# Use of Feedback Information from Library Statistics in Decision Making by Librarians in University Libraries in South East Zone of Nigeria

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## Abstract

**Purpose**: The study was carried out to examine the use of feedback information from library statistics in decision-making by librarians in university libraries in south east zone of Nigeria. **Design /methodology/ Approach:** Survey research was adopted for the study. Three objective and three research questions were formulated to guide the study. Questionnaire was used to collect data. Data obtained was analyzed using mean score. The population of the study consists of all the librarians in leadership position in University libraries in Southeast zone of Nigeria. They consist of the University librarians, their deputies and heads of units of libraries under study. The population of the study therefore is 103 librarians in Southeast zone of Nigeria. The entire 103 libraries were used as sample size. 103 questionnaires were distributed and duly completed and returned resulting in 100% response rate. The data collected was analyzed using IBM, SPSS, version software for the calculation of mean and standard deviation, and testing of hypothesis. The research questions were answered using mean score. Any mean score above the benchmark of 2.5 were accepted while those below were rejected.

# **Findings:**

**Implications:** The study shows that feedback information from library statistics is used in decision making by librarians. The implication is that libraries as a matter of policy should maintain accurate statistics of its activities and ensure updated records of its operations.

**Originality** / **Value:** The researcher recommends that since library statistics plays an indispensible role in library decisions, the head librarian should ensure that all staff saddled with the collection of statistics should be given basic statistical education on method of collecting and analyzing data.

**Keyword** Feedback information: Library Statistics, Decision Making, Librarian, University Library, Nigeria

#### Introduction

Decision-making are the life wire of any organization, and the "hub" of the "Wheel" of management processes. It involves the art of planning and application of resources towards the pursuit, realization as well as sustenance of the goals and objective of any organization.

Libraries are information based organization which engage in constant decision-making activities in its operations and service delivery. Some of the library operations where decision making are made include planning, staffing, organizing, directing and controlling of services as well as resources of the library. Decision must be made on what to do, who to do, how and when it will be done.

Decision making especially in the library is largely based on, and sustained by the feedback Feedback information is information. transmission of evaluative or Corrective information, to the original or controlling sources, about an action event or process. Such transmission informs or forms the platform of future polices or decision. Golec (2004) observes that mangers estimate the correctness of their past actions by observing the output of their earlier decision through feedback mechanism and also introduce corrections where necessary. By this way feedback information becomes a very critical factor in decision-making and the "pivot' of the 'fulcrum' of the organizational decision making processes, which cannot be easily ignored and or overemphasized. Thus feedback concerning how

organizational activities are carried out becomes an important tool for managerial decision making. Feedback information is generated using various data collection instruments such as questionnaire, interview observation. Graffiti and statistical records though this work is more interested in the use of statistics. Statistics as a subject of study is concerned, with the scientific method of collecting, organizing, summering, presenting and analyzing data as well as drawing valid conclusion and making reasonable decisions on the basis of such analysis (salawu, 2016). According to Ho'el in Hameed (2004) statistics is used to mean a summary measure obtained after data have been analyzed. They are data compilations in books, files and other documents, usually in numerical forms or events or activities that take place in the organization. The data so collected must be analyzed before it can be used in decision-making. In the library, statistical data is the art of keeping qualitative records of operation and services. They are accurate and precise records of data collected by the library staff in the course of discharging their daily services. Every library keeps a variety of statistics on its routine operations and such records are feedback information tools used for decision making by the library management. Library statistics as a feedback tool is a vital component for management decision making. It is a major performance evaluation tool as it enables a library to measure its performance periodically and then make necessary adjustment.

The importance of library statistics in management decision making cannot be overstressed. They paint a picture of the library which could not be adequately and succinctly stated in any other According to Nwalo (2003), library fashion. statistics tell stories, in the library. The collection, analysis and publication of basic statistics in the library are essential for planning which facilitates quality decision making (Hameed, Statistical data as feedback information can be used in many different ways such as supporting management decision for benchmarking with other libraries and in making submission for grant of money (Silovsky, 2018). Library statistics are needed in order to ascertain the level of different resources and services that a library provides and how the resources and services are also needed for assessing the level of performance of different library operations and services. The ultimate aim

of keeping statistics in the library is for decisionmaking.

It is one thing to generate statistics of operations, and it is another thing to put the generated data to effective use in management decisions. While many libraries gather statistical data, there appeared to be little or no use of such in planning and decisions. There is no gainsaying the fact that any library manager with passion for successes must engage in constant and continues effective feedback information generated through library statistics. This will enable them take quality decision in packaging and repackaging quality product and services towards the satisfaction of the needs of the users. It is against this background that this study examines the librarians' use of feedback information generated through library statistics in decision making.

## **Statement of The Problem**

Effective management of organization is a function of quality policy decisions anchored on use of information, effective (feedback information). Consequently, the use of information generated through statistics becomes a sine-quanon for the achievement of organizational goals and objectives. The library as an organization is involved in decision-making process. Decisions making are mechanisms to pursue and actualize the goals and objectives of the library. These are essentially translated through all library activities designed to achieve quality service delivery to the users. The pursuit and realization of the noble goals and objective of the library can be achieved and sustained through effective generation of library statistics which enhances the formulation of quality, accurate and goal oriented decision making in the library.

Furthermore, although the need for library statistical records and its potentials in decision making is acknowledged by libraries, most libraries are still struggling to put in place systems for its effective generation and use in decision making. In many libraries it is difficult to find or maintain accurate statistical data on library activities and where such are available, the records are harp hardly kept and hardly updated. Situations such as these, impede effective generation and use of library statistical data which ultimately could jeopardize the accuracy and quality of decision. In the light of the above, provision of quality

# Use of Feedback Information from Library Statistics in Decision Making by Librarians in University Libraries in South East Zone of Nigeria

resources and service delivering will definitely be endangered.

This study therefore is carried out to examining the librarians' use of Feedback information generated though library statistics in their decision making.

### **Review of Related Literature.**

Statistics is used to mean a summary measure obtained after data have been analyzed. Salawu (2016) defines statistics as a scientific method of collecting, organizing, summarizing, presenting and analyzing data as well as drawing valid conclusion and making reasonable decision on the basis of such analysis. According to salawu (2016) statistics as output represent data that has been summarized as qualitative facts or charts or images. Contributing to the meaning of statistics, Hameed (2004) summarized it as scientific study collection, methods of organization, summarization, analysis and quantitative data for the purpose of drawing valid conclusion in such a way as to maximize any uncertainty drawing from the data and be able to assess the degree of such uncertainty.

Library statistics as feedback information are data compilation in books, files and other document usually in numeric form on events that take place in the library (Solomon –Uwakwe & Onyeneke, 2009). Nwalo (2003) defined library statistics as the act of keeping qualitative records of operations of the library. They are accurate and precise records of data collected by library staff in the course of discharging their daily services. Every standard library keep a variety of statistics on routine operations and occurrences such as acquisition, Cataloguing, Binding, circulation, reference services, serials consultations etc.

Library statistics occupy a central position in management decisions. It usually tells the stories in the library and facilitates effective and efficient management of the library and enhances decisions in the library (Nwalo, 2003). According to Salawu (2016) library statistics shows the strength and weaknesses of the library in terms of resources, equipment, staffing, finance, use of collection degree of patronage and services. Library data and statistics generated from records and surveys of the research interest of users enable the library to provide them with latest available information on their research areas in the appropriate formats as list of newly acquired books or journals issues,

content page of journals, abstracts of publications, complete bibliographies of latest relevant materials (Obillade, 2003). Statistics are the common means of measurement. They present a picture of the library which could not be adequately and succinctly stated in any other fashion (Nwalo, 2003). Library statistics is a major performance evaluation tools as it enables a library to measure its performance periodically and then make necessary adjustment. Salawu (2016) noted that such statistics is the tool for implementing the feedback function of library management. According to Salawu, Survey statistics on users' opinions provides a means for assessing user's satisfaction with library services.

Librarians of academic libraries, research institutes, and other organizations rely on statistics to make a case for increased budgetary allocation from their parent institutions as they need to support their claims with facts and figures. Luthen (2002) states that compiled library statistics enable librarians to make case for additional funding as well as aids selection decisions. Libraries are not exonerated from the tight financial budget facing organizations. This situation places financial constraint on the effective pursuit of its goals and objectives, however, a proper analysis of it major needs through feedback information generated from library statistics that x-rays the needs of its users, will enable the library management allocate its resources to the areas of greater needs. Thus, library statistics as feedback information serves as a tool for effective resource allocation. Supporting this, Eiriemiokhale et.al (2018) opined that libraries have shifted from spending acquisition budget on the basis of speculation to spending on yardstick of demand and this could be attained when libraries keeps and uses data on library usage and acquisitions. Through accurate and authentic information generated from statistical records, library regularly assess how best to allocate resources to balance needs (Patrica, 2010). Adetaro (2000) opines that in many libraries, statistics are usually computed daily, weekly, monthly and annually about activities including traffic, registered users, and materials consulted and loaned out. Information stored in the acquisition register, user's registration ledger, loan register etc, enhances the decision making of librarians. They serve as data bank for information storage on library routine activities and are veritable feedback information which enables the library management to take decision on library operations. For instance, a new library service can be planned or an existing service improved. Statistics will indicate whether there will be enough demand for the new service or not.

The importance of statistical data in decision making of librarians is not in question. That is why librarians and information centers show increasing interest in maintaining and updating statistical records. What actually keeps the library going is the keeping of proper records. For any effective planning, decision making and controlling to take place, they must be timely access to records. Nwalo (2001) argues that one of the best way to determine library effectiveness is the use of library statistics .The use of data, information and knowledge in planning and decision making of management can effectively improve library performance (popoola, 2000). Rodriguez (2008) revealed how computerized library data collection development system was used to explore the use of aggregated circulation. Littman (2002) revealed that circulation analysis have been applied to a number of important issues including evaluating collection, acquisition policies, management decision, allocating physical space for materials, identifying materials for office storage, allocating funding for materials and suggesting approaches to deselecting.

There are lots of challenges that hinder effective use of statistical information in decision making by librarians. Eiriemokhale et.al (2018) pointed out that obstacles of organizational structure, inadequate leadership, librarians unease with qualitative analysis, lack of good data analysis and presentation skill and the need to present meaningful measures as major barriers to more extensive use of data in libraries.

This paper investigates librarians' use of feedback information generated through library statistics in decision making.

# Methodology

This study adopted descriptive **survey** research design. Questionnaire was used to collect data.

Data obtained was analyzed using mean score. The population of the study consists of all the librarians in leadership position in University libraries in Southeast zone of Nigeria. They consist of the University librarians, their deputies and heads of units of libraries under study. The population of the study therefore is 103 librarians in Southeast zone of Nigeria. The entire 103 libraries were used as sample size. 103 questionnaires were distributed and duly completed and returned resulting in 100% response rate. The data collected was analyzed using IBM, SPSS, version software for the calculation of mean and standard deviation, and testing of hypothesis. The research questions were answered using mean score. Any mean score above the benchmark many of 2.5 were accepted while those below were rejected.

# Objective of the study

- (1) To find out if librarian in the university libraries in Southeastern generate feedback information through library statistics.
- (2) To determine the mean score rating of the use of feedback information from library statistics in decision making.
- (3) To identity the problem that militate against the use of feedback information from library statistic in decision-marking.

# **Research question**

- (1) Do librarians in university libraries in South East zone of Nigeria generate feedback information from library statistics?
- (2) What is the mean score rating of the use of feedback information from library statistics in decision-making?
- (3) What are the problems that militate against the use of feedback information from library statistics in decision making?

## **Hypothesis**

The mean rating of the use of Feedback information generated from library statistics in decision-making by librarians in university libraries in south eastern zone is not significantly greater than the expected mean of 2.5 (P<0.05).

# Result and Discussion Table 1: Distribution of Questionnaire Distribution of librarians in leadership position in university libraries in south east zone of Nigeria.

University Library	University Librarian	Deputy University Librarian	Heads of Units
Abia State University Uturu.	1	2	6
Anambra State University, Uli.	1	2	6
Ebonyi State University Abakiliki	1	2	7
Enugu State University of Science and	1	3	9
Technology Enugu.			
Federal University of Technology, Owerri	1	0	7
Imo State University, Owerri	1	0	9
Madonna University, Okija	1	1	7
Michael Okpara federal University of Agriculture, UmudikeUmuahia	1	0	6
NnamdiAzikiwe University Awka	1	1	7
Renaissance University, Ugbawka Enugu State	0	1	2
University of Nigeria, Nsukka	1	5	10
Total	10	17	76

All the 103 copies of the questionnaire representing 100% of the respondents were duly completed and returned

Research questionnaire: Do librarians in university libraries in South East zone of

Nigeria generate feedback information from library statistics.

Table 2: Generation of feedback information from library statistics

Response	F	%
Yes	103	100
No	-	-
Total	103	100%

The entire 103 librarians from the 10 university sampled indicated that they generate feedback information form library statistics. This is evident in the

100% response recorded by yes on table two. This shows that librarians in university libraries in South east zone of Nigeria keep records of statistics of their operations in the library.

Research question 2: What is the Mean Rating of the use of Feedback Information generated through Library Statistics in Decision-Making by Librarians in University Libraries in South East Zone Nigeria?

Table 3: Distribution of the Mean Responses of the Respondents on the Use of Library Statistics

for Decision-Making.

for	for Decision-Making.								
S/	Use of Library Statistics in	No of	SA	A	D	SD	X	Std	Decisio
NO	Decision-Making on Library	Respons					-	Deviatio	n
-	Issues.	e						n	
1	I use information from the	!03	45	54	4	0	3.40	.566	Positive
	acquisition register in decision-								
	making.								
2	I utilize information on the rate	!03	45	51	1	0	3.43	.5i6	Positive
	of use of the library when								
	making decisions.								
3	Information on the number of	!03	47	54	4	0	3.42	.569	Positive
	books obtained in the library is								
	useful to me in decision-								
	making.		20		4.0		2.15	<b>-20</b>	<b>.</b>
4	I rely on information obtained	!03	29	63	10	1	3.17	.628	Positive
	on the charging rate of books in								
_	making decisions.	102	22	50	10	2	2.17	(79	Danitina
5	I generate Information from the	!03	32	59	10	2	3.17	678	Positive
	answered users queries are for decision-making.								
6	I rely on feedback information	!03	27	64	9	3	3.12	.676	Positive
U	obtained through overdue	:03	21	04	7	3	3.12	.070	rositive
	notices in decision- making.								
7	I utilize information generated	!03	34	62	5	2	3.24	.633	Positive
,	through library records on peak	.03	٥.	02		_	3.21	.033	1 obitive
	periods in make decisions.								
8	Information generated through	!03	35	58	10	0	3.24	.618	Positive
	library records on vandalized								
	books is useful to me in								
	decision-making.								
9	I rely on information	!03	31	58	13	0	3.16	.668	Positive
	generated through the records								
	of books on reserve for making								
	decisions.								
10	I rely on information generated	!03	31	58	10	0	3.13	.737	Positive
	through the library statics of								
	registered users in decision-								
	making.	100	25	- 4			2.12		<b>.</b>
11	Information from library	103	27	64	9	3	3.12	675	Positive
	statistics is useful t me in the								
	allocation library resources								
	Grand mean						3.28		Positive
	Grand Incan						5.40		1 OSITIVE

# Use of Feedback Information from Library Statistics in Decision Making by Librarians in University Libraries in South East Zone of Nigeria

Table 3 shows the mean rating scores of respondents on the use of information generated from library statistics in decision-making. All the items on Table 3 relating to the use of library statistics for decision-making had a higher response rating on agree than disagree, which indicates a positive response to the questions. This is confirmed by the mean response scores recorded by the items, which are all above the expected mean of 2.5 and the standard deviation that ranges

from .566, .516, .569, .628, .678, .633, .618, .668, and .737. This therefore shows that many of the librarians in the university libraries in South East Zone of Nigeria use information generated through library statistics in decision- making. This indicates a high and positive response to the question and it is inferred that librarians use feedback information from library statistics in decision-making.

Table 4 Summary of the t-test on the level of significance of mean rating responses of the use of

information from library statistics in decision-making by Librarians

Variable	No of Response	No of Items	Mean	Stand Dev	t-test	p-val	Level of significance	Decision
Use of Lib Statistics In decision-making	103	10	3.282	.473	70.388	0.000	0.05	Ho Rejected

The result of the t-test on table 4 carried out at 0.05 level of significance, showed that the overall mean ( $\mathbf{X}$ ) is 3.282, while the standard deviation and t- test were .473 and 70.388 respectively. Since the p-value = 0.000 which is less than 0.05, the null hypothesis is rejected. It is therefore inferred that the mean rating responses of the use of feedback Information from library statistics in decision-making is statistically, significantly greater than the expected mean of 2.5.

This finding supports the findings of Hameed (2004) that librarianship as an aspect of social sciences and as an educational facilitator also employs statistics extensively. He explained that it is so because some of the library's daily activities which are rendered to its users, are quantitative and therefore, analyzable resource in a library. Corroborating this, Flind (1996) asserted that many facts about libraries whether academic, school, special or public libraries, visa-avis the quality of duties performed by librarians and other supporting staff, the services, the available resources and the total number of queries answered for the clientele of the library, can be accurately described in quantitative data for the purpose of analysis. Uwakwe and Njoku (2012) opine that library statistics are a veritable instrument management used to generate

information for decision-making on library issues. Librarian keep variety of records such as acquisition register, loan register, records of mutilated or missing materials etc. statistical data serve as a data bank for information storage which librarians rely upon to generate feedback for decision-making. Most of the respondents attested to the fact that they constantly consult the library records on the rate of use of the library, peak period of the library, and the subjects constantly consulted by the users to take decision on how to improve the library facilities and services.

However it is pertinent to note that observation made by the researcher in the course of this study tends to question some of the claims by the respondents especially on the use of library statistics to generate feedback information for decision making. The researcher observed in some libraries visited that they do not keep records of their routine operations and even where they do: the records are haphazardly kept and hardly updated.

Definitely, the field observation either reveals very poor attitude and commitment of these libraries to the use and application of library statistical data for generating feedback information for this completely nullify the claim of employing this tool in decision making.

# Feedback Information from library statistics in Decision-making?

Research question 3: What are the Problems that Militate against the Effective use of

Table 4 Distribution of the Mean Rating Responses of the Respondents on the Problems that Militate Against Effective use of library statistics

Militate Against Effective use of library statistics									
S/N	Problems Militating	No of	SA	Α	D	SD	$\overline{\mathbf{x}}$	Std	Decision
	use of feedback	Response					^	Deviation	
	information from	-							
	library statistics in								
	Decision-Making								
1	Lack of well articulated policy in collection and use of library statistics	103	49	47	5	0	3.43	.651	Positive
2	Inappropriate collection of statistical data	103	52	50	1	0	3.49	.558	Positive
3	Uncertainty of the authenticity of data generated from library statistics	103	53	4+8	1	0	3.49	.575	Positive
4	Poor statistical keeping method	103	49	52	2	0	3.46	.538	Positive
5	Insufficient fund	103	39	60	6	0	3.34	.552	Positive
6	Poor management attitude	103	45	55	2	0	3.42	.535	Positive
7	Insufficient skill in analyzing and interpreting statistical data	103	30	72	1	0	3.28	.473	Positive
8	Lack of ICT facilities	103	35	64	4	0	3.30	.539	Positive
9	Poor attitude eof staff	103	33	60	8	0	3.20	.662	Positive
10	Inadequate staff	103	30	64	6	0	3.17	.663	Positive
	Grand mean						3.34		Positive

Table 4 identified the problems militating against effective use of feedback information from library statistics in decision making by librarians. All the items on Table on the problems militating against the use of library statistics in decision-making had a higher response rating on agree than disagree, which indicates a positive response to the question. This is confirmed by the mean response scores recorded by the items, which are all above the expected mean of 2.5 and the standard deviation that ranges from .651, .558, .575, .538, .552, .535, .473, .539, .662, and .663. This therefore shows that many of the librarians in the universities in South East Zone of Nigeria agree that the above-mentioned problems on Table 4 militate against the use of feedback information

from library statistics in decision- making. Some of these include Lack of well articulated policy on collection and use of library statistics, collection of statistical inappropriate data. Uncertainty of the authenticity of data generated from library statistics, Poor statistical keeping method, insufficient fund, poor management attitude, lack of ICT facilities, insufficient skill in and interpreting statistical data, analyzing Inadequate staff, poor staff attitude etc. The findings of this study collaborates the findings of Hiller (2002) that the obstacles of organizational structures , inadequate leadership, librarians unease with qualitative analysis lack of good data analysis and interpretation skill are major barriers to more extensive use of statistical data in

# Use of Feedback Information from Library Statistics in Decision Making by Librarians in University Libraries in South East Zone of Nigeria

libraries. This is also in line with Lakos (2002) assertion that the sheer amount of data is obviously one obstacle to using it for library management. Eri (2018) in his study also found out that poor statistical keeping method, insufficient skill in analyzing and interpreting statistical data as well as lack of ICT facilities as major problems that hinder effective use of information from library statistics in decision making.

Library statistics like any good and useful tool have some short comings. Experience have shown that the data given on daily activities of the library is either under or over recorded thus, the figure may not reflect the true position of library services for the purpose of appraisal and consequently, its authenticity for decision making. When the authenticity of library statistics is in doubt, its utilization becomes difficult. The uncertainty of the authenticity of the information from library statistics may arise due to inappropriate collection of data, poor statistical keeping method, insufficient skill in analysis and interpretation of statistical data etc. In situations such as this, such information could be counterproductive and might constitute a distraction to management decision making.

Policies are deliberate plan of action, which is intended to guide decision making and achieve rational outcome (Adomi, 2008). They provide framework against which proposals and or activities can be tested and progress measured (Spasoff, 1999). Formulation of policy on the generation and use of library statistics is an indication of the seriousness management attaches to its role in library decisions. Most libraries lack clearly defined policy on library statistics to regulate its activities. Lack of clearly defined policy militates against its generation and application in the library. It also accounts for the

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poor management attitude towards its adoption (Uwakwe & Onyeneke, 2009)

### **Conclusion and Recommendations**

The study concludes that librarians in the university libraries in south east zone of Nigeria use feedback information generated through library statistics in their decision making. Some of the areas in which statistics is needed in decision making is cost analysis, allocation of library resource, acquisition of library materials, recruitment of staff, library security, opening and closing hours of the library, cataloguing and reference services. The study also identified some problems that militate against effective and efficient generation and use of library statistics in decision making as lack of well articulated policy, insufficient fund, inappropriate collection of data, poor statistical keeping method, insufficient skill in analysis and interpretation of statistical data, lack of ICT facilities, poor attitude of management and staff, uncertainty of the authenticity of generated statistics, etc.

Based on the findings the following recommendations are made for effective generation and utilization of library statistics for decision.

- 1. Statistical records play an indispensable role in library operations and decision-making process. Thus, the head librarian should appoint staff who should consistently record and regularly update them.
- 2. All staff saddled with collection of library statistics should be given basic statistics education on various methods of collecting and analyzing data. This will enhance proper interpretation and manipulation of data
- 3. ICT facilities should be provided in all the libraries that still use manual data entry of daily library activities to keep abreast of modern practice in technological era.

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