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Assessment of Information Management in a State Public Service in Nigeria

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Abstract

This study provides an assessment of information management in Oyo State, Nigeria with a view to understanding the information sources used by policy makers in the ministries, current information organisation and storage practices, and level of utiliisation of information. The paper also examined information dissemination practices and perceived benefits of information management as well as the challenges encountered. A sample survey design was used to collect data from 374 staff from the rank of grade levels 07 to 16 in seven of the twenty ministries in the state. Data was collected using a structured questionnaire. The ministries used multiple sources of information; professional/ academic journals and the Internet are the least consulted sources. The ministries seldom shared information/database/datasets. The dominant storage system is file cabinet. Current practice of information dissemination is through paper files, memos and reports, meetings, print media, and telephone. Major information management practices are driven by manual systems and approaches. This report contradicts reported efforts of government to implement egovernment. Investing in information technology infrastructure is required to create enabling environment for transition to egovernance. Enskilling civil servants with capacity for managing information using electronic technologies is necessary to improve information management in the state public service.

Keywords: Information Management, Oyo State, State Public Service, information technology, Nigeria

Introduction to the Study

Information is a resource that enables organisations effectively combine and utilise other factors of production; it coordinates the mobilisation of other resources and assets to enable organisations perform optimally. Information management and its systems are essential means of managing the ever increasing huge amount of information that organisations have to process (Gunnar and Svensson 2012, Cordella and Iannacci 2017, Alvarenga, Matos, Godina and Matias 2020, Watad 2020) Thus, organisations are on regular basis looking for methods to collect, organise and manage their information, and they require effective information management knowledge, tools and technologies to do so (Gunnar and Svensson, 2012). Governments at all levels need efficient information management system to function maximally. The public sector is the pivot upon which the wheel of government machinery rests, and it is often faced with the challenges of modern day administrative trends of performing tasks fast and in a robust, efficient, and accountable manner that takes reduction of cost into consideration. The challenge is how the wealth of information is managed quickly, effectively and securely to achieve government goals and objectives.

Government and other organisations are witnessing information explosion, resulting in information and knowledge indices becoming evidence of social, economic and political progress (*Open Group*, 2007, Brown and Toze, 2017). All organisations, including the public sector, especially have nearly the entire product of administrative decision-making and service delivery in the form of information. The records of an organisation, such as the public sector, constitute her corporate memory which supplement human memory and serve as

guides for effective planning and decision-making (Adewale, Abioye and Isa 2016). Information flow and management are the lubricants that enable the combination of the multiple information and their sources. Improvements in information management will drive and support progress across board by providing civil servants with timely access to high-quality, accurate and relevant information that strengthens decision making and improves operational performance.

Information and records management in Nigeria is yet to attain the level of attention and support that it has received in countries of the developed world Atulomah (2011). For instance, Hamadoja (2011) argued that in Nigeria, the depth of preservation of records is not yet accorded deserved priority; as ancient as record keeping is, public institutions are still deficient in organising, maintaining, and making information accessible despite the presence of microcomputers. Today, majority of government and public institutions still process their payrolls, personnel, and official information manually despite the presence of microcomputers. Files are piled up on top of one another in cabinets without any indexing and cataloguing methods, making information and data access tedious and time consuming.

There is need to provide quality, efficient and effective information management system. It is important to provide government institutions with valuable information that will aid decision-making on ways of improving the existing information management system, the information services and infrastructure, management practices that would make their operations more efficient and effective. There is need for studies on information flow and information management. Since information system and technologies are dynamic, there is need to carry out an assessment of existing information management system and resources in order to assist public organisations in identifying areas where there are problems and decide the most feasible solution based on existing situation and technologies. It is against this background that this study examined the information management behaviours, infrastructure and services needed to manage information in the ministries of the Oyo State.

Problem Statement

Several studies have been carried out in relation to assessment of records and information management process and data processing system in Nigerian public service system (Gunnar and Svensson, 2012;Yahyah, 2006; Atulomah, 2011; Adebayo, 2011, Adewale, Abioye and Isa 2016). Many public organisations handle sensitive and information that constitute part of the public record that must be well-managed, made available and protected, and they need to provide online information and services in a manner that is accessible to the entire public. It is apparent that effective information management system in place can resolve most problems facing the public sector which ranges from alarming rate of misplacement or loss of vital records. There also exist the challenges of inaccurate and slow retrieval of necessary information needed to take decisions or respond to inquiry, delays in payment of staff emoluments and fringe benefits, finding and collating data across different information sources, getting hold of the correct and up-to-date data. But many of these studies assessing information management in public sectors in Nigeria address the problem from entirely sectoral perspective. For instance, all the studies, including the present one that focuses on Oyo State, address the situation with respect to state governments. This study is therefore part of the studies focusing on various states in Nigeria required to accumulate a body of knowledge that captures the information management situation in the public service sector.

Aim of Study

The aim of this study was to examine how information is managed in the public sector in selected ministries in Oyo State Nigeria.

Research Questions

The study was guided by the following research questions:

i. What are the information sources used by ministries in Oyo state?

ii. What is the current state of information organisation and storage practices of the ministries in Oyo State?

iii. What is the level of utiliisation of information in the ministries?

iv. What are the various information dissemination practices used in Oyo state's ministries?

v. What are the benefits of information management to ministries in Oyo state?

vi. What are the challenges encountered in meeting information-related obligations in the ministries?

Literature Review

Information management refers to the economic, efficient and effective co-ordination of the production, control, storage and retrieval and dissemination of information from external and internal sources, in order to improve the performance of the organisation. Information management is the organisation's capability to create, maintain, retrieve and immediately make available the right information, in the right place, at the right time, in the hands of the right people, at the lowest cost, in the best media, for use in decision making. The main challenge facing the information personnel is to ensure that the information resource benefits its potential users in the best way possible. Information management includes indexing, abstracting, information analysis and consolidation, information repackaging, production of trend reports, feasibility studies and viability studies, as well as statistical bulletins (Matovu 2006, Adewale, Abioye and Isa 2016). According to Ralph et al., (2008), information management system is a set of interrelated components that collects, manipulates, stores and disseminates information and provides feedback mechanism to meet an objective. An information system can also be considered as a mechanism used for acquiring, filing, storing, and retrieving an organised body of knowledge. However, Tiamiyu (2003) had earlier opined that information system is designed to organise or process data in such a way that the resultant processed data are most informative to its users.

Asemi, Safari and Asemi (2015) opined that the two vital functions of information management system is the ability to output information to support decision making, co-ordination, control, analysis, etc and receive feedback from which further inputs can be derived. Generally speaking, an information system is composed of computing hardware, software, and communication facilities. These are tangible portions of an information management system. The intangible portion of an information management system, which is very crucial and usually neglected, is the organisational issues of an information system which are user requirements analysis, data capturing and cleaning, data maintenance and updating, information dissemination and utiliisation, etc., all need to be well planned and organised. Any information system, no matter how advanced its hardware and software are, cannot possibly be successful unless management and organisational issues are a top concern (GIS, 1995). To achieve high efficiency, quality and productivity, office automation and information systems will be working together (Brown and Toze 2017).

An information management system (IMS) should have the ability to facilitate managing of information at four stages: input, data processing, output and storage. This information helps administrators to solve problems and seize opportunities. Information management systems (IMS) make it possible for organisations to get the right information to the right people at the right time by enhancing the interaction between the organisation's people, the data collected in its various IT systems, and the procedures it uses. It brings together the raw data collected by the various areas of the organisation, which, while useful for specific functions such as accounting, does not provide, by itself, information that can be used to make decisions. As organisations grow, IMS allows information to move between functional areas and departments instantly, reducing the need for face-to-face communications among employees, thus increasing the responsiveness of the organisation (Alvarenga, Matos, Godina and Matias 2020). Rowley (1998) proposes four different levels of information management: information retrieval, information systems, information contexts, and information environments. Effective information management needs to address issues at all of these levels. Choo (2002) defines information management as a cycle of processes that support the organisation's learning activities: identify information needs, product and services, distributing information, and using information.

A government exists to serve its citizens and is the largest user of information technology (GIS, 2005). Their primary activity is record-keeping. Records, and the information they contain, are a valuable asset that must be managed and protected. Records provide the essential evidence that a particular action or transaction took place or that a particular decision was made. Records support all business functions and are critical to the assessment of policies and programmes, and to the analysis of individual and organisational performance. Without reliable records, government cannot administer justice and cannot manage the state's resources, its revenue or its civil service. It cannot deliver services such as education and health care. Without accurate and reliable records, and effective systems to manage them, governments cannot be held accountable for their decisions and actions, and the rights and obligations of citizens and corporate bodies cannot be upheld.

The public administration process is, to a large extent, virtually a process of data/information processing. Government authorities collect and process various data and information - on individuals, families, organisations, and companies, and then on the basis of these data and information, produce new information for the public, such as policies, strategies, plans, regulations, and various services to the public. Clearly, government is more than simply a user of information system. Each government has to chart policies and strategies to exploit its information resources, to develop its information infrastructure, and to promote the utiliisation of information systems for the purposes of achieving more effective growth of public services (Gunnar and Svensson 2012). Failure to initiate effective and timely action will have serious ramifications for the ability of a government to stimulate effective social and economic development of the country. Matovu (2006), in reviewing the structure of information in Uganda, examines the nature, strength and weaknesses of the conventional information system in Uganda. He pointed out that communication provides the government with the means with which to direct people's attention, opinions and thoughts, thus influencing people's perception with regard to social issues.

Public administration is a network of human relationships and associated activities extending from government to the lowest paid and powerless individual charged with keeping in daily touch with all resources, natural and human, and all aspects of the life of the society with which the government is concerned. Matovu (2006) in his study identified and described the nature and scope of public administration in Uganda. He observed that the introduction of information management system in public administration in Uganda had direct bearing to the attempt to replace the conventional approach to public administration with what had come to be known as new public management. The use of information technology in the public sector has been developed in two dimensions: office automation and information systems. The office automation dimension aspires to raise efficiency and productivity of office business; while the second aims at organizing and utilising information to support administration and management, as well as policy development and decision making, so as to improve effectiveness, efficiency, and productivity of an organisation as a whole.

Information management plays a crucial role in all public administration activities. Without accurate and reliable information, and effective systems to manage them, governments cannot be held accountable for their decisions and actions, and the rights and obligations of citizens and corporate bodies cannot be upheld. Effective information management enables the ministries to reduce costs by minimizing waste and duplication. Effective information management can, for example, remove unnecessary recording for civil servants, enable civil servants to share services and systems, allow for better use of analytics to support cost-based decision making and ensure that specialist administrative skills are utilised effectively in the discharge of their duties (Gunnar and Svensson, 2012).

Information management also increases the effectiveness and performance of civil service in a number of ways. It enables collaboration and information sharing between ministries and other agencies, supports the use of analytics to strengthen intelligence-led and preventive measures and enables civil servants to access critical information remotely. It also helps the civil servants increase public confidence by enabling them to engage with the citizen they serve. Information management encompasses the processes, functions, standards and

technologies that enable high quality information to be created, stored, communicated, valued and used effectively and securely in support of an organisation's strategic goals. Information is the life blood of public service (Brown and Toze 2017).

Ministries face a range of challenges associated with the creation, collection, storage, communication, valuation, sharing and use of data. One of the difficulties with the application of information systems is that with such systems people tend to incline towards concentrating on the technological aspects and a general lack of understanding of the processes. Most administrators tend to have problems with information management in which case managing the creation, flow and delivery of organisational information often constitute a problem; flow of information, funds to facilitate access to latest technology can also constitute a problem. In recent years there are criticisms reported about poor information management, inaccuracies and often non-availability of data and lack of information for purposes of monitoring, regulating and controlling of public service operations (Akindele 2006, Omar, Weerakkody and Sivarajah 2017). Unless properly addressed, these challenges reinforce data silos, inhibit collaboration and hinder data access. They can prevent the civil servants from unlocking the value of the information they hold and undermine improvements in efficiency and performance.

Theoretical Model: Information Management Cycle Model

The Information Management Cycle Model depicts information management as a continuous cycle of six closely related activities: identification of storage; development of information needs; information acquisition; information organisation and storage; development of information products and service; information distribution; and information use (Choo, 2002).

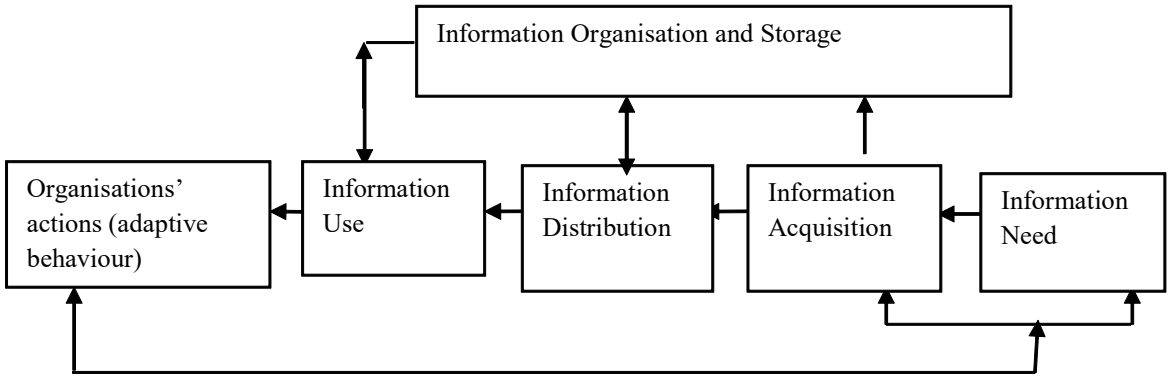

Figure 1: Choo (2002) Information Management Cycle Model

Identification of Information Needs

In the identification of information needs, organisation members recognise the volatility of the environment. Members seek information about its salient feature in order to make sense of the situation, and to have the necessary information to take decisions and solve problems. Public administrators need data concerning issues at hand which require decision making. They need data that is adequate, reliable and easy to use. The value of information is directly linked to how it helps decision makers achieve the organisation's goal. The value might be measured in time required to make decision. Public administrators are often involved in making decisions that affect many people's lives, and may have long term effects on the society. This explains the need for data that is reliable. At the same time, public administrators often handle several problems simultaneously hence; they generally would prefer data presented in a factual format for easy use, fully indexed for easy retrieval, current and thus reliable; and where necessary, data must be flexible enough to permit further analysis (Brown and Toze2017).

Information Acquisition

Information acquisition is driven by information needs and must adequately address these needs. Planning

for information acquisition has become a complex function. The fragmentation of human endeavor into pockets of specialisation has led to a proliferation of information sources and services that cater to these needs. At the same time, organisations increasingly require in-depth treatments of selected issues that are strategic to their growth and survival. Existing sources have to be constantly evaluated, new sources have to be assessed, and the matching of sources to needs had to be regularly re-examined (Choo, 2002). Hence, different ministries are most likely to embark on the acquisition of different types of information.

Information Organisation and Storage

In information organisation and storage, the objective is to create an organisational memory that is the active repository of much of the organisations knowledge and expertise. The volume of data produced and collected needs to be given structure in ways that reflect the interests and information use modes of the organisation and its members. Information technology can raise the efficiency and reliability of the organisation's operational activities. Integrated information management policies ensure that significant information concerning the organisation's past and present are preserved and made available for organisation learning (Weerakkody, Omar, El-Haddadeh, Al-Busaidy (2016).

Information Products and Services

Information acquired and information from memory is package into different levels of information product and service targeted at the organisations different user groups and information needs. This is not a passive repackaging of incoming data. Information products and improving the fit between the information and the needs or preferences of the users (Taylor, 1986).

Information Distribution

The goal of information distribution is to increase the sharing of information widespread information sharing catalyses organisational learning information sharing also creates new insight and knowledge about difficult problems or situations (Huber, 1991). End users should be given the best available information to perform their work and the information should be delivered through channels and modes that dovetail well with users' work patterns.

Information Use

Information is used for the creation and application of knowledge through interpretative and decision making processes. Information use for interpretation and delivery should support the multilevel interaction of social discourse (Choo 2001, Mamman, Isichei and Anza 2016). Information use for decision making involves the selection of alternatives, and information provision and content, should accommodate the kinetic and non-linear nature of the decision process.

Methodology

The location of the study was Oyo State, Nigeria. The study adopted a survey research design. The target population for this study consists of all staff between grade levels 07 and 16 in seven ministries of the twenty ministries in the Oyo State government. Civil servants in this category are expected to possess at least Ordinary National Diploma, or have been in the ministry long enough to rise to the rank of grade level 6, and therefore understand, and participate in, policymaking activities. Generally, people at these levels have better knowledge and understanding of the information management system in their respective departments. The study excluded level 17 officers and the commissioners; studying them would require interviews, an activity the protocols did not permit at the time of the study.

The researcher purposively selected seven ministries (see table 1) based on their perceived high propensity for data generation and consumption. These ministries have a total number of 1122 staff. The researcher used the Bourley's (1989, cited in Okeke 1995) proportional allocation formula was used for selecting the samples, $m = \frac{n_i(n)}{N}$, where m = sample size, n_i = element within the sample frame i.e. Number of staff in each ministry, n = sample or the proportion of the universe used for the study (total sample size); and N = Population of the study.

Table 1: Ministries in the study and samples selected

Selected Ministries	Total	Sample size
Information and Orientation	84	28
Establishments and Training	113	38
Industry, Applied Science and Tech.	95	32
Economic Planning and Budget	174	58
Finance	156	52
Health	323	108
Trade, Investment and Cooperative	177	59
Respondent per Grade	1122	374

Accidental sampling was used to select the respondents based on availability at the time of data collection in each of the selected ministries. Deliberate effort was made to ensure that each grade level was represented. Data was collected using a structured questionnaire.

The researcher administered a total of 374 copies of questionnaire designed for this study in seven ministries. Each respondent was given a copy of the questionnaire while the researcher was available to interpret portions that were unclear to each participating individual. Each of the respondents was required to fill the questionnaire and return it immediately except where the respondent chose to fill and return the questionnaire at an agreed convenient time to the researcher. 320 copies of the instrument were retrieved, out of which 303 were considered fit for use in analysis; others were discarded for inconsistency and lack of vital information.

Findings

Demographic Characteristics of the Respondents

Table 2 shows that 49.5 percent of the respondents were male while 50.5% of the respondents were female. This implies that both genders were fairly well represented. Among the seven ministries assessed, Ministry of Economic Planning and Budgets accounted for 17.5%, Ministry of Finance 13.9%, Ministry of Establishment and Training 10.2%, Ministry of Information and Orientation 9.2% .17.5% in the Ministry of Trade, Investment and Commerce, 22.8% in the Ministry of Health and 8.9% in the Ministry of Industry, Applied Science and Technology. The table also shows that 22.8% of the respondents had been in the service for between 1-5 years, 18.8% between 6-10 years, and 23.8% for between 11-15 years. Furthermore, 10.2% and 24.4% of the respondents have been in the civil service for 16-20 years and 21+years respectively. The result shows that about 58% of the respondents had been with the Oyo State civil service for more than 10 years, hence, they are well familiar with the operations of the service.

Table 2: Socio-Demographic Characteristics of Respondents

Variable	Categories	Frequency	%
Gender	Male	150	49.5
	Female	153	50.5
Ministry	Economic Planning and Budgets	53	17.5
	Finance	42	13.9
	Establishment and Training	31	10.2
	Information and Orientation	28	9.2
	Trade, Investment and Commerce	53	17.5
	Health	69	22.8
	Industry, Applied Science and Technology	27	8.9
Years of working experience	1-5 years	69	22.8
	6-10 years	57	18.8
	11-15 years	72	23.8
	16-20 years	31	10.2
	21 years and above	74	24.4

Addressing the Research Questions

Research Question 1: What are the information sources used by ministries in Oyo State?

Table 3 examines the information sources used in ministries in Oyo state. The table shows that 81.8% of the respondents often sourced information from government publications e.g. gazettes, budgets 14.2% indicated sometimes, 4% of the respondents indicated never sourced for information from Government Publications. Also, the result indicated that 63.4% of the respondents sourced for information from professional/academic journals often, 26.1% sometime does so, and 10.6% of the respondents never source for information from professional/academic journals.

Table 3: Information Sources

DOCUMENT	Often		Sometimes		Never		Mean	S.D
	Freq	%	Freq	%	Freq	%		
Government Publications e.g. Gazettes, Budgets	248	81.8	43	14.2	12	4.0	2.778	0.502
Professional/Academic Journals	192	63.4	79	26.1	32	10.6	2.528	0.677
Newspapers, Magazines	234	77.2	44	14.5	25	8.3	2.690	0.617
Memos, Reports	259	85.5	40	13.2	4	1.3	2.841	0.400
Conference/workshop papers	209	69.0	74	24.4	20	6.6	2.624	0.607
Colleagues	194	64.0	75	24.8	34	11.2	2.528	0.689
Internet	186	61.4	71	23.4	46	15.2	2.462	0.744
Statistical Data	193	63.7	85	28.1	25	8.3	2.555	0.643

The findings on sources of information used in the ministries revealed that majority of the respondents often sourced for information from memos and reports (85.5%), followed by government publications (81.8%), followed by conference/ workshop paper, information from colleagues accounted for 64%, professional /academic journals, statistical data and internet are the least consulted sources for information.

Information Organisation and Storage

Research Question 2: What is the current state of information organisation and storage practices of the ministries in Oyo State?

Table 4 examines the current information organisation and storage practices in ministries in Oyo state. The study found that the current capability of the ministry in updating information as good (98%) followed by accessing information (96%), supply of useful information (95.7%), supply of current and timely, information (95.4%), storage of all required information (93.4%) , Processing of information (95%), retrieval of information (89.1%), protection of data from loss

Table 4: Information Organisation and Storage

Information Organisation and Storage	Good		Poor		Mean	SD
	Freq	%	Freq	%		
Updating of information	298	98.3	5	1.7	1.984	0.128
Accessing information	291	96.0	12	4.0	1.960	0.195
Digitizing of information	261	86.1	42	13.9	1.861	0.346
Processing of information	288	95.0	15	5.0	1.951	0.217
Retrieval of information	270	89.1	33	10.9	1.891	0.312
Supply of useful information	290	95.7	13	4.3	1.957	0.203
Supply of current and timely information	289	95.4	14	4.6	1.954	0.210
Protection of data from loss	267	88.1	36	11.9	1.881	0.324
Sharing Information databases/dataset	248	81.8	55	18.2	1.819	0.386
Protection of information from unauthorized use, falsification	263	86.8	40	13.2	1.868	0.339
Storage of all required information	283	93.4	20	6.6	1.934	0.249

(88.1%), protection of information from unauthorized use, falsification (86.8%), digitizing of information (86.1%) and the least capability is sharing information databases/dataset (81.8%)

Information Storage

The table below examined the information storage used in ministries in Oyo state. Figure 2 revealed that 46.5% of the respondents indicated file cabinet system as their record keeping system, 35.0% indicated computer storage, and 26.4% indicated storage devices: CD, flash drives, 11.6% indicated databases, 4.3% indicated online storage and 2.6% of the respondents indicated others systems of record keeping. The result shows that file cabinet system is the commonest record keeping system and online storage is the least utilise means of keeping records in the ministry.

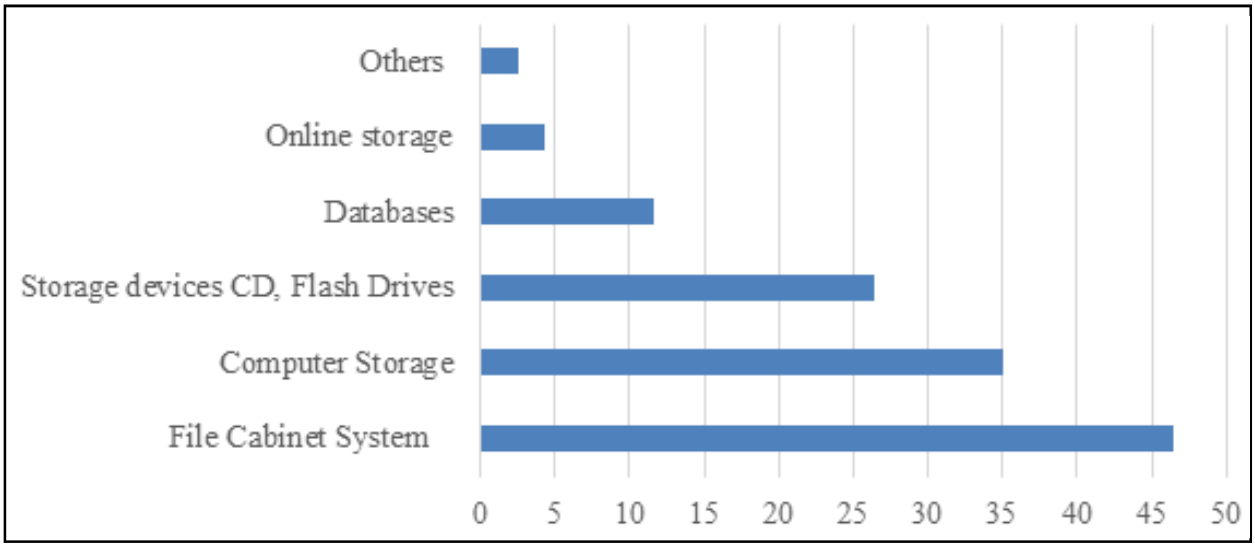

Figure 2: Information Storage system

Information Utiliisation

Research Question 3: What is the level of utiliisation of information to address tasks in the ministries?

Table 5 shows how the various ministries used the information obtained from different sources according to the participants in the study. The table shows that 88.1% of the respondents indicated that they often used information obtained for budget execution, 7.3% indicated sometimes.

Table 5: Information Utiliisation

Tasks	Often Used		Sometimes Used		Never used		Mean	S.D
	Freq	%	Freq	%	Freq	%		
Budget Execution	267	88.1	22	7.3	14	4.6	2.835	0.481
Accounting	260	85.8	36	11.9	7	2.3	2.835	0.430
Fiscal Reporting	216	71.3	66	21.8	21	6.9	2.644	0.608
Cash Management	203	67.0	74	24.4	26	8.6	2.584	0.645
Debt Management	165	54.5	80	26.4	58	19.1	2.353	0.783
Revenue Administration	221	72.9	54	17.8	28	9.2	2.637	0.646
Civil Service Administration	245	80.9	47	15.5	11	3.6	2.772	0.499
Auditing	245	80.9	42	13.9	16	5.3	2.756	0.540

Also, the result indicated that 85.8% of the respondent used the information for accounting often, 11.9% sometime did so, 2.3% of the respondents never used the information obtained for accounting. 80.9% used information for civil service administration, followed by 72.9% for revenue administration and auditing, followed by fiscal reporting 71.3%, 67 % for cash management and 71.3% for fiscal reporting.

Research Question 4: What are the information dissemination practices used in Oyo State's ministries?

From table 6, the often use means of disseminating information is paper files, memos, reports (86.5%), closely followed by meetings (82.2%), records/ archives (79.9%), telephone (74.9%), print media (State publication) (72.6%), television/radio advert (52.1%), bulletin boards (50.5%). E-mail (49.2%), CD-ROM (45.9%), website (45.9%), online databases (45.5%) and intranets (40.6%) are the least use of all the means of information distribution.

Table 6: Information Dissemination Means

Information Dissemination Means	Often used		Sometimes Used		Never used		Mean	S.D
	Freq	%	Freq	%	Freq	%		
Print Media	220	72.6	48	15.8	35	11.6	2.611	0.686
Meetings	249	82.2	41	13.5	13	4.3	2.779	0.509
Website	139	45.9	80	26.4	84	27.7	2.182	0.840
CD-ROM	139	45.9	92	30.4	72	23.8	2.221	0.806
Bulletin Boards	153	50.5	82	27.1	68	22.4	2.281	0.808
Online Databases	138	45.5	62	20.5	103	34.0	2.116	0.886
E-mail	149	49.2	73	24.1	81	26.7	2.224	0.843
Telephone	227	74.9	42	13.9	34	11.2	2.637	0.676
Paper Files, Memos, Reports	262	86.5	28	9.2	13	4.3	2.822	0.483
Records/Achieves	242	79.9	39	12.9	22	7.3	2.726	0.588
Television/Radio Advert	158	52.1	67	22.1	78	25.7	2.264	0.844
Intranets	123	40.6	71	23.4	109	36.0	2.046	0.875

Research Question 5: What are the benefits of information management to ministries in Oyo State? From the result of table 7, it shows that the most rated benefits of information management by the ministries as shown by the respondent is enhanced the knowledge delivery for improved resource allocation (93.1%), enabled the ministry to share high quality information (92.7%), followed by enabled the ministry to share high-quality information securely and effectively with partners (92.7%), closely followed by providing timely access to high quality information held by different organisations (92.1%), Improved the delivery of insight to enable better decision making (89.8%) and support intelligence analysis enabling the identification of links between people, objects, locations and events (89.8%). Reducing the cost in terms of the time used for data collection and entry accounted for 88.8%, reducing the cost in terms of the resources of data collection, storage and retrieval 88.1%.

Table 7: Benefits of Information Management

Benefits of Information Management	Agree		Disagree		Mean	S.D
	Freq	%	Freq	%		
Reducing the cost in terms of the time use for data collection and entry.	269	88.8	34	11.2	1.888	0.316
Reducing the cost in terms of the resources of data collection, storage and retrieval.	267	88.1	36	11.9	1.881	0.324
Providing timely access to high quality information held by different organisations.	279	92.1	24	7.9	1.921	0.271
Enabled the ministry to share high-quality information securely and effectively with partners.	281	92.7	22	7.3	1.927	0.260
Improved the delivery of insight to enable better decision making.	272	89.8	31	10.2	1.898	0.304
Enhanced the knowledge delivery for improved resource allocation.	282	93.1	21	6.9	1.931	0.254
Support data aggregation that turns information into actionable intelligence.	263	86.8	40	13.2	1.868	0.339
Support intelligence analysis enabling the identification of links between people, objects, locations and events.	272	89.8	31	10.2	1.898	0.304

Research Question 6: What are the challenges encountered in meeting information-related obligations in the ministries?

Table 8 presents the day–to-day challenges that occur significantly within the ministry in meeting information obligations as rated by the respondents; the percentage of how often the respondents faced different challenges in the implementation of information management the table revealed that the most often challenge faced was bureaucracy in getting information. (44.2%), closely followed by finding and collating data across different information sources difficulty (43.6%), getting information from a database difficulty (39.6%), required data was often not available quickly enough to act on it effectively (38.3%), Publishing Information online challenge (36%), No up-to-date information (36.0%), Specific information needed not captured (35.6%), knowing the information was there, but getting at it was difficult or impossible. (33.7%), and the challenge least faced by respondents was that some of the information sources produced conflicting result (32%).

Table 8: Challenges Encountered

Challenges	Often		Sometimes		Never		Mean	SD
	Freq	%	Freq	%	Freq	%		
Finding and collating data across different information sources is difficult.	132	43.6	94	31.0	77	25.4	2.18	0.812
Specific information needed not captured.	108	35.6	102	33.7	93	30.7	2.05	0.814
Knowing the information is there, but getting at it is difficult or even impossible.	102	33.7	95	31.4	106	35.0	1.989	0.830
Some of the information sources produce conflicting results	97	32.0	69	22.8	137	45.2	1.87	0.870
Required data is often not available quickly enough to act on it effectively.	116	38.3	86	28.4	101	33.3	2.05	0.846
Bureaucracy in getting information.	134	44.2	88	29.0	81	26.7	2.18	0.825
No up-to-date information	111	36.6	71	23.4	121	39.9	1.97	0.876
Publishing Information online	109	36.0	86	28.4	108	35.6	2.00	0.848
Getting information from a database	120	39.6	97	32.0	86	28.4	2.11	0.818

Discussion of Findings

This study was carried out to assess the information management in Oyo State public service in Nigeria using data collected from the ministries in the state. The study examined information sources, current state of information organisation and storage practices, level of utiliisation of information, information dissemination practices, perceived benefits of information management and the challenges encountered in meeting information-related obligations in the ministries. The ministries used a number of sources of information as this is in line with Kirk (1999) that multiple sources of information enhance capabilities of individuals in the organisation and Choo (2002) that it is beneficial to be provided with information through various sources of good quality information. The findings also showed that professional/academic journals and the Internet are the least consulted sources of information. It also can be inferred that information sources residing in the cyberspace is yet to be fully utilised in all the ministries as discussed by previous studies (Adebayo, 2011). This finding does not agree with Oduwole *et al* (2003) that the Internet which is the most prominent of this source has made possible access to electronic books and journals; various databases and search engines and the need for online public access catalogues. However, various authors (Orna, 1990; Stanat, 1990; Choo, 2002, Brown and Toze 2017) advised that existing sources have to be constantly evaluated, new sources have to be

assessed, and the matching of sources to needs had to be regularly re-examined.

The findings of the study showed that the ministry's capability in updating information (98.3%) and storage of all required information (93.4%) are the most rated among others. From this, it is clear that some mandated requirements are generally managed reasonably well, on the other hand, many ministries are still struggling with sharing information database/dataset, protecting information and falsification, reporting to stakeholders, which are relatively low in coping with the rising demand of information in public sector, a significant gap still exists in this regard in relation to other information management activities. Also it was gathered from the findings from the study that updating information in the public sector has relatively improved as well as supply of information. This is supported by Choo (2002) and Gunnar and David (2012) which states that the volume of data produced and collected need to be given structure in ways that reflect the interests and information use modes of the organisation and its members.

From the research findings, the storage system dominant is file cabinet. Though computer storage system is on the increase (rated 35%) relative to what it was from previous study (Atulomah 2011, Hamadoja 2011), use of storage devices is gaining ground, use of databases and online storage are still relatively very low (11.6% and 4.3% respectively) which corresponds with previous studies. In agreement with Popoola (2009) and Atulomah (2011), for accurate and reliable information, for easy finding and sharing of information in addressing more specific purposes and the need to take advantage of the past experiences can be achieved effectively through use of computer storage system, online storage system. Gunner (2005) and (Choo, 2002) also stressed that there is need for the public sector to embrace the use of databases , online storage in all public sector for effective storage system as memory stored in database constitutes a vital source for decision making

The findings of the survey further revealed that the current practice of information dissemination to end users in the ministry is largely through paper files, memos and reports,(86.5%), meetings (82.2%), print media (72.6%), telephone (74.9%) among others, they are the easiest means of disseminating information to their targeted audience which corresponds with previous studies(Hamadoja,2011) . On the other hand, use of emails (49.2%), website (45.9%), and intranet (40.6%), online database are not often used. According to Ralph et al., (2012), an information system can be manual or computerised. The findings of the study show that the information dissemination in the ministries is more of manual than being computerized.

Though it was revealed that a few ministries had improved in adopting the use of electronic means of information dissemination yet, it is not coherent across all the departments in such ministries. Some ministries have desktop tools which are not connected to serve information sharing and distribution. The research indicates that significant capability gaps exist with regard to electronic dissemination means. Addressing this gap will lead to efficiency gains as online interaction are generally cheaper than dealing with people face – to – face, over telephone or via paper correspondence (Choo 2002, 2011). Enabling more efficient online interaction, intranet will clearly help to address the needs and expectations of the public sector as the use of the web, mobile devices and social networks are increasingly becoming an integral part of the daily lives (Choo 2002). Information leads to decisions and actions that will help the organisation meet its goals. All the decisions taken are based on the quality of the information; the quality of the decision will be influenced by the quality of the information. The decisions in most cases will be actions to focus or refocus organisational objectives, either by changing strategies/approaches or maintaining status quo.

The findings of the study revealed that the most important outcome of information management implementations in the ministries are the provision of timely access to high quality information held by different organisations, facilitation of the sharing of high-quality information securely and effectively with partners, reduction in the cost in terms of the time use for data collection and entry, improvement in the delivery of insight to enable better decision making, enhancement of the knowledge delivery for improved resource allocation, support for data aggregation that turns information into actionable intelligence, reduction the cost in terms of the resources of data collection, storage and retrieval. This supports the

findings of Maurice, James and Manuel (2010) and (Watad 2020) regarding information management capabilities to play critical roles in supporting all administrative processes and enabling the delivery of civil services. Most public sector recognised the huge benefits of efficient and effective information management system in place as it will improve their deliverables. This corresponds to previous studies as well. Thus, the need for increased awareness for commitment from public sector is no longer an issue.

Conclusion

The implementation of information management is expected to face a unique set of challenges. By documenting these challenges, and the thinking behind the corrective action, we can enhance our ability to respond to future challenges. The Study found that meeting information obligations has some related challenges, according to the respondents, there is widespread of bureaucracy in getting information as at the time needed and collating information from different sources is a great challenge. Respondents sometimes encountered the problem of specific information needed not captured. It is obvious that the public sector is still faced with the challenges of making information available to external interested parties and on demand information provision in addition to routine reporting. They are faced with the challenge of finding and collating information from a fragmented and often inconsistent data source which takes time to work through.

Moreover, the study found out that publishing information online is creating real challenge and the obligation of making information available on demand to the stakeholders is adding to the burden which corresponds with previous studies (Atulomah 2011, Hamadoja 2011; Lee, Kim, Park, Park and Oh 2007). However, the study discovered a significant gap in the use of electronic means of information management in some ministries among other key constraints to effective and efficient information management. Akindele (2006) observed that in recent years there are criticisms reported about poor information management, inaccuracies and often non-availability of data and lack of information for purposes of monitoring, regulating and controlling of public service operations. Unless properly addressed, these challenges reinforce data silos, inhibit collaboration and hinder data access. They can prevent the civil servants from unlocking the value of the information they hold and undermine improvements in efficiency and performance.

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