CHAPTER ELEVEN

CREATING COLLABORATIVE LEARNING SPACES (MAKERSPACES) AS IMPETUS FOR SUSTAINABLE CHANGE IN NIGERIAN FEDERAL POLYTECHNIC AND MONOTECHNIC LIBRARIES

Sokoya, Abiola Abosede
Deputy Polytechnic Librarian,
Yaba College of Technology, Lagos, Nigeria
aasokoya@yahoo.co.uk

Alabi, Adefunke Olanike
Technical Services Department,
University Library
University of Lagos, Lagos, Nigeria
oladesh@yahoo.com

Abstract

Increased access to information and knowledge is an essential pillar for complete library service for sustainable development in the community. Library services could be well developed through strategic planning for sustainable change. This will include balancing the traditional library service with virtual service to meet digital need of library users. But much more, the trend globally is to develop information services that will meet the information needs of today's users. The 21st century library users information needs now encompass access to online information, vocational training for skilled employment, job advertisement and so forth. Libraries these days do not exist solely for the purpose of borrowing books or offering a quiet place to study. There is now a pressing need on higher institution library such as ours to develop and devote spaces for collaborative learning/workspace. This study examined how polytechnic and monotechnic libraries in Nigeria are bringing about sustainable change in library services. Sustainable change in library service provision could be seen in innovative physical designs, seating arrangements, use of physical spaces, particularly for collaborative learning, popularly known as maker spaces. The study population was drawn from librarians and library patrons in federal polytechnic and monotechnic in Lagos State, Nigeria. Convenience sampling technique was utilised to determine sample size for the study. Data were gathered through questionnaire, interview and observation. Data were analysed using descriptive statistics and thematic content analysis. Ethical procedures for obtaining data from participants were ensured. The

findings of the study were presented using appropriate techniques, and recommendations were provided based on findings. The outcome of this study is capable of enhancing library services in higher institutions in Nigeria.
Keywords: Collaborative learning, sustainable change, Nigerian Federal Polytechnic libraries

Introduction

Library services was been carried out in the most traditional ways of processing books, charging, discharging books and providing conducive silent reading arena for library users. This traditional style of service was majorly in giving the most of the available space in the library to book shelves, reading tables and chairs. The then free library service attracted large influx of users who could be said to be the product of the then influential aristocrats who love books and reading. Library was highly embraced for its role as information and knowledge custodian. According to Abdulsalam (2013) library is a place where ideas, knowledge and experience of great men, though dead, continues to live. The process of discharging library service and usage took a new turn with the advent of ICT and Internet use in the library as it were with other professional services for sustenance. The Internet brought the library into digital age; of fast and better job performance, easy and fast service delivery to larger users in a short time but not without its many challenges. To curb some of the challenges on the down turn of library patronage, service and setting there is a desperate need for library to take bold steps that could bring more users and to be able to meet the users' information need through different creative changes for better service and sustenance (Kylie 2011). Different literature has been put up on ways to effect change in library service for better patronage but this paper aimed at examining how polytechnic and monotechnic libraries in Nigeria could transform library services through space creation/transformation for collaborative learning, popularly known as maker spaces.

Literature Review

For the past years in operation, library is known with the traditional role as information and knowledge custodian; a place for building knowledge through diverse service. Library according to Abdulsalam (2013) is the house of learning that plays in the development of its environment and the society at large. Today library service has gone pass charging and discharging of books and information material as the Internet now give room for storing many book shelves thereby

leaving a large physical arena free within the library. Therefore such free arena without book shelves, reading tables and chairs should not be left void but could be put to other uses by the library management still for service oriented ventures. This venture could be practical hands-on service for library users' for knowledge development and sustenance. In recent time, such free spaces are set aside for training library users on skill development and learning (Sanjana 2013). Maker space is an innovative service to reshape the library service for sustainable change in some area in the library setting, service and for library users. Increase access to information and knowledge is an essential pillar for complete library service for sustainable development in the community. Library services could be well developed through strategic planning for sustainable change by using the knowledge and skills of library staff in helping users through collaborative efforts. This could include balancing the traditional library service with virtual service to meet the need for innovative service; space creation, digital needs of library users. Though some library users may tend to value traditional service much more with an emphasis on borrowing books, yet the yearning of young adults towards modernisation of library services, enhancements of the Internet facilities such as Wi-Fi, eBooks etc and knowledge for new skills should be included in plan for facelift of library service.

Therefore, space for group discussion, training, quiet study, and computer section for divers services could move the library to the new trend of service delivery. Makerspace as addition to the library service could be well developed with strategic plans that will foster influx of users for diverse need; help with finding information online for sustainable change such as job seeking, vocational training for skilled employment or entrepreneurial services (Alison 2016). Libraries could engage in community service; providing information that could be of immense benefits to young adults and help adults in their business endeavours (Natalie 2014). The innovation for learning space revamp could be well achieved with the move to re-shape library setting. Rebecca (2013) opined that reshaping library structure for makerspace could simply involve re-arranging available space in the library for such purpose without demolishing the library. Another approach to having maker spaces in the library is to design instructional opportunities for library patrons through collaboration between librarians and IT staff (Bennett 2009). Maker spaces encompass variety of resources and activities that will enhance learning in (Burke 2014). According to Arlee (2013) introduction of makerspaces in the library is a collaborative learning programme enjoined in the library environment where people come together to share materials and learn new skills.

Makerspace is a mindset for partnerships, collaboration among the library and experts in the different fields. Sanjana (2013) expressed that library serve many diverse functions to meet users information needs at demand. Makerspace is avenue to sustain library to be more creative in service to stand the wave of digital age and still be in business. According to Anglada, (2014) Sustainability is the capacities to endure over time for library and librarians to stand the test of digital information explosion. Mary et.el (2017) suggested the need for library to introduce radical phase lift in their role of services delivery for sustainable change. The sudden increase in student population should be met with the introduction of skilful practical services through training anchored by the library. Makerspace could be used to entice the new and old students in academic institution to patronise library service. It is also capable of transforming the library and meet the need of the digital generation of library users. The said change is not to erase or neglect the traditional ways of library service but rather to introduce additional ways of meeting library users' information need in more salient ways. It is also capable of allowing creative collaboration among diverse group of patrons such as faculty, students and experts in different fields of study to help with knowledge sharing/acquisition right inside the library.

According to Mary (2017) makerspace promotes sustainability of library services and relevance to the community in partnership with professionals. Makerspace is space for creativity in the library which could impact on people and bring people with same interest together, and their interaction can bring about a positive change in the community. Makerspaces could be creative seating arrangement to meet different users' need, to stimulate higher rate of concentration and assimilation. Rearrangement of readers seating arena could influence special group discussion on different areas of common interest. Sometimes rearrangement of the whole library could bring about special creative room for use at different times either as a workstation; fashion shop, art and craft studio, or technology lab. Library is going through tremendous changes away from the traditional the purpose of borrowing books or offering a quiet place to study. To a large extent library is changing from the traditional role of their cardinal rule of silence to creating services that will bring collaboration for sustenance. This is making library to wearing a new face for more collaborative activities such as learning environments; makerspaces, innovative physical designs, seating rearrangements, and the availability of accessible, emerging technologies. (Natalie 2014).

Research Questions

- To what extent are technologies provided in the library?
- To what extent do you appreciate these technologies to work for makerspace?
- To what extent can makerspace help your library users?
- To what extent will makerspace contribute to your library service?
- How well can this vision of creating makerspaces in libraries be sold to management of the institution?

Methodology

The study population was drawn from librarians, ICT staff and library patrons in both Federal polytechnic and monotechnic in Lagos State, Nigeria. The research was conducted in one state out of the six states in South West Nigeria. Using convenience sampling technique, two institutions were chosen for the study: Yaba College of Technology and Federal Technical College of Education. The sample size of the study comprised librarians, ICT staff and library patrons; totaling 65 respondents including polytechnic librarians, library staff and library patrons, however 56 (90%) useful questionnaires were retrieved and used for this study. Simple random sampling technique was utilised to select library patrons who participated in the study while the census method was utilised to select participants for the interview. Questionnaire, interview and observation methods were used to gather data. Data gathered through questionnaire were analysed using descriptive statistics while data gathered through interview was analysed using thematic content analysis. Ethical procedures for obtaining data from participants were ensured.

Data Analysis

The age rage of the respondents was between 40-49years while 45% were male and 55% were female. In the final analysis 12% of the respondents were librarians, 35% were library patrons and 53% were ICT staff.

PL	LIBRARY PATRONS	ICT TECHNOLOGY
12%	35%	53%

Table above shows the percentage of the respondents to the questionnaire for the study. However 53% of the ICT library staff, 35% of the library patrons and just 12% of library core librarians' suggested the provision of the following facilities to make makerspace functional in the library.

Suggested Facilities and Tools for Makerspace in the Library

1. Rearrangement of library setting to make for enough space for makerspace
2. Provision of Modern ICT Technology
3. Staff Training and Development on Modern Technology
4. Audio Visual Room/Space for Collaboration Leaving
5. Create makerspace awareness: Taking a bold step in visiting all the faculty member and students to tell them about the new innovation in library service; making space and tools available in the library as a way to develop and improve on users' skills.

The result shows that 13 out of 23 respondents are aware of makerspace in the library while 10% were not aware of makerspace or improved technologies/activities or the importance of makerspace.

Available Technologies and Activities in the Library

No.	Technologies/Activities	Available	Not Available
1	3D Printer	44%	56%
2	Video Editing	34%	66%
3	Computer Programming Lab	40%	60%
4	Art And Craft	-	-
5	High Quality Scanner	56%	44%
6	Creating Websites	41%	59%
7	Digital Music Recording	36%	64%
8	3D Modeling	17%	83%
9	Tinkering Room	-	-
10	Robatic Kitz	10%	90%
11	Creating App	-	-
12	Wood Carving Machines	46%	54%s
13	Sewing Machine	20%	80%
14	Equipment Owned at Photocopying Arc of Eng	-	-
15	Workshop Starting A Business	-	-
16	Marketing And Others Topics	-	-
17	Entrepreneurs	65%	35%
18	Jewelry Making	-	-
19	Musical Instrument	32%	68%

Steps towards Establishing Successful Makerspace in the Library

- **Create Informal Space**: Allow the space to be informal and community-driven, rather than enforcing structured, formal learning that is directed by library staff.

- **Set Up a Making Space:** Allow specific space for making such that will allow the noise to be contained to one area of the library, while the other areas in the library can be designated as quieter zones.

- **Source for Financial Help**: Look for grants to help bring in new technologies (3D printers, software, electronics, etc.).

- **Create a Time Table for Rotation of Audience**: Create different times for your specific audiences at different categories of users at different hour to engage users in library activities and develop their making skills.

- **Commit the Institution Management Authority:** As the authority in your field write convincingly to commit the institution authority and organisation that can give financial support, tools and experts that will make makerspace work in your library.

Conclusion

This result shows that libraries should ensure the creation of makerspace with different materials, tools and machines as addition to the traditional old services. Therefore to ensure increase in library patronage library services should come of age with the new trends of making users more at ease in learning space. Findings also show that makerspace is a collaborative workspace where people can gather to explore knowledge to help each other to learn in the area of individual interest. Makerspace is a free room for library users to build and create new objects, or offer tools and technologies like 3D printers, sewing machines for fashion or wood work machines for sustainable change among other benefits. This new trend is created to add to library traditional service and to balance the old and the new service delivery; to encourage more library patronage.

Reference

Alison J. Head (2016) Planning and Designing Academic Library Learning Spaces: Expert Perspectives of Architects, Librarians, and Library Consultants. Available online: http://projectinfolit.org

Anglada, Lluís (2014). "Are libraries sustainable in a world of free, networked, digital information?" El professional de la información, v. 23, n. 6, November-December, pp. 603- 611 http://dx.doi.org/10.3145/epi.2014.nov.07

Arlee Turner, Bernadette Welch and Sue Reynolds (2014) Learning Spaces in Academic Libraries- A Review of the Evolving Trends. Australian Academic & Research Libraries. Vol. 44, No. 4, 226-234,http://dx.doi.org/10.1080/00048623.2013.857383

John Burke (2015) Making Sense: Can Makerspaces Work in Academic Libraries? Available online: media/2015-nmc-horizon-report-HE-EN.*pdf*, 40-41. 11.

Kylie Bailin (2011) Changes in Academic Library Space: A Case Study at The University of New South Wales, Australian Academic & Research Libraries, 42:4, 342-359, DOI:10.1080/00048623.2011.10722245

Mary Ellen Spencer and Sarah Barbara Watstein (2017) Academic Library Spaces: Advancing Student Success and Helping Students Thrive. Libraries and the Academy, Vol. 17, No. 2 (2017), pp. 389–402. Johns Hopkins University Press, Baltimore, MD 21218

Milter, R. G. (2015) The Impetus for Change: Why Entrepreneurial Universities Will Transform the Future (While Others Will Cease to Exist) Available online: *https://www.springer.com/cda/content/document/cda.../9783319092461-c2.pdf...*

Natalie_Gilbert (2013). The Future of Public Libraries: Emerging Trends. Available www.Learning bored .com

Paul Bayley (2014) Libraries Strategy Developing Sustainable Library Services and • Community Hubs Principal Manager Local Community Services

Rebecca M. Sullivan (2010) Common Knowledge: Learning Spaces in Academic Libraries, College and Undergraduate Libraries, 17:2-3, 130-148, DOI: 10.1080/10691316.2010.48160 Downloaded by [196.45.48.130] at 01:05 03 November 2017

Sanjana Shrestha (2013). The Changing Role of Community Libraries: Emerging Centres for Sustainable Development Country Director, READ Nepal Kathmandu, Nepal. Available Online www Iflawlic 2013 http://www.upenn.edu/pennnews/news/read-global-wins-100000-lipman-

Teresa Sullivan (2014). Building on 200 years of Achievement to Set a Third Century Agenda.