Automation of Public Libraries in South West, Nigeria: Challenges and Way Forward

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Abstract
This study investigated the challenges of library automation in public libraries in South West, Nigeria and discusses the way forward. The survey research design was adopted for the study. Three states (Lagos, Ogun and Oyo States) in the South West of Nigeria were selected. Respondents of the study were patrons of the selected public libraries. Systematic sampling technique was used to select the population for the study. Krejcie and Morgan published table was used to determine sample size for the library patrons. Data collection was by means of a structured questionnaire. Data collected were analyzed using percentages, frequency tables and bar charts. The challenges of automation in public libraries in South West, Nigeria that were identified include inadequate finance, lack of technical skill, absence of training, lackadaisical attitude towards automation, unstable power supply, unsatisfactory library software, scarce ICT infrastructure and lack of commitment from the parent organization (Government). Recommendations were made to proffer solutions to the identified challenges.

Keywords: Library Automation, Public Library, Challenges, South West of Nigeria

1.1 Introduction

Library automation is a term that describes the use of computers and other related technologies to carry out library activities that were hitherto performed by humans. Boateng, Agyemang & Dzandu (2014) define library automation as the process of making use of information communication technologies (ICT) to carry out routines in the library. "Library automation also refers to the use of computers, associated peripheral such as magnetic tapes, disks, and optical media in the performance of all types of library functions and operation. Computers are capable of introducing a great degree of automation in operation function since they are electronic, programmable and are capable to control the processes being performed" (Shanthakumara, 2018:11).

Library automation activities began in the 1950s and 1960s in North America and Europe. In developing countries, significant library automation did not begin until 1980s (Mutula, 2012). Over the last decade, library automation in Africa has gained impetus. It has spread to a point that it positively affects the roles and day to day operations of libraries most especially public libraries (Eze, 2012). Public libraries have now changed from using the traditional modes of operation to

automated/virtual/ digital/ electronic library (Jan & Sheikh, 2011).

1.2 Research Objectives
The paper sought to address the following objectives:
i.   To examine the challenges of library automation in public libraries in South West, Nigeria.
ii. To investigate how these challenges can be surmounted.

1.3 Research Questions
i.   What are the challenges of library automation in public libraries in South West, Nigeria?
ii. How can these challenges be surmounted?

2.1 Review of Related Literature
The automation of a library offers a variety of services to both staff and patrons. It satisfies their information needs beyond what the manual system can offer. With library automation, it is possible for library users to access information materials in the library within the shortest possible time. Through library automation, there has been an increase in the number of patrons that visit the library. Those who cannot visit physically have remote access to information resources (Ndum, Edem& Chinwe, 2012). According to Ajaykumar (2013), library automation does not only offer proficient services and opens a new era in bibliographical control but provides access to essential database that are needed by patrons.

Public libraries are libraries that provide access to knowledge, information and works of the imagination through a range of resources and services and are equally available to all members of the community regardless of race, nationality, age, gender, religion, language, economic status, employment status and educational

attainment (Oghenetega, Umeji, & Obue, 2014). They have a wider scope of tasks they render to their patrons unlike other types of libraries such as academic, school, private and special libraries. Public libraries have the responsibility to cater for the information needs of the general public. These include children, youths, adults, and physically challenged (Jibril, 2013). They are funded by the government with tax-payers funds, and services rendered are free of charge therefore, they are referred to as "The People's University" (Hopper, 2013).

Krubu and Osawaru (2010) in a study of the effects of information communication technology (ICT) in Nigerian libraries reveal that the main factor hindering effective use of ICT was inadequate fund from the parent organisation. Chisenga (2004) in another study examined the use of ICTs in African public libraries. His focus was on twenty-two public libraries selected from ten (10) African countries namely: Zimbawe, Uganda, Ghana, Kenya, Nigeria, Zambia, Botswana, South Africa, Tanzania and Malawi. He avers that part of the challenges these libraries encountered were outdated hardware and software, inadequate budget, lack of precise policies, erratic power supply, lack of skilled personnel, negative attitude towards automation and technophobia.

Developing countries most especially Nigeria, are overwhelmed by socio-economic and political problems. This has led to the abandonment of the educational sector and particularly public libraries by the government (Omotosho and Okiki, 2012).

The consequence of this neglect result to public libraries not being able to perform up to expectation. In addition, lack of knowledge at policy level, inadequate training of librarians, inadequate funding, lack of awareness, insufficient information resources were key challenges public libraries experienced (Omotosho and Okiki, 2012). Furthermore, in a study of library automation

in developing countries, Hopkinson (2009) affirms that expensive nature of the hardware, erratic power supply and lack of trained personnel were problems militating against effective automation of libraries.

3.1 Research Methodology

Survey research design was used for this study. It was preferred because information gathered from the sample population was used to make inferences about some characteristics of the entire population. The target population of this study was library patrons in Oyo, Ogun and Lagos State public libraries. The reason for selecting the patrons as respondents was because they were the recipients of library services and were able to give valued information about the user viewpoint of ICT services provided by public libraries in South West, Nigeria. Kumar (2011) define sampling as the process of selecting a few from a larger group. Systematic sampling technique was used to

collect data from the patrons. Krejcie and Morgan's published table was used to determine the sample size.

According to Krejcie and Morgan (1970) (Table 1), for a population of about 700, 248 will be the sample size.

Krejcie and Morgan (1970) formula is explained below:

$$SP = \frac{N \times S}{TP}$$

Where SP = Sample Population
N = Population size of each group
S = Sample size and
TP = Total population

Based on this formula, the distribution of samples across the three public libraries is provided in Table 1

Table 1: Distribution of Samples in the three Selected Public Libraries

Sample Population	Oyo State	Ogun State	Lagos State	Total
Patrons	$\frac{290 \times 248}{738} = 97.4 = 97$	$\frac{214 \times 248}{738} = 71.9 = 72$	$\frac{234 \times 248}{738} = 78.6 = 79$	248
Total of Sample Size for patrons	97	72	79	248

For the purpose of this study, questionnaires were used to collect data from library patrons. The questionnaire was preferred because it is quick to collect information from a large group of people and at a low cost. Data collected from this study was analysed using percentages, frequency tables and bar charts.

4.1 Result and Discussions

Table 2: Expected Respondents/Actual Respondents

Libraries and States Located	Number of Expected Respondents	Actual Respondents
Oyo State Library Board	97	83
Simeon Adebo Library (Ogun State)	72	55
Ikeja Old Secretariat Library (Lagos State)	79	76
Total	248	214

Table 3: Response Rate

Public Libraries	Actual Respondents in Each State	% Response by percentage
Ikeja Old Secretariat Library (IOSL) (n=76)	76	96
Simeon Adebo Library (SAL) (n=55)	55	76
Oyo State Library Board (OYSLB) (n=83)	83	86
Total	**214**	**86**

Number of respondents selected for the study was 248. However, only 214 questionnaires were retrieved and valid for the study.

- Note that for demographic data presented in the bar charts below, IOSL represents Lagos State and is presented in Blue Colour
- SAL represents Ogun State and is presented in Brown Colour
- OYSLB represents Oyo State Library Board and is presented in ash colour

Gender of Patrons

	MALE		FEMALE	
IOSL (n=76)	57	75%	19	25%
SAL (n=55)	35	63.6%	20	36.4%
OYSLB (n=83)	42	50.6%	41	49.4%
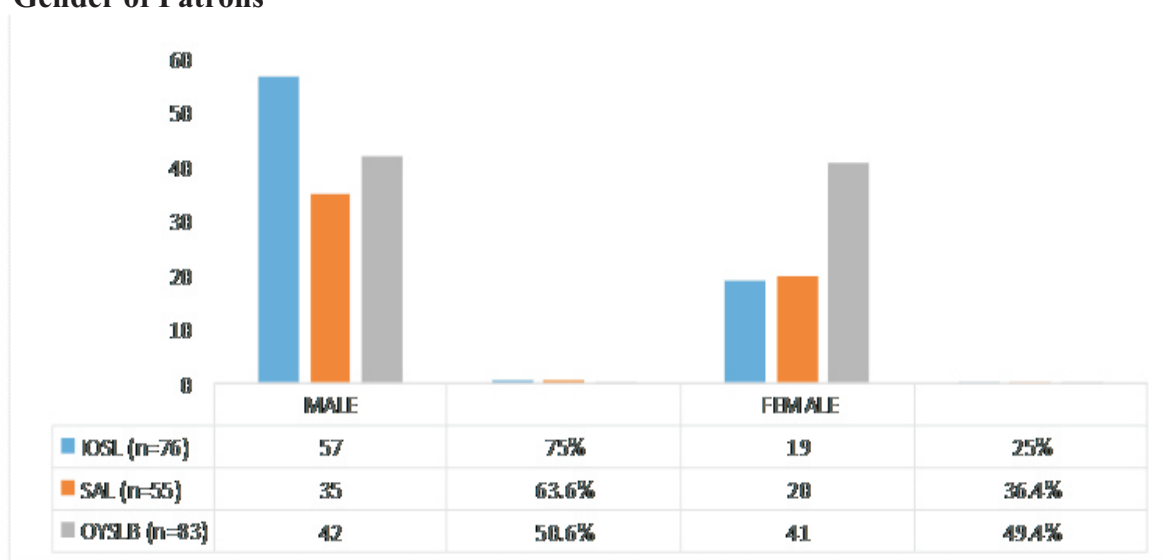
Figure 1. Gender of Patrons

The result shows that in IOSL, male respondents were 57 (75%) while the females were 19 (25%). In SAL, male respondents were 35 (63.6%) while females were 20(36.4%)and in OYSLB, male participants were 42 (50.6%) while females were 41(49.4%) (Figure 1). Findings revealed that male respondents were more than females in all the public libraries studied.
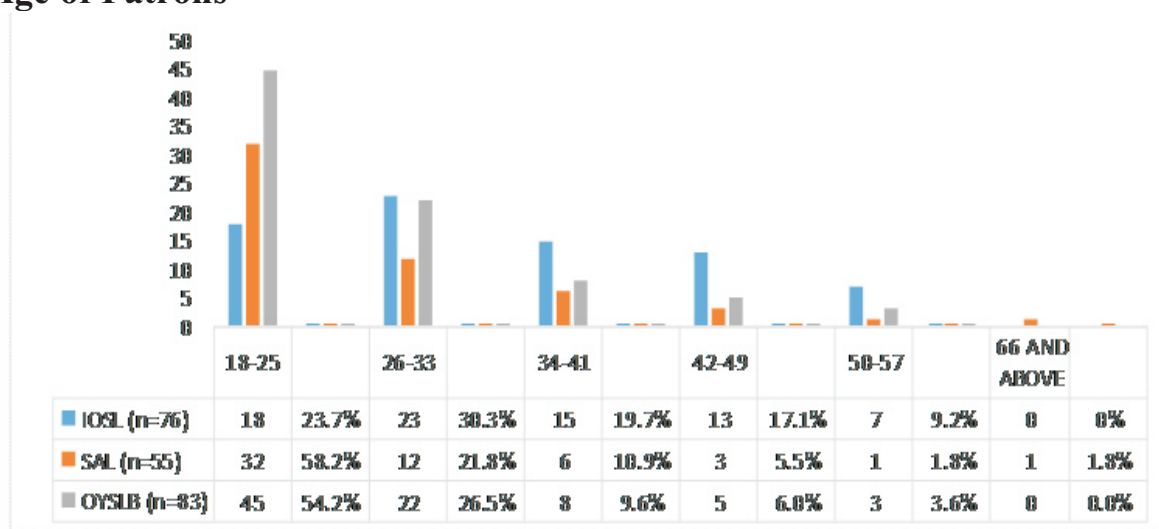
Age of Patrons

Figure 2: Age of Patrons

Figure 2 revealed that in IOSL, age group 26-33 had the highest number of respondents. 23 (30.3%) people belonged to this group. In addition, in SAL, age group 18-25 had the highest number of respondents. 32(58.2%) belonged to this group while in OYSLB, age group 18-25 also had the highest number of respondents with 45 (54.2%) participants. The results revealed that majority of the respondents were in their youthful age and patronised the public library more than others.

Table 4:Educational Qualification of Patrons

QUALIFICATION	IOSL		SAL		OYSLB	
	Frequency	%	Frequency	%	Frequency	%
SSCE	15	19.7	21	38.2	23	27.7
NCE	1	1.3	3	5.5	10	12
DIPLOMA	9	11.8	6	10.9	8	9.6
FIRST DEGREE	28	36.8	16	29.1	17	20.5
MASTERS	20	26.3	7	12.7	16	19.3
PHD	1	1.3	1	1.3	1	1.3
NONE	2	2.6	1	1.8	8	9.6

Table 4 shows that in IOSL, 15(19.7%) respondents were SSCE holders, only 1(1.3%) person possessed NCE. 9(11.8%) had bagged a diploma degree. In addition, majority 28(36.8%) of the respondents had a first degree. A total of 20(26.3%) respondents were masters' degree holders. Furthermore, only 1(1.3%) respondent had bagged a doctoral degree. Lastly 2(2.6%) had no degree as at the time this study was carried out.

In SAL, majority 21(38.2%) of the respondents were SSCE holders, 3(5.5%) respondents possessed NCE. 6(10.9%) had bagged a diploma degree. In addition, 16(29.1%) had a first degree. A total of 7(12.7%) respondents were masters' degree holders. Furthermore, only 1(1.3%)

respondent had bagged a doctoral degree. Also 1(1.8%) respondent had no degree as at the time this study was carried out.

Lastly, in OYSLB, majority 23(27.7%) of the respondents were SSCE holders, 10(12%) respondents possessed NCE. 8(9.6%) had bagged a diploma degree.

In addition, 17(20.5%) had a first degree. A total of 16(19.3%) respondents were masters' degree holders. Furthermore, only1(1.3%) respondent had bagged a doctoral degree. Also 8(9.6%) respondents had no degree as at the time this study was carried out.

Table 5: Challenges of Public Library Patrons in Oyo, Ogun and Lagos State Experienced in the use of Automated Systems

Inadequate Finance								
Library	YES	%	NO	%	No Resp.	%	TOTAL	%
IOSL (n=76)	75	98.7	1	1.3	0	0	76	100
SAL (n=55)	55	100	0	0	0	0	55	100
OYSLB (n=83)	83	100	0	0	0	0	83	100
Total	**213**	**99.5**	**1**	**0.5**	**0**	**0**	**214**	**100**
Lack of Technical Skills								
Library	YES	%	NO	%	No Resp.	%	TOTAL	%
IOSL (n=76)	51	67.1	25	32.9	0	0	76	100
SAL (n=55)	36	65.5	19	34.5	0	0	55	100
OYSLB (n=83))	64	77.1	19	22.9	0	0	83	100
Total	**151**	**70.6**	**63**	**29.4**	**0**	**0**	**214**	**100**
Absence of Training								
Library	YES	%	NO	%	No Resp.	%	TOTAL	%
IOSL (n=76)	62	81.6	14	18.4	0	0	76	100
SAL (n=55)	50	90.9	5	9.1	0	0	55	100
OYSLB (n=83)	83	100	0	0	0	0	83	100
Total	**195**	**91.1**	**19**	**8.9**	**0**	**0**	**214**	**100**
Lackadaisical Attitude Towards Automation								
Library	YES	%	NO	%	No Resp.	%	TOTAL	%
IOSL (n=76)	42	55.3	34	44.7	0	0	76	100
SAL (n=55)	36	65.5	19	34.5	0	0	55	100
OYSLB (n=83)	48	57.8	35	42.2	0	0	83	100
Total	**126**	**58.9**	**88**	**41.1**	**0**	**0**	**214**	**100**
Irregular Power Supply (N=214)								
Library	YES	%	NO	%	No Resp.	%	TOTAL	%
IOSL (n=76)	65	85.5	11	14.5	0	0	76	100
SAL (n=55)	52	94.5	3	5.5	0	0	55	100
OYSLB (n=83)	83	100	0	0	0	0	83	100
Total	**200**	**93.5**	**14**	**6.5**	**0**	**0**	**214**	**100**
Unsatisfactory Library Software								
Library	YES	%	NO	%	No Resp.	%	TOTAL	%
IOSL (n=76)	42	55.3	34	44.7	0	0	76	100
SAL (n=55)	27	49.1	28	50.9	0	0	55	100
OYSLB (n=83)	21	25.3	62	74.7	0	0	83	100
Total	**90**	**42.1**	**124**	**57.9**	**0**	**0**	**214**	**100**

Scarce ICT Infrastructure								
Library	YES	%	NO	%	No Resp.	%	TOTAL	%
IOSL (n=76)	61	80.3	15	19.7	0	0	76	100
SAL (n=55)	50	90.9	5	9.1	0	0	55	100
OYSLB (n=83)	83	100	0	0	0	0	83	100
Total	**194**	**90.7**	**20**	**9.3**	**0**	**0**	**214**	**100**
Lack of Commitment from the Parent Organisation (Government)								
Library	YES	%	NO	%	No Resp.	%	TOTAL	%
IOSL (n=76)	47	61.8	28	36.8	1	1.3	76	100
SAL (n=55)	32	58.2	23	41.8	0	0	55	100
OYSLB (n=83)	25	30.1	57	68.6		1.2	83	100
Total	**104**	**48.5**	**108**	**50.4**	**2**	**0.9**	**214**	**100**

Table 5 revealed that 213 (99.5 %) participants indicated that **inadequate finance** was the main problem public libraries were experiencing in the adoption of automation. The result of this study corroborates the findings of Babayi, Makintami and Tumba (2019) in a study of funding of public libraries in Nigeria. They found that funding of public libraries was inadequate and as a result, public libraries were not performing up to expectation.

Irregular power supply came second on the list of problems with 200 (93.5 %) responses. Another problem that patrons were facing was the lack of training on how to use devices and equipment. Findings revealed that 195 (91.1 %) of the patrons indicated that they lacked access to training.

Inadequate ICT infrastructure was the next challenge with 194 (90.7 %) responses. A total of 151 (70.6 %) participants also noted that lack of technical skills was a problem they encountered in the adoption of ICTs. 126 (58.9 %) selected lackadaisical attitude towards automation, while 104 (48.5 %) participants indicated lack of commitment from the parent organisation.

Finally, the least popular among the challenges was **unsatisfactory library software** with 90 (42.1 %) responses. These results corroborated the findings of the studies carried out by Gbaje, (2007), Okojie (2008) and Oyeniran & Tumba, (2011) on academic and school libraries in Nigeria, where several challenges confronting the application of automated libraries were discussed. Although their studies were focused on other types of libraries, however, the challenges limiting the application of library automation are related.

Suggested Solutions and the Way Forward to Challenges
To proffer solutions to the challenges identified by library patrons in the use of automated systems, the following suggestions were made:
- Stakeholders of public libraries should provide adequate funds. This will enable full automation of the public library services. When the libraries are automated, then they can deliver real-time information services.
- Library management needs to convince the parent organisation (The Government) on the importance of making the public libraries automated.
- The public libraries need to make their presence known in the communities they are located by organising enriching programmes such as book club, book fair

amongst others.

- Professionals who are highly skilled and are ICT compliant must be employed to take charge of the automated library. When professionals are in place, it is easy to train the entire staff. When all the staff are trained, it becomes easy to pass the knowledge across to the library patrons. In addition, the employment process of library staff should lay emphasis on possession of ICT skills as part of the requirements.
- Frequent training programmes should be organised by the library management.
- Adequate infrastructure such as hardware and software should be put in place. Maintenance of the infrastructure should also be done at regular intervals.
- Power generators, solar energy, and inverters should be available to serve as backup when the main electricity supply is cut-off. This is particularly important because automation cannot work without power supply.

Library management must select software that would be highly effective. Certain criteria need to be considered in doing this. The scope and capacity, vendor support, vendor reputation, available modules, cost of the software, software functionality, user friendliness, and security of the software.

Conclusion

The study examined the challenges public libraries in South West, Nigeria were experiencing in the use of automated systems. The overall findings of the study revealed that public libraries were facing major challenges such as inadequate finance, irregular power supply, lack of training on how to use devices and equipment, inadequate ICT infrastructure, lack of technical skills, lackadaisical attitude towards automation, lack of commitment from the parent organisation, and unsatisfactory library software. However, several recommendations were made on how the identified challenges can be surmounted. If these recommendations are implemented, automation of public libraries in South West Nigeria will be much easier and the libraries will be more efficient.

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