge services, Innovative library services, Library Golden circle, Universities, Library services, Nigeria

Introduction

It is almost stating the obvious that the establishment of a university is synonymous with the establishment of a university library. This is expected since the university is regarded as the centre of learning and excellence, where knowledge is acquired processed and disseminated. The pedagogical platform of university education and mindset of the society remained

unchanged for a long time. During that era, industry was the central focus of any economic growth.

Change became imperative with the advent of information and communication technology which revolutionized societal growth from industry-based economy to knowledge-based economy. The mode of knowledge generation, transmission and use was transformed globally. Consequently, pedagogical changes and product expectation of university system began to affect every subsystem in the university. Productivity in the university system (graduates) began to have a quantum leap. The result of the change in the elements of university system (input, processing and output) is a change in university library as a subsystem. University library needed to redefine its services and products to add value to the system it serves and enhance its competitive advantage. To achieve the aforementioned, the University Library, Federal University of Technology Owerri (FUTO) repositioned itself as innovative knowledge services centre.

The Library Federal University Of Technology, Owerri (FUTO Library) As Innovation And Knowledge Service Centre And the Rush To Use The Library.

The Library FUTO was establish on 3rd August, 1981 with the mandate to provide information resources to the students, staff and surrounding community for education ,research and relaxation It is considered and recognized as a major service unit of the University. From its humble beginning with 2,500 volumes of resources, 22 staff providing traditional library services to 80 students in a small hall, it evolved to 96,501 volumes of resources, 124 staffers providing 24,700 users with innovative knowledge service activities. The library as established held esteemed position internally and externally in view of its excellent organizational, operational and services structure. Its organizational outlook was unequaled as it is designed along global libraries structure that positions the university librarian as the chief administrative officer supported by other operational heads. Operationally, there was the collection development, technical services and user services. Collection development and technical services were regarded as the major operational units with the responsibility to source, acquire and process the resources of the library. The user services unit enjoyed the monopoly of providing the environment and other services to ensure the use of acquired resources. Circulation, reference, bibliographic and use of library services were the major preoccupation of the user services unit. The environment and services as provided were not challenged due to the near non-existence of alternative services outlet. The initial position of library as the hub of the university is presented in Figure 1.
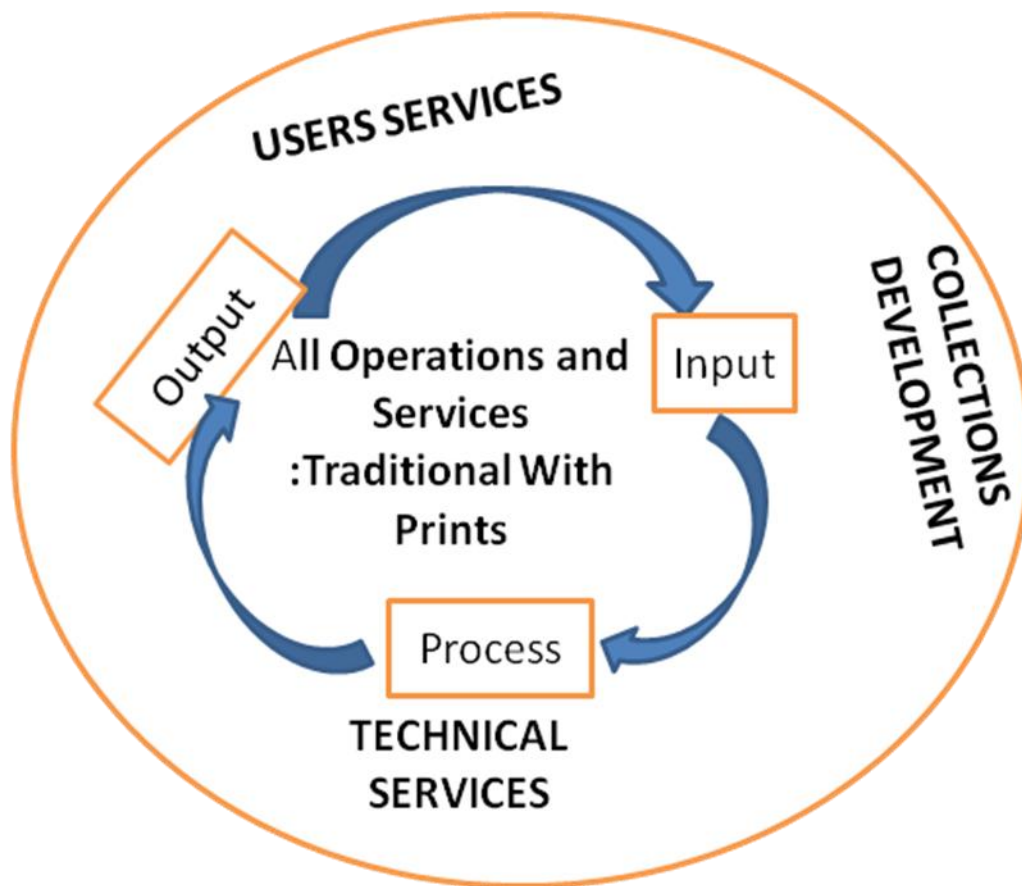
Figure 1: Traditional Structure of FUTO Library

The activities as presented in Figure 1 involve efforts to provide services in print non-competitive environment. The services so provided could pass for Knowledge Intensive Service (KIS) provided by the university library to the university community. This corroborates the definition of Knowledge Intensive Service (KIS) by Lee, Shim Jeong and Hwang (2003) as service activities provided either internally or externally to a firm, in manufacturing or service sectors. It is a specialized service which only the library in the university system provides to members of the university community (staff, students and surrounding community) as suggested by Hipp ,Tether and Milos (2000).

Despite the central position of the Library for the provision of resources for teaching, learning and research , transformation engendered a rethink of its claim as a service centre. Recent developments in global community shift emphasis to information and knowledge as major factor of growth while the changing mode of information and knowledge packaging threaten the service provision mode of university library which brought a new wave of challenges and expectation (Research and Information Network report (2007). Lee, Shim Jeong and Hwang (2003) positioned that information and communication technology has become a very important

part of knowledge intensive services which is variously applied in the development of other services.

The Changing Situation

The evolving situation informed by ICT presented both internal and external challenges to the university library. Internally, members of the university community began to question the role and justification for the existence of the university library. Externally, ICT related knowledge and information providers began to make incursions into the mandate of the university library. Consequently, the Library considered the elements of knowledge intensive services activities (KISA) as a starting point for redefinition of it operations and services. These elements according to Lee, Shim, Jeong and Hwang (2003) include:

- KISA provides user firms with capabilities in the operation and management of technological systems and information activities;
- Intergeneration of ICT has changed characteristics of systems provided;
- Innovation in any knowledge intensive service sector is propelled by ICT;
- Knowledge intensive service sector are lead users of ICT;
- The application of innovation in service sector has influenced productivity and growth and result in further innovation ; and
- Service innovation brings about organizational change and reduces organizational hierarchies by de-layering which creates flatter organization.

The enumerated elements with the views of Hipp ,Tether and Milos (2000) on KIS propelled the University Library Management to have a rethink on its services . The Library was first positioned to stand on a tripod question as provided by Hetz (2014) with the Golden Circle – why, how, and what. The nucleus and action is as presented in Figure 2:
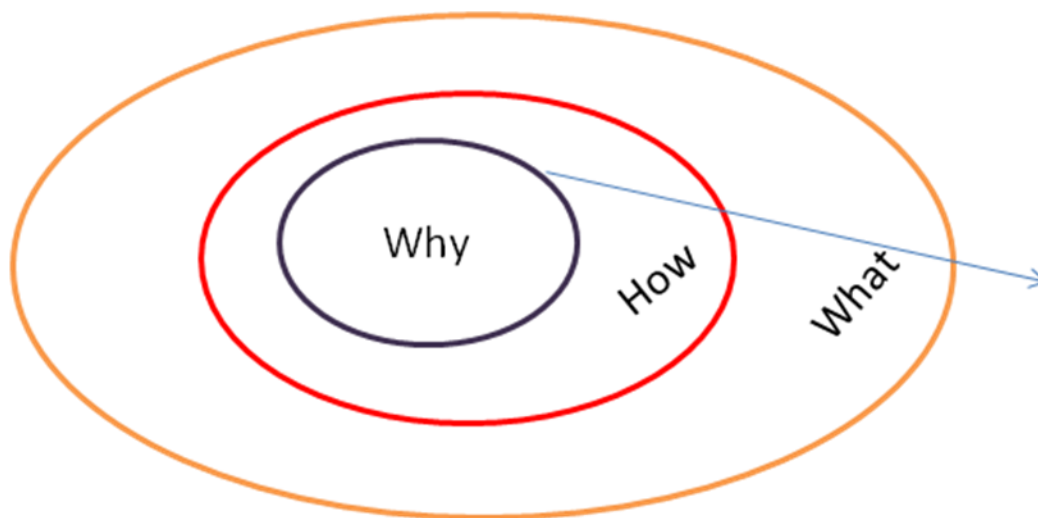
Figure 2: The Golden Circle (Hertz, 2014)

Figure 2 shows the approach the University Library adopted in the application of Golden Circle communication and plan of action which denoted action from inside out. The plan positioned the Library to consider 'why' it should engage in any service activity, 'how' it should be applied and 'what' will be the product. The bottom line is that transformation took place leading to the Library ascensions to innovation services provision. The Library reflected and addressed the following as it affects the service receiver (University community)

Pressure Point
The Library sought to determine the areas of pressure that has eluded its central position as Knowledge Service Centre(KSC) in the university. Evidence abound that the university community and environs are more disposed to digital contents. Other knowledge service centres are available to provide digital contents in acceptable manner. Current resources are readily available in electronic format which users can easily access with portable devices beating space and time. Digital resources can easily be stored and own in the users' digital devices. The university community knowledge base (indigenous resources) can easily be preserved and used for increase productivity and competence with little or no input from the university library. Furthermore knowledge acquisition, creation and re-creation through teaching, learning and research have no geographical barrier.

FUTO Library as a Place
FUTO Library as a place for learning and research was threatened The technology-based nature of the university has always propelled members of the community to resort to the library for lecture (course) preparation, as study environment , borrow state- of- the-art resources and as a conducive environment for research. However, the clock-in count began to dwindle. The

postulation was as presented by Lombardo & Condic (2001), that when library environment does not encourage users, they may resort to alternative method of actualizing their information needs. The environmental indicators in FUTO library including the building, furniture and its arrangement, the temperature, library decor, signage and noise level were areas to apply the Golden circle.

Library Users' Behaviour

The position of the library as a sole KSC was also questioned by members of the university community who still considered the University Library relevant. Many resorted to Online Public Access Catalogue to locate resources in the Library. Only very few use print based access points (print catalogue and indexes). Collection of CDROM containing theses/dissertation and as well as programmes accompanying textbook were the toast of library users for borrowing and loans. Laptops and electronic devices were the major engaging facilities in and around the Library environment. The rate of borrowing and use of print library resources continued to dwindle. Current print and bound newspapers were rarely in use. Physical reference services were not used any longer. Requests were frequently made of electronic databases which the library has subscribed to as well as the demand for e-mail of scanned print resources. Requests were made of search results of electronic information resources rather than bibliographic compilation of knowledge resources within and outside the library. The clarion call for establishment of electronic branch libraries with remote access to the bibliographic databases of the Main library was overwhelming.

Consequently, the Library engaged the 'Golden Circle' to justify the position of the Research and Information Network report (2007) that "the successful research library of the future needs to forge a stronger identity within the institution. FUTO Library engaged in innovation service which Lee, Shim, Jeong and Hwang (2003) described as the renewal of an organization, its products and services. The Library then positioned itself to represent innovation knowledge service centre which involves the transformation to service economy associated with productivity growth. Productivity growth in the university comprises providing the necessary input, processing it and the production of greater output. This move is associated with innovation (Lee, Shim, Jeong and Hwang 2003) through the deployment of Golden Circle elements - **how, why and what.**

New Ways of Working as Innovation Knowledge Service Centre(IKSC)

The Library's new ways of working was anchored on the need to provide innovative knowledge services (IKS) that will not only be transformative through the adoption of the Golden Circle elements but offer solutions to the changing university community views and approach to the library as well as increase productivity. This justifies the position of Gardrey, Gallouj, &

Weinstein (1995) that service innovation is effort to proffer solution to problems which does not involve supply of goods. The start point was to determine the why of: our organizational structure, operation and the services we offer. Secondly to determine the 'how' best to engage the operations and services activities. Finally, "what" will be the outcome of the 'whys' and the 'how's'.

The initial question was why must FUTO Library continue to exist and maintain its pride of place as knowledge service centre? Why should it continue to maintain the traditional service structure? Why should it continue to maintain the operation and services of Collections Development, Technical Services and User Services? The point by point activities were analyzed and the whys of each determined. The result was the new organizational/operational structure as well as services as presented in Figure 3

FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI

THE LIBRARY ORGANOGRAM

CO-ORDINATOR
REPROGRAPHY & BINDERY SUB- UNIT

UNIVERSITY LIBRARIAN

SECRETARIAL STAFF

CO-ORDINATOR INFOR. & COMM. TECH. UNIT (ICT)

CO-ORDINATOR SERIALS UNIT
- Projects
- Journals
- Newspapers and Magazines

CO-ORDINATOR ACQUISITION UNIT
- Book Selection
- Ordering
- Stamping
- Accessioning
- Carding
- Payment Instruction
- Statistics

CO-ORDINATOR BOOK PROCESSING UNIT
- Cataloguing & Classification
- Lettering
- Card Production & Maintenance
- Filing

CO-ORDINATOR USERS SERVICES UNIT
- Circulation
- Reference
- Bibliographical Services
- User Statistics

WEB SERVICES
- Electronic resources & other Internet related Services

Automation
- Data Entry
- Editing
- CD Management
- User Services/Statistics

INSTITUTION REPOSITORY
- Collation & Acquisition Digitization
- Metadata
- Services

CO-ORDINATOR BRANCH/SCHOOL LIBRARY
- School /Faculty Library
- Departmental Library

CO-ORDINATOR RESEARCH TRAINING & STATISTICS UNIT

CO-ORDINATOR DOCUMENTS/ LIGHT READING UNIT
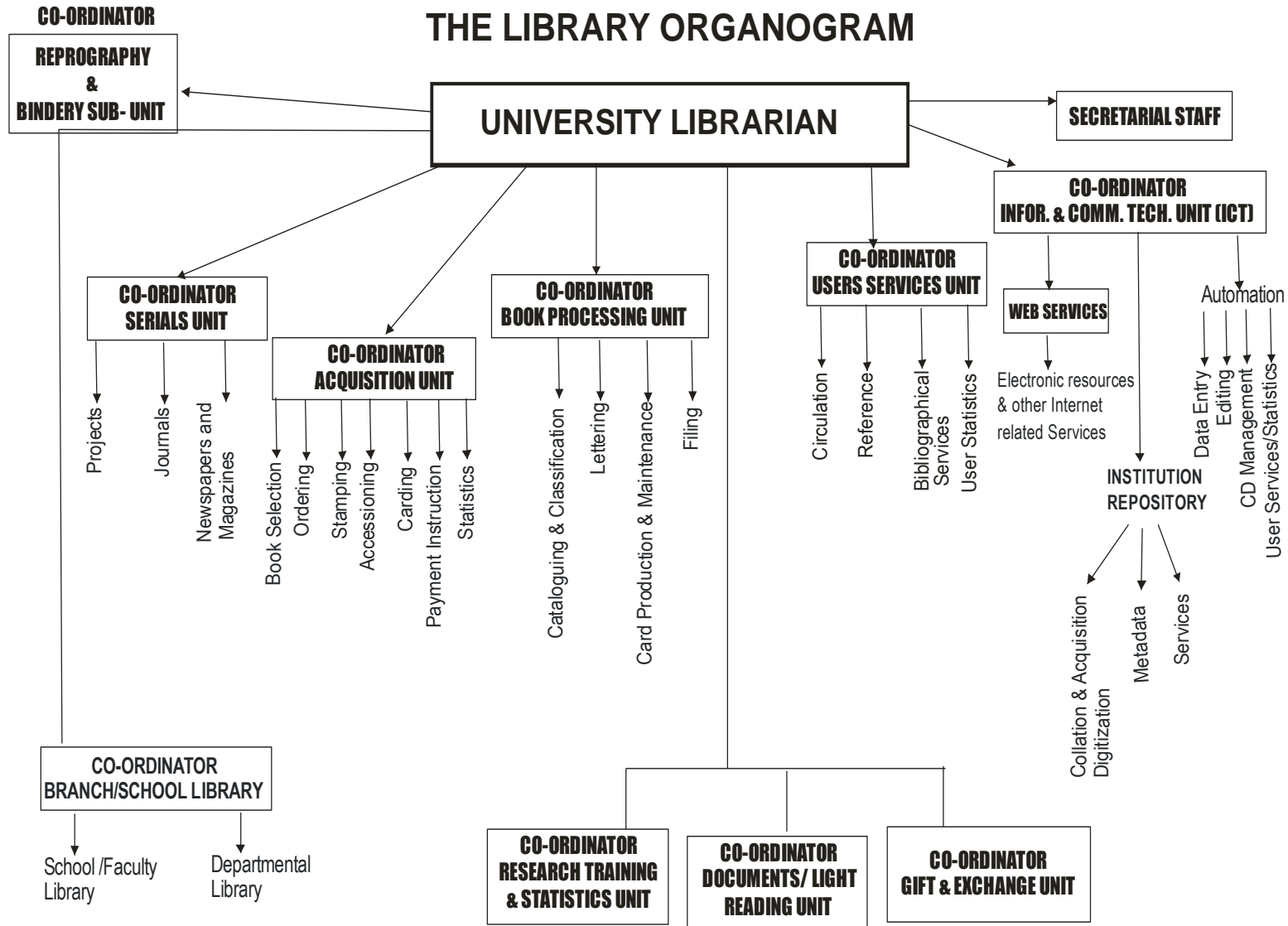
CO-ORDINATOR GIFT & EXCHANGE UNIT

Figure 3: The new Organogram of FUTO Library

The structure became bedrock for new operations and services which was innovative with a view to ensuring greater output (product) in form of providing services for improved productivity in FUTO as a University.

How did we achieve this-?
- Provision of innovation services (New ways of providing services);
- Changing the way we relate with the university community; and
- Changing the environment of the library.

Provision of Innovation   Services

It was clear that as posited by Hambo and Hansen, (2012) that the traditional services which seems meaningful to libraries may not be meaningful for library users. To them libraries must be abreast of the changing needs of users. Applying the users logic which means placing the users instead of library in the centre (Hambo & Hansen 2012) , the 'how' of the Golden Circle became more realistic. We designed services that will address the pressure points, and the library user behaviour.

The central location of the Library   allowed for the provision of Electronic Notice Board with multimedia projecting screen. Current Awareness Information Services (CAS) on the happenings in and round the University as well as newspaper information snapshots was displayed electronically for user community perusal. This innovation later evolved to Electronic Dashboard where users converge for information.

The Library engaged in the Innovation Knowledge Service using Library 2.0 opportunities to meet them where they are likely to be found. All freshmen of the university are engaged in networking as well as collaborating with the University Library virtually by following the library   on   twitter,   facebook   and   blog.   (twitter.com/futolibrary, www.facebook.com/futolibrary,and www.futolibrary.wordpess.com respectively).   New resources in print or electronic forms are domicile in FUTO Library website (Library.futo.edu.ng) while awareness is created using the library 2.0 windows of the Library. Instant messages as well as e-reference services are provided through the FUTO Library mailbox and GSM (library@futo.edu.ng and service hotline respectively).

Internally generated information resources of the University are   converted to electronic format, hosted in the FUTO Library website or pointers made to FUTOSpace (the Institutional Repository) as developed by the Library. E-books, theses and dissertations, question papers, lectures, journals articles, etc are made available for download on registration in Library website.

E-books and e-journals are acquired and processed into the Library Server for remote access via the Library LAN. Users who registered in the Library website have the opportunity to click and download into personal devices.

As a knowledge service centre which applies ICT to enhance productivity, the Library collaborates with Postgraduate School and students to handle technologies relating to the final production of theses and dissertations. The community is supported on the ways and means of slide preparation and use of application software in the preparation of university acceptable electronic copies of theses and dissertations. This corroborates the views of Lee, Shim, Jeong and Hwang (2003 that KISA provides user firms with capabilities in the operation and management of technological systems and information activities. The later is also evident in the Library participation on the use of interactive board in the University for teaching and learning, as well as virtual interactions on the use of computer applications and databases without physical contact with the library. All service is geared towards averting the apathy to library and information resources use, enhance academic excellence in teaching, learning and research for quality graduates.

Library 2.0 is used to expose the users to available knowledge and knowledge harnessing platforms. User communities are encouraged to make their requests (information) and provide insight and thoughts on issues and services.

The Library's move to address users' behaviour on their mode of access was achieved through remote and in-library access to all resources through the Integrated Library Management System – 'Alexandra'. Alexandra platform serves as one click point for all Library's bibliographic and full text electronic information resources.

Distance and space issues were addressed through the establishment of branch libraries in each of the faculties. Access is linked to the Alexandra platform. The challenge arising from dispersed location of faculty and lecture halls was resolved by the decentralized library services driven by ICT. Faculty/lecture hall delivery of resources on demand is being adopted.

The Library moved beyond the branch library to become part of the "users' way of doing things' (Drewes and Hoffmen 2010). Embedded library services became a very engaging outfit designed to "bring the resources and services of the library close to the point of use, (Library Memo to Deans 2014, Drewes and Hoffmen 2010, Shumaker and Talley 2009). Embedded services doubled up as service as well as visibility and enlightenment process. The Library innovated the service 'Not Just Book '. Non-book facilities – umbrella, raincoats, and laptops are offered to users on short loans.

Changing the Way We Relate with the Community

One of the major 'how's of FUTO Library as innovative knowledge Service Centre is to address not only the communities' mindset on the library but also to demonstrate the difference. Through the embedded librarians, the Library became part of most lectures in the University. They were able to form strong work relationship with their users, engage and communicate with them effectively, thus providing effective knowledge resources assistance (Shumaker & Makin, 2013). Embedded librarians provide ready reference while assisting users in research and assignments as posited by Shunmaker & Talley (2009).

Interaction with students is taking the form of extended physical and virtual orientations as well as the use of flyers and improved signage.

The University Librarian also used her office as member of the University management to convincingly demonstrate what the Library can offer when provided with the necessary support .

Changing the Environment of the Library

The 'how' of innovation on changing the environment of the Library was addressed as follows:

- Old chairs were replaced with new and comfortable ones. The reading tables are yet to be address due to thier cost intensive nature.
- Conducive environment was provided through the installation of air-conditioners and fans as well as improved the lightening in the reading areas.
- Above all the state-of-the-art library building which could be considered 'e' in all ramifications was constructed. This is to ensure that members of the community who still need the physical environment will be fully adjusted.

Evidence Based Success Story

The success of FUTO Library as innovation knowledge service centre (IKSC) is demonstrated by the increase productivity which provides answer to the 'what' of its services. Implicit and explicit evidence revealed that the Library rating has increased. Its central position as academic support centre is appreciated.

Testimonies

Professional librarians within and outside the University acknowledged that FUTO Library is fully engaging knowledge-wise. The professional librarians are challenged by the demands of the new services to dig into literature as their mandate exposes them to both pear and user community assessment. Professional librarians are called to step up their competencies in rendering Innovation Knowledge Service Activities (IKSA). Consequently, many are benefiting from trainings which university has gladly supported. Librarians are

engaged in research on how to harness knowledge and support university education.

There is quantum leap in service delivery/output: FUTOSpace (The University Institutional repository) is fully populated with electronic and scanned theses, dissertations, inaugural lectures, journal articles, question papers etc. Automation is in top gear with platform migration for '**Alice for Windows'** – a non-interactive non-web-based application to '**Alexandra'**; social media services – facebook, twitter, blog, instant messaging/chat are fully engaging and serve as means of harnessing knowledge from the community for expanded knowledge as well as feedback mechanism.

Increased use in services resulting from the virtual contact and embedded activities become the joy of the service provider (Library) and the receiver (User community). University management testifies of improved, enhanced and innovative services rendered by the University Library. Management is fully disposed to step up fund allocation to the Library.

Faculty and other academic units testimony is that the 'Library is now working'. It is available within and virtually to render services. Students demonstrate stronger confidence in the University Library. One- on- one services as well as ICT user support are enjoyed on daily basis. The University Library becomes the place to be for steady power source and environment conducive for reading and research.

Statistics

Evidence based statistics show changes in service delivery as well as changes in the number of users. The changes in service delivery are the consequence of evolution from the traditional to IKSC. Though evolving service delivery was gradually taking root in the Library, it became apparent from 2014. New services involving deployment of library 2.0 are consolidated by way of blogging , facebook, twitter and instant messaging . From social media services none use in 2013, every newly registered student enjoy the services we offer on the social media while the old ones are joining. From the one branch library services in 2013 , 5 branch library services are provided in 2016 all supported with the activities of 12 embedded librarians to the faculties. Institutional repository –FUTOspace is being populated and the content has increased from 120 in 2014 to 2321 in May 2016. The user community is now enjoying the web-based integrated library management system- Alexandra which was used to replace Alice for Windows in 2014. Significant increase was evident in the Library use registration, materials consultation and clock in count. The number of registered users rose from less than one thousand in 2013 to above five thousand May 2016. Consultation of physical resources increased from 10,466 in 2013 through 22,534 in 2014 to 24,374 in 2015. Clock in to use the Library rose from 7,920 in 2013 through 12,425 in 2014 to 24,889 in 2015. E-resources databases provided to satisfy the evolving demand for electronic resources include Science Direct, Ebscohost, Research4life databases, TEEAL and other free electronic resources .

Statistical evidence shows that the three types of services innovation involved in knowledge intensive services as note by Pressl (2000) are provided for namely: innovation initiated by the library and expected to be relevant to future user, innovation demanded by library users to solve their problems and the service provided by the library though not innovative but becomes one through interaction with the user . The later is experienced in the use of library website and social media by FUTO community. User community presently interacts with the Library and provide their inputs to enhance the services as needed. The change in environment as well as enhanced access point could have contributed to the increase in use of library and the resources. Innovation services to overcome the pressure points and user behaviour resulted in increasing provision and use of electronic services (Innovation demanded by Library users)**.**

Global Impact

The University Library global impact was demonstrated by the web ranking of the University from 48th in 2011 to 8th position of the 100 universities in Nigeria in 2016. The Library's virtual activities employing the website and marketed by the social media platforms enhanced visibility of the University. Research outputs and other indigenous knowledge resources as well as activities of the University are made available online in real time. The result is enhanced visibility of the faculty members in particular and the university in general. The University faculties through the visibility are enjoying international linkages and engagements. Quality graduates who are ranked tops in national interview are produced.

Barriers/Challenges

Innovation knowledge services are transformative requiring the renewal of organization and its services. Such activities are usually met with challenges from different angles.

Library Front

Hermon & Whiteman (2009) posited that "attitude and role of staff members are key factors in any service organization that values its customers". This means that the success or failure of any innovative activity rests on the effectiveness, commitment and competences of the staff driving it. FUTO Library consists of the zealous technophilic and the clock-in to wait for salary staff. To the zealous type, it is time to learn and demonstrate the position of the library as academic support unit. To the later, "innovation is simply a move to disturb the peaceful traditional mode of service or arm chair library service. They tend to discourage and frustrate efforts to ensure IKSA in the Library. They avert to new competences needed to drive the innovation. The Library also struggles with facilities and technology failure. Such failures typically truncates services and frustrate staff and users (Kulkarm 2012).

University Management

Though management are receptive to developments in the Library which are yielding fruits, unity of purpose to support such efforts often eludes it. In view of the place of ICT for the

actualization of IKSA, FUTO Library requires heavy investment in ICT. The later is cost intensive and some members of management do not accent to increase funds for library activities.

Competition

The Library is faced with keen competition with external and internal ICT services stakeholders who demonstrate their capacity to deploy any e- services rendered by the University Library. The ICT Directorate of the University, departments with ICT- based programmes and suppliers of ICT hardware/ software are challenging the import of University's focus on the Library.

Detractors

Apart from the effort of ICT competitors, some members of the University community continue to insist on the irrelevance of the University Library for teaching, learning and research. Their lecture notes and use of Internet from any source suffice. To them, the University can provide a conducive environment for Internet access and disposed of the Library.

University Community

One of the major challenges of the IKSA of the Library is the University community ignorance of the services rendered, their incompetence to use the available as well as the poor reading culture of the community. A cursory observation shows that majority of the university community members are not abreast of the innovation services the Library offers. Again many shy away from the use due to lack of skill to utilize them. Furthermore, the University community is suffering from the lack of reading culture. To them library or no library the University will continue to exist.

Conclusion

The whole essence of any innovation knowledge service is to move organization from the primary state to a state of competitive advantage through the provision of three major type of service driven by ICT- anticipated service to increase production, on demand service by the members of the organization and services though not innovation driven but becomes so due to interaction of the existing service with the user firm. FUTO library which was founded on traditional service sensed its eluding role as the university's core resource, applied the Golden circle elements of why it will continue to provide its services, how the services will be provided and what will be the outcome of the services to justify the new service mode of Innovation Knowledge Services. The innovation activities are evident in the change in the Library physical environment, operational procedure and services leading to enhanced university access to global and indigenous knowledge which has increased the production capacity of the university (output). Consequently quality services and resources of the library are accessed and used, the University is enjoying increased visibility, quality

research and teaching are carried out by faculty, quality graduates who can confidently secure employment opportunities in highly rated companies are produced and the Library's position in the University is consolidated .

Recommendation

University Library transformation to Innovation Knowledge Service Center should be of utmost concern to its survival. FUTO library experience and success story is a pointer that it is achievable. However the member of the subsystem (University Library) should be on their toes and ready to

- Provide answers to: How , why and what of the university expectation of the library;
- Ensure that technology which drives innovation does not elude the library;
- Think out of the box and push out of the envelop;
- Market the Library and seek value for operations and services provided.

Acknowledgments

References

Drewes, K. & Hoffman, N. (2010) Academic embedded librarianship: an introduction . *Public Services Quarterly* 6, 75-82.

Gadrey J, Gallouj F, Weinstein O (1995) New modes of innovation. How services benefit industry. Int J Serv Ind Manag 6(3),4–16.

Harbo , K. & Hensen , T.V (2012) Getting to know library users' needs – experimental ways to user- central library innovation. *Liber Quarterly* 21 (3/4), 367 - 385.

 Hermon, P. & Whiteman, J.R. (2009) Delivering. satisfaction and service quality: a customer based approach for libraries. New Delhi, ALA Indians.

Hetz, Hanni (2014): Participant Introductions and Discussion of Library needs. In Managing University Libraries for Online Education International Seminar Organized by Galilee International Management Institute, Israel, 14-27 November, 2014.

Hipp C., Tether, B., Miles, I (2000) The incidence and effects of innovation in services: evidence from Germany. *International Journal of Innovation Management* 4(4), 417–454.

Kulkarni, M.K. Deshpande, N.J. (2012). Empowering library users, establishing channel of communication for service quality expectation of trainers from Government Administrative Training Institute (ATI) Libraries in India. World Library and Information Congress: 78th

IFLA General Conference and Assembly Accessed from http://conference. Ifla.org/ifla 78. Feb. 10, 2016.

 Lee, K., Shim, S., Jeong, B., and Hwang, J. (2003): Knowledge Intensive Services Activities (KISAs) in Korea's Innovation System, 202 strategic Research Partnership of KDI. (www.springer.com/cda/content/.../cda.../9783642346750-c2.pdf) Accessed Feb. 3, 2016.

Lombardo, S.V. and Condic K.S. (2001) Convenience or content: a study of Undergraduate Periodical Use. *Reference Services Review* 29(40), 332-338.
Research Information Network and the Consortium of Research Libraries (2007) Researchers' use of Academic Libraries and their services. Accessed from   www.rin.ac.uk. On Feb 10, 2016.

Shumaker, D. & Talley M. (2009): Models of embedded librarianship: Final report. Chicago: Special Libraries Association Review.   Accessed from http://www.sla.org/pdfs/Embedded librarianship final report Rev. pdf. On Feb. 10, 2016.

Shumaker, D. and Makin, A(2013) Lessons from Successful embedded librarians . Access https://www.sla.org/wp-content/uploads/2013/05/Lessons_from_Successful.pdf on Feb., 13, 2016 .