

Skills and Competencies Required by Academic Staff in the Utilisation of Information Retrieval Devices in Polytechnic Libraries in Kaduna State, Nigeria

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Abstract

This study was carried out to assess the information retrieval skills and competencies required by academic staff in the use of domiciled Information Retrieval Devices (IRD) in Polytechnic Libraries in Kaduna State. The main objective of this study was to identify the types and IRDs available; ascertain the means of information retrieval skills acquisition for effective utilisation of IRDs, and determine the constraints militating against the effective use of the IRDs by academics staff in the Polytechnics studied in Kaduna State. The survey research method was adopted for the study. A total number of 1700 of academic staff from the two selected polytechnic libraries formed the subject of the study. The questionnaire and observation were the instruments used to collect data. Descriptive statistics was used and analysed the data collected. The findings revealed that the types of IRDs available were manual library catalogue, index, and abstract. The results also showed that the trial and error approach was the primary way of retrieving information resources. One of the challenges encountered by the respondents was the lack of knowledge on how to use the IRDs in retrieving information resources. The study concluded that information retrieval skill was lacking; hence, there was no satisfaction derived from the use of IRDs by the academic staff of the institutions surveyed. Based on the findings of this study, some recommendations were made among which are: the polytechnic librarians should have a policy for training both existing and newly recruited academic staff for effective and efficient utilisation of information retrieval devices to retrieve information resources with ease.

Key Words: Academic Staff, Information Retrieval Devices, Skills, Utilization,

Introduction

Academic staff of Kaduna State Polytechnic engaged in teaching, learning, and research. They need access to timely and relevant information resources. Access to information resources particularly in libraries can be effective with the help of information retrieval tools. Information retrieval (I.R.) is the activity of finding information resources relevant to an information need from a collection of information resources. It is a problem-solving assistant that facilitates the retrieval

of information resources. However, the optimal use of information resources by academic staff may depend on their information retrieval skills. One of the main reasons for the difficulties in the retrieval of information was attributed to non-availability of training programmes to educate students on how to use information retrieval tools to obtain relevant information (Fordjour, Badu, and Adei. 2010).

Problem Statement

The end-user of any library is the justification for the existence of that library. One of the keys to the successful exploitation of any library information resources lies in drawing up precise information retrieval devices coupled with a quick and skillful way of retrieving information. While it is, that can be assumed that a lecturer should be competent enough to teach his subject, his knowledge of how to access current literature in that subject in a well stock library may fall short. Other researchers have similarly observed the inefficient use of IRDs. Baro, Endouware, and Ubogu (2011) attributed this to "inability to use the library effectively, and poor skills in information search and retrieval and low level of user education and information literacy." For this reason, it has become duty-bound for Information professionals to continually equip their users with the necessary skills to overcome the challenges of information retrieval. As a problem, the study intends to investigate the utilisation of IRDs by the academic staff of the two Polytechnics who are expected to produce skilled human resources required at the lower levels of the workforce in the country.

Objectives:

The study was based on the following objectives:

1. To find out the types of Information Retrieval Devices (IRDs) are available and being utilised in retrieving information resources in the Polytechnics libraries in Kaduna State
2. To identify the types of Information Retrieval Devices (IRDs) are utilised for Information access to the information resources in the Polytechnics libraries in Kaduna State
3. To assess the means of skills acquisition required by the academic staff in using the IRDs to access information in the Polytechnics libraries in Kaduna State
4. To identify the challenges associated with the utilisation of IRDs to access information resources in the Polytechnics libraries in Kaduna State

Literature Review

There is no single universal definition pin down to the concept of Information Retrieval Devices. Various authors and scholars have defined it from their perspective. However, they are systems created for the retrieval of information and information resources. They established the existence of information resources in a given library by giving some bibliographical details of Information resources

and where it can be located and retrieved for consultation. Any tool or device that has been designed to facilitate information search could be legitimately termed as Information Retrieval Devices. Onwuchekwa and Jegede (2011) have reported that there are two broad categories of information retrieval:

- In-house Information Retrieval Devices
- Online Information Retrieval.

Our concerns here are with In-house Information Retrieval Devices, which has been set up by a particular library or information centre to serve mainly the users within the organisation. Examples of an in house Information Retrieval Devices are: Library catalogue, Indexes, Abstract, Bibliographies, and Online Public Catalogue (OPAC) and the like

Information Retrieval Devices used for Information access.

Libraries have designed some IRDs to identify specific sources of information based on the type of sources needed. How information is retrieved, depends upon the IRD clients have been or are using as the access tool. IRDs that can be found in Academic libraries include, among others, Library catalogue, Bibliographies, Index and Abstract, Online Public Access Catalogue, and Directories. This assertion is equally supported by Becker (2008) that "these Information Retrieval Devices now constitute the basic structure for library collections, and are the fundamental finding aids that researcher employ." The available IRDs that can be found in libraries include but not limited to library catalogues of all types, including online catalogues, indexes, and abstracts. Other IRDs are bibliographies, references at the end of books and published/printed papers, as well as 'see and 'see' also reference, internet search engines such as Yahoo, Google, among others. Access to library and information resources involves identification, location, and handling of information resources physically and or remotely.

Generally, a client will need to use more than one access tool because well-balanced research usually requires information from different kinds of sources. www.ibiblio.org/msmckoy/1b.doc reported the following as necessary retrieval tools:

- Bibliographies
- Indexes
- OPAC
- * Catalogues
- * Abstract

Bibliographies

Bibliographies are lists of books, articles, and other materials about a particular subject or by a particular author. Gordon (2009) defined bibliography as "the art and science of describing information sources, especially their literary content or physical make up." Bibliographies belong to two groups - those concerned with the listing of books and other documents and those concerned with the study of books as physical objects. It brings together a list of sources (such as

Books, Newspapers, Websites, Academic journals, and the like) based on the subject matter, Author, by periods. Bibliographies are essential tools to scholars, librarians, book collectors, and dealers as a reference source of information. It brings together lists of sources based on the subject matter, on authors, by periods, etc. It can also be a part of a scholarly work and consist of the information sources that were consulted to by the Author or compiler, or they can be completely separate entities--an individual list of lists.

Catalogue: The catalogue is primarily an index to a library's information. It is a method of describing any information resource in such a way that such material can be easily located, search, identified and retrieved for consultation. Catalogues are used by librarians, museum personnel, and patrons of libraries and archives. Basil (2010) stated that the library catalogue is a file of records for a library's collection. It is vital to both library users and library staff. Its functions include giving a comprehensive record of materials owned by the library, listing what the library possesses by a specific author, on a given subject, and with a particular title, and enabling library materials to be located quickly. Badawi (2011). Averred that "a catalogue is the essential retrieval tool for organising a library collection, and that it records, describes and provides efficient means of locating each item on the library shelves." However, card catalogue does not list all the information resources a library has as a collection with all this limitation. A current catalogue is still an indispensable tool if the library resources are to be fully utilised

Index: Indexes are reference tools that "point to" pieces of information located within a document—for example, books, journals, newspapers, magazines, and articles. Online Etymology Dictionary has stated, "an index practically can be described as an instrument of accessibility and information retrieval." Cleveland and Cleveland (2013) noted that an Index or abstract lead a user to totally pertinent information seldom leads to trivial information and never, ever, lead to non-pertinent information. General indexes cover a wide variety of topics and may index popular magazines, newspapers, and some scholarly journals. Specialised indexes include a specific topic or discipline and will usually index more scholarly journals.

Abstract: An abstract is a brief summary of a research article, thesis, review, conference proceeding or any in-depth analysis of a particular subject or discipline, and is often used to help the reader quickly ascertain the paper's purpose. An abstract always acts as the point-of-entry for any given academic paper or patent application. Academic literature uses the abstract to communicate complex research succinctly. An abstract may serve as a stand-alone entity instead of a full paper. An abstract aims at giving the reader an exact and concise knowledge of the parent document. In documentary abstracting, two main types of abstracts are identified: indicative abstracts that point to information and informative abstracts that give detailed information about the findings of the work. With so many indexes now

available electronically, abstracts with their keywords are even more critical because readers can review hundreds of abstracts quickly to find the ones most useful further research

OPAC: An Online Public Access Catalog (often abbreviated as OPAC or only Library Catalog)It is a computer-based catalogue and can be accessed through computer terminals in a library and virtually. Adenike and Akin (2014) defined it as "an online bibliography of a library collection that is available to the public. They are generally linked to a library's website. The importance of OPAC apart from speed and accuracy is that it allows the opportunity for simultaneous search through a different access point (Yusuf 2012).

Directories: Directories are quick reference works that cover all topics and geographic areas. They are systematically organised, alphabetically sometimes topically to provide critical information in a concise form covering list, contact, and other information for people, government agencies and corporations, and businesses.

Skills and Competencies Required for Utilising IRDs.

The optimal use of information resources by academic staff may depend on their information retrieval skills. To buttress this point, Gui (2007) stated that the skills needed to use the IRDs effectively involve the ability to handle the different retrieval tools that abound. One of the main reasons for the difficulties in the retrieval of information was attributed to non-availability of training programmes to educate students on how to use information retrieval tools to obtain relevant information. Fordjour, Badu, and Adei. (2010). Information retrieval skills are crucial for retrieving information needed for teaching, learning, and research. However, academic staff's efforts to complement their work with library resources may be limited due to the lack of information retrieval skills, which is necessary to retrieve accurate, relevant, and up-to-date information stored effectively. Information Retrieval Skills in the library and information science is the set of skills needed to find, retrieve, analyse, and use information.

Challenges Associated with the Utilization of IRDs to Access Information Resources in the Polytechnic Libraries.

Academics in polytechnic libraries encounter many challenges in retrieving relevant information, and to extract relevant information from the vast complexity of data is the central quest of the modern information society. A library's success does not depend upon the availability of information resources alone, or even bibliographically accessible, but they must be physically available to those who need them.

There are generally two kinds of failure in-library use: stock failure and reader's failure. The former is a library's failure to acquire or produce the material needed

by the patron. The reader's fault has two aspects: bibliographical and physical. The bibliographical issue involves the reader's inability to find the item sought in the library catalogue. The physical point is the failure to locate the materials housed in the library. Reasons for inaccessibility have been identified by Aguolu and Aguolu as cited in Hassan (2015) stated that "the bibliographic or intellectual access to the content of the library is inadequate owing to poor indexing system in the library catalogue or of the library collection itself." Bibliographic obstacles take various forms. In some cases, an adequate bibliographic description is lacking, while in others, the bibliographic description is incomplete or incorrect. In many cases, information retrieval devices are lacking. These devices vary in sophistication and usefulness. However, their objective is to save the user's time and simplify searching (Bundy 2004).

Methodology

Survey design is considered ideal. Ibrahim (2013) has stated that "survey design allows studying the relative incidence, distribution, and interrelation of the variables, especially in issues of the moment that involves systematic collection of data from the population of the study through the use of questionnaire and observation." The population of the study comprised of the Kaduna Polytechnic, Kaduna, and Nuhu Bamalli Polytechnic Zaria. The subjects of the study were the Academic staff of the two Polytechnics. The populations of the study are Onethousand seven hundred (1700) Academic staff in the two Polytechnics. In determining the sample size used for the study, the researcher adopted the pinion of Ukashatu (2014), who stated that "no fixed number or percentage is ideal." It is against this background that no sampling technique will be used because the researcher used the entire population to have a better understanding of the problem at hand. The use of census sampling would assist in avoiding errors in sampling, coupled with the fact that the population of the study is manageable to the researcher. Out of one thousand seven hundred (1700), copies of questionnaire were administered to the respondents, out of which a total of 1680 (98.8%) copies were returned duly completed and found usable for the study.

Results and Discussion of Finding

Table 1: Types of Information Retrieval Devices (IRDs) Available in the Polytechnic Libraries in Kaduna State

Types of IRDs	Kaduna Polytechnic	Nuhu Bamalli Polytechnic
Library index	√	√
Manual library catalogue	√	√
Abstract	√	√
Bibliographies	X	X
OPAC	X	X
	√ =applicable,	X=not applicable

Table 1 shows that the manual library catalogue; index, and abstract were found to be readily available in the Polytechnic libraries studied. The non-availability of OPAC might lead to a lack of quick and easy access to information resources. Yusuf (2012) asserted that without OPAC, "users may not access information materials at the right time; "consequently, this would affect information service delivery in the Polytechnic libraries studied.

Table2: Use of the Information Retrieval Devices (IRDs) for Retrieval of Information Resources.

IRDs	Responses Rate			Means	Std.dev
	Used	Not used	Undecided		
Index	1214	339	127	2.6470	0.887
Manual library catalogue	1597	59	24	2.9363	0.957
Abstract	1029	511	140	2.5291	1.078
<i>Cumulative MEAN</i>				<i>2.7041</i>	
Decision mean=2.000					

Table 2 shows that the Manual library catalogue has the highest mean of usage level of 2.9363, while Abstract has the least mean usage level of 2.5291. This finding is supported by Becker (2008), who asserted that the manual library catalogue now constitutes the basic structure for library collections and is the first finding aids that researchers employ'. The implication of this is that the academic staff will miss the opportunity which OPAC offers, which are speed, accuracy, and its chance for allowing simultaneous search through the different access point.

Table 3: Access to Information Resources through the Utilisation of IRDs in the Polytechnic Libraries studied.

IRDs	Responses category			Means	Std.dev
	Accessible	Not accessible	Undecided		
Index	1280	376	24	2.7476	1.021
Manual library catalogue	1505	110	65	2.8571	0.981
Abstract	1174	460	46	2.6714	1.031
<i>Cumulative MEAN</i>				2.7587	

Table 3 shows the level of access to information resources through the utilisation of the Information retrieval devices in the retrieval of information resources in the Polytechnic libraries studied. The finding has revealed that the manual library catalogue, index, and Abstract are utilised as a means of gaining access to information resources in the Polytechnic libraries studied. The respondents from the Kaduna Polytechnic indicated that utilisation of the manual library catalogue as a means of gaining access to information resources in their library

recorded the highest response with a mean score of 2.8571 and use of abstract recorded the least response with a mean score of 2.6714. These findings imply that access to library information resources is mostly achieved through information retrieval devices such as manual library catalogue, Indexes, and abstracts, in that order. This finding is supported by Muhammad (2011), who affirmed that " to ensure full access and utilisation of information for any purpose, there is the need for viable retrieval devices and knowledge on how they can be manipulated to secure the needed information." The implication of this is that Academic staff in the Polytechnic studied with limited access to information will find their daily tasks of teaching, learning, and researching development challenging to accomplish.

Table 4: Means of Information Retrieval Training and Skills Acquisition for Effective Information Retrieval Devices Utilization.

Items	Response Category					Mean	Std	Rankings
	SA	A	UD	D	SD			
I acquire my skills through my colleagues in the library	337	540	134	99	570	2.985	1.594	2
I acquire my skills through library orientation in my school	135	641	133	367	404	2.842	1.363	3
I acquire my skills through constant trial and error approach	441	705	168	234	132	3.648	1.226	1
I acquire my skills through library user education.	236	269	102	203	870	2.284	1.550	4

Key: SA=Strongly Agreed, A=Agreed, U=Undecided, D=Disagreed, SD=Strongly Disagreed

Table 4 revealed that the majority of the respondents acquire their skills through constant trial and error, as this ranked first with the highest mean response of 3.648. They learn skills through their colleagues in the library, as this ranked second with a mean reaction of 2.985. It can be concluded that the majority of the respondents acquire their skills through constant trial and error approach. The trial and error approach to information search and retrieval is a very ineffective method of retrieving information. Skills acquisition is, very crucial because information retrieval skill is the ability to carry out a task with pre-determined results often within a given amount of time, energy, or both.

Table 5: Challenges the academic staff encountered in using the Information retrieval devices in retrieving information resources in the Polytechnics Libraries in Kaduna State.

Items	Response Category					Mean	Std	
Lack of awareness of information resources in the library	470	539	100	100	471	3.260	1.598	4
Lack of physical access to information resources in the library	404	539	67	199	471	3.122	1.584	7
Lack of knowledge in how to use the information retrieval devices in the library	426	663	114	48	429	3.362	1.526	1
I do not know what I want precisely or how to articulate it to the library staff	403	540	65	202	470	3.002	1.242	8
The bibliographic or intellectual access to the content of the library is inadequate	426	162	110	47	434	3.125	.75	6
The circulation policy of the library is inefficient, shelving methods are inadvertent and guides to the library arrangement are lacking	357	644	68	167	444	3.180	1.535	5
Unnecessary physical and administrative barriers are imposed upon the use of the library material by the library management	505	538	67	67	503	3.282	1.637	3
I find it challenging to locate information resources in the library shelve	483	566	138	26	467	3.340	1.581	2

Decision mean=3.000

Based on the above table, the cumulative mean response of 3.21 was found to be higher than the decision mean of 3.000. Specifically, the biggest challenge is a lack of knowledge in how to use the information retrieval devices in the library as this item ranks first with the highest mean response of 3.362. Another severe challenge was difficulty locating information resources on the library shelve. This item ranks second with a mean reaction of 3.340. The implication of this is that information search and retrieval will be cumbersome and frustrating since the respondent lacks the prerequisite skill needed for information search and retrieval. This finding is in line with Hassan (2015), who observed that "even the highly educated lack awareness on how to use information retrieval devices." In the same vein,

Summary of Findings:

Based on the data collected and analysed for the study, the following are the summary of the significant findings of the study:

1. The most available and being utilised Information Retrieval Devices (IRD) are Indexes, Abstracts, and manual library catalogue, while the Online Public Access Catalogue is lacking.
2. The majority of the respondents acquire their information retrieval skills through constant trial and error approach.
3. Generally, the academic staff in the Polytechnic libraries studied were not satisfied with most of the IRDs available for retrieving information resources
4. The most significant challenges faced by the academic staff in the Polytechnic libraries surveyed were lack of knowledge on how to use the IRDs in retrieving information resources and failure to locate an information resource that has been catalogued on the library collection

Conclusion

Based on the findings of the study, the libraries do not apply modern technology such as the Online Public Access Catalogue (OPAC) as an information retrieval device. While on the whole, the respondents are not satisfied with the information retrieval devices in place, it is equally worthy of notice that the trial and error approach is the dominant approach in acquiring information retrieval skills. The challenges encountered by the respondents, if not correctly managed, will hinder the achievement of the goals and objectives of the library in rendering useful service to its parent organisation. It can, therefore, be concluded that information retrieval devices and resources are not adequately utilised since the right and modern devices/facilities are not in place.

Recommendations

From the findings of this study, and to improve the quality of the utilisation of information retrieval devices for accessing information in the Polytechnic libraries studied, the following recommendations were made:

1. Online Public Access Catalogue should be deployed in the Polytechnic libraries studied.
2. User education and training programme on how to use retrieval devices should always be carried out to the Academic staff of the Polytechnic libraries studied.
3. User satisfaction survey of resources and services should always be carried out to determine the success or failure of the system and services
4. There should be a periodical assessment of the information retrieval devices to ensure their viability in providing adequate access to information resources.

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