

## **Information management and librarians' productivity in university libraries in South-South, Nigeria**

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### **Abstract**

This work examined information management and librarians' productivity in university libraries in South-South, Nigeria. Descriptive survey design was adopted for the study. The population of the study consisted of 132 librarians in federal, state and privately owned universities in South-South, Nigeria. The entire population was used for the study as it was manageable. A self-designed questionnaire was used to collect data on information management and librarians' productivity. Mean was used to answer the research questions while the Pearson's product moment correlation coefficient (PPMCC) was used to test the hypotheses. Three research questions were posed and one hypothesis formulated for the study. Results from the study show that the librarians adopted different strategies for the management of information and that there is a positive significant relationship between information management and librarians' productivity in university libraries. Based on the findings it was concluded that there is a positive relationship between information management and the librarians' productivity. The study recommended amongst others that library management should create more awareness on cloud computing as an information management strategy alongside the adoption of files/file cabinet information management strategies.

**Keywords:** Information management, librarians' productivity, productivity, university libraries

### **Introduction**

Productivity is a measure of how well specified resources and services are offered and rendered to meet stated goals in a timely manner. Productivity is also described as an index that compares the output (goods and services) to the input. Inman (2021) posits that organizations can monitor productivity for strategic reasons such as corporate planning, organization improvement, or comparison to competitors. It can also be used for tactical reasons such as project control or controlling performance to budget. Shital (2020), however, views productivity as the physical link between the quantity produced (output) and the quantity of resources utilized (input) in the course of production. Hence, productivity can be said to be the proportion of goods and services produced to the resources consumed in the manufacturing process. Productivity has remained a topical issue in the humanities, social sciences and other business-related professions for ages. Rao (2012) defines productivity as the overall output of goods

or services produced, divided by the inputs needed to generate that output which involves great managerial skills and commitments. Keith (2009) defines productivity as the process by which a library as an organization produces high-quality services. Dolly (2016) posits that the productivity of an organization, such as a university library, has a linear correlation with the productivity level of the employees. From this viewpoint, no university library can achieve its objectives if the librarians are not productive in line with the vision and mission statement of the university library. Dolly goes further to outline some factors that can significantly influence the rate of increase of productivity of employees (librarians inclusive); these are accountability level, project management tools, motivation, teamwork, job rotation, technological upgrades and work life balance.

Librarians' productivity, according to Hinmicks (2010) entails the sense of success, attainment, and execution of a task.

As a result, evaluating librarians' productivity entails determining the routines they perform and how well they perform it. Academic librarians' productivity is service-oriented; this means that academic librarians' productivity is focused on providing services to users and how well they do it. Yaya, Uzohue and Akintayo (2016) posits that librarians' productivity in Nigerian public university libraries entails providing services and current/relevant educational resources in the library, which would encourage faculty members and librarians to publish more papers, as well as innovative research projects in the university that would attract grants from both local and international organizations. Yaya, Uzohue and Akintayo (2016) further affirm that for university libraries to be able to achieve high productivity rate, it is very important to adequately motivate their workforce. Dell (2018) affirms that it is necessary for organizations (university libraries inclusive) to focus on the overall productivity of their organization as a whole rather than each employee, as latest research have revealed that most productive individual will not prosper in an unsupportive environment. To buttress the aforementioned assertion, Mankins' (2017) posits that most employees desire to be productive, but the organization frequently gets in the way. According to the findings of Mankin's study, the average firm loses more than 20% of its productive potential as more than a day every week, to what is term "organizational drag," which refers to the structures and processes that waste time and inhibit employees from getting things done. Organizational productivity can also be tied to the level of information technology deployed within the organization. Supporting the above findings, Dell (2018) affirms that modern productivity of organizations can be directly tied to the flexibility of their technology. Mankins (2017) further affirms that developing a

productivity mentality is difficult, but the benefits are immense hence, some of the benefits include; significantly higher profits, operating margins 30%–50% higher than industry peers and faster growth, etc.

Blakely-Gray (2020) posits that libraries wanting to gain a competitive advantage should pay serious attention to productivity killers which could maximally absorb time and competitive edge of the organization. Blakely-Gray (2020) goes further to outline some prominent productivity killers; they are disengagement, workplace distractions, lack of recognition for hard work, perfectionism, disorganization, unnecessary meetings, technological problems, and poor work life balance. The aforementioned viewpoint is quite right, it is however key for university libraries to identify the productivity killers within their library and deal with them swiftly for optimum output and performance. University libraries, according to Nkamnebe, Udem, and Nkamnebe (2014 p. 3), "are libraries developed, operated, and supported by the university to satisfy the information, research, and curriculum requirements of its students, faculty, and staff". Universities libraries, as a learning and academic environment, are leveraging on ways to improve their productivity level, increase their output and overall performance in line with their core mandate of producing high quality professionals in diverse fields of life. University libraries as a focal department of the university support the core mandate by aiding the teaching, learning, research and recreational needs of users. In discharging these duties, university libraries generate a lot of data/ information that should be stored/ managed properly for future reference and for posterity's sake.

Information management (IM), according to Tallinn University (2021), is the management of organizational processes and systems that acquire, develop, organize,

disseminate, and utilize data. Identifying information needs, getting information, organizing and storing information, generating information products and services, distributing information, and using information are all processes that support an organization's learning activities (Choo, 1995). IM is a continuous cycle of six closely related activities, according to a process perspective of information management: identification of information needs acquisition and creation of information, analysis and interpretation of information, organization and storage of information, information access and dissemination and information use.

Information management strategies are plans that help enterprises stay on track with its information management operations, improve procedures, and plan for the future (Simon, 2017). Simon (2017) further posits that current status, future goals, clear steps to attain those goals, plans to acquire new resources, methods and policies for dealing with business units, and allocating responsibilities are all examples of information that can be included in these plans. According to Detlor (2010), from a library perspective, information management concerns the management of information collections, such as books and journals. The goal of information management from a library perspective is to help library patrons' access and borrow information items held in the collection. A variety of activities surround the management of a library collection, including the development of collection policies and materials budgets, the selection of collection items, the analysis of collection usage and end-user collection needs, training of collection staff, preservation of collection items, and the development of cooperative collections with other institutions (Detlor, 2010).

The information management strategy that should be deployed in university libraries should be able to integrate people, process technology and content which should start with the collection and management of both physical and electronic information of the library and the dissemination of the information to interested users using digital technologies and information systems (Chatzipanagiotou, 2015; Gartner, 2013). Arua and Ukwuaba (2016) studied effective information management in academic libraries in Nigeria. The findings revealed that the information management strategies that should be deployed should enable academic libraries to have meaningful, reliable and usable information when needed and providing mechanism for ensuring accountability and managing risk. Khan & Ayesha (2021) studied the key features of information management systems for automation in university libraries in Pakistan. The findings revealed that free and open-source software are widely used in university libraries to manage the bibliographic information of library material. KOHA is the most used software for library automation in university libraries of Pakistan. The findings also revealed that the key features of library information management system (IMS) include reliability and security of the software, user-friendly interface, advanced searching options, use of library standards (MARC, Uni MARC, RDA), online up gradation, technical support of developing company, shared cataloging, multilingual features of software.

Information management aids quality decision making, enhances swift information flow, and mitigates challenges that could have occurred due to unavailability of the right information, to the right person, in the right format and at the right time. Management Hub (2021) affirms

that information management facilitates planning, minimizes information overload, encourages information decentralization. It also boosts coordination, efficiency, and assembles the process required in storing, retrieving, evaluating and disseminating information within the organization which can boost the overall productivity of employees. (Management Hub, 2021). Rifaudeen (2015) did a study on Information Management in Libraries and Its Impact on Sustainable Library and Information Services with Special Reference to University Libraries of Sri Lanka. The study highlighted that user expected that librarians should be able to manage information resources that will facilitate their speedy access to library information resources whenever they require them. The study also highlighted that the more skills possessed by librarians in information management, the more productive they become in the discharge of library services to users.

Tantua and Godwin-Biragbara (2020), investigated the print media's management information system and office productivity in Rivers State, Nigeria. The study's findings revealed that there is a strong link between management information systems and print media office productivity in Rivers State. It was suggested that information systems be implemented in the administration and operations of print media firms in order to improve the firm's ability to run efficiently and profitably. According to CILIP: The Library and Information Association (2020), proper information management within an information service organization enhances efficiency, performance, sustained responsiveness and competitiveness, increases creativity and innovation, reduced costs of information processing, enhances information storage, sharing and re-use, reduces time and effort expended on searching for and managing information, all

of which reflects in improved productivity of information providers.

Productivity, according to Parham (2014), can be defined as a measure of the rate at which outputs of goods and services are produced per unit of input (labor, capital, raw materials, etc). It is calculated as the ratio of the number of outputs produced to some measure of the number of inputs used. In the same vein, Ogunsanwo (2012) defined productivity as the rate at which a worker, an organization, or a country produces goods and services. It also means the expected output of manpower in ratio of the energy exerted for the job at hand. Employee productivity is generally acknowledged as a necessary factor that enhances the growth and development of every organization in the human society (Yaya, Opeke & Onuoha, 2016).

The productivity of librarians in university libraries is hampered due to some factors that will be reviewed under this section. Babalola and Nwalo (2014) studied the influence of environmental factors on the productivity of librarians in Colleges of Education. The findings revealed that majority of the sampled librarians are not productive in terms of researcher productivity. The factors influencing the low level of productivity include poor internet connectivity and inadequate knowledge sharing with colleagues. From this finding to boost the productivity of librarians there is need to provide them with a swift internet access and encourage collaboration among them.

Yaya (2018) investigated the impact of librarian motivation on productivity in Nigerian public universities. The study concluded that university library

administration should continue to promote principles such as increased employee recognition, strong leadership style, and improved employee incentive programs in order to boost employee productivity. The productivity of librarians can be affected when meritorious staff is not rewarded for their efforts, and managerial leadership can also stifle employee productivity. Dukes (2016) highlighted poor time management, inability to prioritize tasks appropriately, inadequate training, poor work-life balance, a lack of quiet spaces, unrealistic expectations, and zero feedbacks as factors affecting employee productivity. Patrick (2021) studied top problems that affect employee productivity. The highlighted problems from the study are financial stress, job security, marriage and relationships, and illness. These highlighted challenges can affect the productivity level of employees if not tackled properly and early.

### **Statement of the problem**

This work is set to ascertain information management as correlates of librarians' productivity in university libraries in South-South, Nigeria. Globally, university libraries acquire information resources of diverse formats to offer services that meet the information needs of their users. However, the management of these resources in university libraries would go a long way to determine the level of librarians' productivity. In Nigeria as observed by the researcher and from preliminary interaction with librarians, the level of productivity is still low in university libraries possibly due to lack of framework for managing information. This lacuna in knowledge necessitated the present study to fill this great gap and serve as a reference for future researchers undertaking similar studies.

### **Objectives of the Study**

The general objective of the study is to examine information management and librarians' productivity in university libraries in south-south, Nigeria. The specific objectives are to:

1. Explore the information management strategies adopted by university libraries in South- South, Nigeria.
2. Investigate the level of librarians' productivity in the universities.
3. investigate the factors influencing librarians' productivity in the universities.
4. Examine the relationship between information management and librarians' productivity in universities in South-South, Nigeria.

### **Research questions**

The following research questions were used to guide this study:

1. What are the information management strategies adopted by university libraries in South-South, Nigeria?
2. What is the level of librarians' productivity in the universities?
3. What are the factors influencing librarians' productivity in the universities?

### **Hypotheses**

The following null hypothesis will be tested at 0.05 level of significance:

1. There is no significant relationship between information management and librarians' productivity in universities in South-South, Nigeria.

### **Methods**

The descriptive design was employed for the study. The population employed for the study is 132 librarians working in 18 federal, state and private universities in South-South, Nigeria. The census sampling

strategy was adopted and all 132 librarians were recruited for the study. A researcher developed questionnaire was used to elicit data from respondents on information management, and librarians' productivity. The instrument was designed on a modified 4-point Likert scale response type. The data generated with the aid of a structured questionnaire was analyzed using both descriptive and inferential statistics. Descriptive statistics such as Mean was used to answer the research questions, while inferential statistics of the Pearson product moment correlation co-efficient was employed to test hypotheses. All statistical analyses were subjected to the Statistical Package for Social Science (SPSS) version

16. A criterion mean of 2.50 was adopted as a decision rule for answering the research questions.

### Results

This section focuses on the results of the study which are presented according to the research questions and hypothesis.

**Research question one:** What is the information management strategies adopted by the university libraries in South-South, Nigeria?

Data used to answer research question one is presented in Table 1.

**Table 1: Information management strategies**

Strategies	SA	A	D	SD	$\bar{x}$
Technologically inclined information management strategy	57	64	3	-	3.44
File backup in disk (hard drive, flash drive)	74	49	-	1	3.58
Data management information management strategy	61	63	-	-	3.49
Creating multiple copies of data and storing them separately is the strategy deployed in my library	30	92	-	-	3.25
Automation software information management strategy	38	83	3	-	3.28
Institutional repository information management strategy	25	91	6	2	3.12
Research information management strategy	38	77	9	-	3.23
Cloud computing information management strategy	32	67	24	1	3.05
Document management system for information management	26	96	2	-	3.19
Files/file cabinet information management strategy	34	70	20	-	3.11
Grand mean				3.27	
Criterion mean					2.50

Data presented in Table 1 reveal that the grand mean of 3.27 is higher than the criterion mean of 2.50, which implies university libraries adopt different strategies for the management of information. Specifically, the strategies adopted by libraries in the management of information as revealed in this study include file backup in disk ( $\bar{x}$  = 3.58), data management information management strategy ( $\bar{x}$  = 3.49),

technological inclined information management strategy ( $\bar{x}$  = 3.44), and automation software information management strategy ( $\bar{x}$  = 3.28). Other information management strategies adopted by university libraries include creating multiple copies of data and storing them separately ( $\bar{x}$  = 3.25), research information management strategy ( $\bar{x}$  = 3.23), document management system for information

management ( $\bar{x}$  = 3.19), institutional repository information management strategy ( $\bar{x}$  = 3.12), files/file cabinet information management strategy ( $\bar{x}$  = 3.11), and cloud computing information management strategy ( $\bar{x}$  = 3.05).

**Research question two:** What is the level of librarians' productivity in the universities?

Data used to answer research question two is presented in Table 2.

**Table 2: Level of librarians' productivity in the universities**

Statements	VHL	HL	LL	VLL	$\bar{x}$
I carryout shelving and shelf-reading of books in my university library	3.40	3.27	3	-	3.40
I carry out charging and discharging routines in my university library	32	83	9	-	3.27
I can independently carry out research studies in librarianship	21	94	6	3	3.25
I have publications in indexed journals	33	83	7	1	3.19
I carry out indexing and abstracting routines in my university library	27	65	32	-	3.19
I carry out user education routines in my university library	46	58	19	1	3.23
I can catalogue and classify library materials in my university library	33	78	13	-	3.29
I engage in knowledge sharing routines with colleagues and users of my university library	20	84	18	2	3.13
I can manage information effectively in my university library	22	72	30	-	3.23
I engage in the marketing of services and resources in my university library	11	32	69	12	2.83
I carry out electronic library services in my university library	25	87	11	1	3.13
I carry out reprographic library services in my university library	65	51	8	-	2.77
Grand mean					3.16
Criterion mean					2.50

Data in Table 2 reveal the level of librarians' productivity in university libraries. It was revealed that the grand means of 3.16 is higher than the criterion mean of 2.50, which indicates that the level of librarians' productivity is high.

**Research question three:** What are the factors influencing librarians' productivity in the universities?

Data used to answer research question three is presented in Table 3.

Table 3 reveals the factors influencing librarians' productivity in university libraries. It was revealed in the table that the grand means of 3.09 is higher than the criterion mean of 2.50, which indicates that several factors influence librarians' productivity in university libraries. Specifically, the factors influencing librarians' productivity are

leadership style of library and university management ( $\bar{x} = 3.51$ ), adequate manpower to perform duties ( $\bar{x} = .46$ ), time management ( $\bar{x} = 3.20$ ), adequate work tools/equipment, and adequate knowledge sharing among employees ( $\bar{x} = 3.19$ ) respectively. Other factors include the ability to prioritise tasks appropriately ( $\bar{x} = 3.16$ ), morale and librarians' motivation ( $\bar{x} = 3.10$ ), recognition/renewal system among employees ( $\bar{x} = 3.07$ ), adequate training for librarians ( $\bar{x} = 2.98$ ), appropriate incentive programme ( $\bar{x} = 2.96$ ), and appropriate work-life balance ( $\bar{x} = 2.94$ ).

**Hypothesis:** There is no significant relationship between information management and librarians' productivity in universities in South-South, Nigeria.

The hypothesis is tested with the data in Table 4.

Table 4 reveals the correlation between information management and librarians' productivity in university libraries in south-south, Nigeria. The result reveals that the correlation coefficient  $r$  is .320, which indicates that there is a positive relationship between information management and librarians' productivity in university libraries in south-south, Nigeria, while the significant level is .000 which is lesser than the alpha level of 0.05. Therefore, the null hypothesis stating that there is no significant relationship between information management and librarians' productivity is rejected. The conclusion was reached that, information management statistically significantly influences librarians' productivity in university libraries in south-south, Nigeria.

**Table 3: Factors influencing the librarians' productivity**

Statements	SA	A	D	SD	$\bar{x}$
Leadership style of library and university management	66	55	3	-	3.51
Adequate knowledge sharing among employee	32	83	9	-	3.19
Recognition/renewal system among employees	21	94	6	3	3.07
Adequate work tools/equipment	33	83	7	1	3.19
Appropriate incentive programme	27	65	32	-	2.96
Time management	46	58	19	1	3.20
Ability to prioritise tasks appropriately	33	78	13	-	3.16
Adequate training for librarians	20	84	18	2	2.98
Appropriate work-life balance	22	72	30	-	2.94
Illness and other health-related concerns	11	32	69	12	2.34
Moral and librarian's motivation	25	87	11	1	3.10
Adequate manpower to perform duties	65	51	8	-	3.46
Grand mean					3.09
Criterion mean					2.50



**Table 4: Relationship between information management and librarians' productivity**

		Information Management	Librarians' Productivity
Information management	Pearson's correlation	1	.320**
	Sig. (2-tailed)		.000
	N	122	121
Librarians' productivity	Pearson's correlation	.320**	1
	Sig. (2-tailed)	.000	
	N	121	123

$\alpha = 0.05$

### Discussion

Analysed data reveals that university libraries in the South-South region of Nigeria adopted different strategies for the management of information. Specifically, the strategies adopted by libraries in the management/organisation of information as revealed in this study include file backup in disk, data management, and technological adoption as well as an automation software. Other IM strategies adopted by the libraries include creating multiple copies of data and storing them separately, research data sharing, document management system for IM, institutional repository, files/file cabinet IM strategy, and cloud computing. This finding corroborates Sahu (2015) who reported that strategic library management is one of the most important alternatives to make the future design and development of the library. The study further noted that systematic planning of academic library is highly essential due to rapid advances of information technology. Hence, most of the University and college libraries are sustaining both teaching and research in their academic periphery and are managing research data in safer and efficient ways such as using automated software and modern technologies as well as the introduction of institutional repositories and creating multiple copies of data and storing them separately using cloud technologies.

Similarly, Popoola and Fagbola (2014) emphasized the importance of modern technologies as strategy for the management of information in university libraries. The introduction of institutional repository according to Weiner (2013) has been recognized as one of the most effective strategies in the management of information resources in university libraries.

The level of librarians' productivity in university libraries is high, which indicates that the level of librarians' productivity based on carrying out shelving and shelf-reading of books in my university library, charging and discharging routines in my university library, independently carrying out research studies in librarianship. The conclusion was drawn that the level of librarians' productivity in the university libraries under this study is high. This study is in accordance with Ali, Ali and Adan (2013) on productivity of workers, it was revealed that the quality of environment in the workplace simply determines the level of employee's motivation, subsequent performance and productivity, and this shows that there is a relationship between office environment and productivity of employees; improved employee morale has direct relationship with their productivity in the organization; and that there is a positive relationship

between working condition and employees productivity.

This study revealed the factors influencing librarians' productivity in university libraries is high. Which indicated that several factors influence librarians' productivity in university libraries. Specifically, the factors influencing librarians' productivity are leadership style of library and university management, adequate manpower to perform duties, time management and adequate work tools/equipment. Other factors include the ability to prioritise tasks appropriately; morale and librarians' motivation, recognition/renewal system among employees, adequate training for librarians, appropriate incentive programme, and appropriate work-life balance. Segun-Adeniran (2015). The findings suggest that the librarian's leadership style may have an impact on job productivity, but it is important to note that leadership style is not the only determinant factor of productivity in a university library. Also, Yaya (2018) investigated the impact of librarian motivation on productivity in Nigerian public universities. The study concluded that university library administration should continue to promote principles such as increased employee recognition, strong leadership style, and improved employee incentive programs in order to boost employee productivity. The productivity of librarians can be affected when meritorious staff is not rewarded for their efforts, and managerial leadership can also stifle employee productivity.

The relationship between information management and librarians' productivity was established using the Pearson product moment correlation which showed a positive and significant correlation between the variables. The respondents' response rate shows that a positive relationship exists between information

management and librarians' productivity in the selected university libraries in South-south, Nigeria. This indicates that good information management strategies can contribute to a comfortable working environment, cooperation among colleagues and motivate them to do extra work to increase their performance and productivity (Arpaci & Baloglu, 2016).

### **Conclusion**

The study explored information management and knowledge culture as determinants of Librarians productivity in university libraries in South-South, Nigeria. Based on the findings it can be concluded that the librarians adopt different strategies in the management of information.the; that factors influencing librarians' productivity include leadership style of library and university management, adequate manpower to perform duties, time management and adequate work tools/equipment and there is a positive relationship between information management and librarians' productivity in university libraries in south-south, Nigeria,

Based on the findings of the study, the following recommendations were made:

1. More awareness on cloud computing as information management strategy should be emphasized for more effective information management in University Libraries.
2. Librarians should adopt swift decision-making motivational strategies in the university libraries that would lead to greater librarians' productivity
3. Librarians should be encouraged to market library and information services and resources using a modern approach to information management.

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