



Use Of Information Retrieval System for Library Services By Undergraduate Students In Professor Aghagbo Nwako Library, Nnamdi Azikiwe University Awka, Anambra State.

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Abstract

The study investigated the use of information retrieval system for library services by undergraduate students in Prof. Aghagbo Nwako Library Awka. The purpose of the study are to determine: The library information retrieval system available for library services to undergraduate students, the use of information retrieval system for library services to undergraduate students, the constraints to the use of information retrieval system in provision of library services to undergraduate students and the ways to improve the use of information retrieval system in provision of library services to undergraduate students. Four research questions guided the study. The study employed descriptive survey research design. The population of the study comprised of 308 regular undergraduate students (100 to 400 Levels) of Library and Information Science, Nnamdi Azikiwe University, Awka. Simple random sampling technique was used for the study; therefore, 120 undergraduate students were sampled. The sample size of the study was 30 regular undergraduate students selected from each of the levels. A self-structured questionnaire was the instruments used for data collection. The data collected was analyzed using descriptive statistics. The findings of the study revealed among others that the undergraduates were aware of information retrieval system available in and use it for their academic purposes and the study also revealed that the students faced unreliable power supply, poor maintenance culture; low bandwidth of internet access, lack of awareness among others factors that hinder the utilization of library information retrieval system. The study concludes among others that information retrieval services are available for use by undergraduate students. But the undergraduate students do not utilize library information retrieval system to a fuller extent due to unreliable power supply, poor maintenance culture, low bandwidth of internet access are among others factors that hinder the utilization of library information retrieval system. The study recommends that high Internet connectivity should be provided in the Library, so as to encourage library users to patronize the library resources and services when they are made available. Also it was recommended that university management should provide adequate fund for maintenance and alternative source of power.

Key Words: Information, Information Retrieval System, Library Services, Undergraduate Students.



Introduction

The academic library is the focal point for academic activities in higher institutions of learning such as universities, polytechnics and colleges of education. They are primarily responsible for the selection, acquisition, and provision of information materials ultimately to support teaching, learning, and research activities. Therefore, academic libraries provide information for smooth academic research process. They provide information and made it available to different types of users in diverse formats for easy access and retrieval. However, the availability of information should not be equated with accessibility. Considering that some academic libraries have available information resources but to access and retrieve these information remain a bottle neck to students. This might be attributed to lack of information retrieval system in the library. Therefore, Retrieving information means extraction of content from different sources of information files, these information sources could be Internet, OPAC, e-books and electronic journals, through the use of appropriate search strategies, including Boolean operators in the search engines. (Ali, Ali, & Bhutto, 2019). Consequently, retrieval of the varied information resources determines the usefulness of the provided information resources and services. Although these academic libraries share certain common features and characteristics, such as service delivery and they differ enormously in the value and content from one another. (Sahai, 2015). For example, the collections in university libraries have wider scope as they include, text books, reference books, journals, government publications, bibliographies, dissertations and theses, and provide access to electronic resources on CD – ROMs or online and databases.

Information Retrieval system is a part and parcel of communication system. An Information retrieval system is a software system that provides access to books, journals and other documents, stored and managed for effective communication and navigation of information. Web search engines are the most visible information retrieval applications. The main objective of information retrieval is to provide right information, to the right user at a right time. Various materials and methods are used for retrieving desired information such as Internet, data bases and OPAC according to Belkin (2016) information retrieval is the art of demonstration, storage, organization of and access to information items. The representation and organization of information should be in such a way that the end user can access information to meet his/her information needs. In Data space, information retrieval finds the structured; semi-structured or unstructured data that satisfies information need from within. Also, it informs the end user on the existence and whereabouts of data relating to his or her query. Information retrieval is generally considered as a subfield of computer science that deals with the representation, storage, and access of information (François, Ranwez, & Montmain, 2015). Information retrieval is concerned with the organization and retrieval of information from large database collections (Sagayam, Srinivasan, & Roshni, 2012).

Information Retrieval (IR) is the process by which a collection of data is represented, stored, and searched for the purpose of knowledge discovery as a response to a user request. (Anwar, 2010). This process involves various stages initiate with representing data and ending with returning relevant information to the user. Agbele (2018) affirms that in information retrieval systems, users often present search queries made of ad-hoc keywords. It involves intermediate stage includes filtering, searching, matching and ranking operations. It is then up to information retrieval systems (IRS) to obtain a precise representation of user's information need, and the context of the information. The main goal of information retrieval system (IRS) is to find relevant information or a document that satisfies user information needs. Information retrieval is the activity of obtaining information resources relevant to an information need from a collection of information resources. Lack of information retrieval system may lead to poor



access to information resources. Therefore, there is need for libraries to provide these retrieval systems such as OPAC for easy access to vast information. Information retrieval is also the process of obtaining information system resources that are relevant to an information need from a collection of those resources. Jansen (2016) states that information retrieval deals with the production, representation, organization, storage, retrieval, or evaluation of information, along with the tools and techniques associated with various processes.

On the other hand, university libraries are repository of knowledge that offer a wide variety of services that include reference, Current Awareness Services (CAS), Selective Dissemination of Information services (SDI), bibliographic services, documentation services, lending and inter library loan services, newspaper clippings, reprographic service, bindery services, indexing and abstracting service, network based services such as access to Online Public Access Catalogue (OPAC), Internet and consortia based services among others. However, library users' satisfaction depend largely on these services which is the ultimate goal of today's information professionals depends to a large extent on effectiveness of the retrieval system in providing library services. Therefore, the researcher tries to find out the use of information retrieval system for library services by undergraduate students.

Statement of the Problem

Information access or retrieval tools also sometime called finding aids are produced for the sole purpose of leading users to particular types of information sources. Some of the traditional tools in libraries include catalogues, Indexes, abstracts and bibliographies. In recent times due to developments in ICTs, computerized access tools have begun to offer full-text access to digital documents in addition to bibliographic records (Ajedekun, 2007). All activities, resources and services of the university library are geared towards helping the students and researchers to retrieve information needs. The emergences of new technologies have necessitated many alternatives for the access to academic information resources for the academic purposes and in support of teaching and learning. But, library based tools for retrieval of information resources was rarely used by students. Also, the vision and mission of the university education in Nigeria has been threatening because most libraries in general are faced with the problem of poor budgetary allocation amongst others, this might lead to in adequate subscription of data bases and integration Library Management Software (LMS) such as Koha, Newgenlib, and D-pace for the management and retrieval of information resources in the libraries. This scenario has left university libraries with no option rather than to depend solely on intervention schemes such as TETFund and other national and international donors in the provision of such library management software to aid information retrieval. Therefore, there is need for the provision of adequate funds to acquire information resources and information retrieval system for effective library services.

Based on the preliminary investigation conducted by the researchers, it revealed that students encountered difficulties in accessing vast information resources in the library, this perhaps might be as a result of poor search skills on how to navigate in the use of databases. Also, lack of users' awareness on information retrieval services available constitutes a major problem. This might also have negative impacts on the academic performance of the students most especially under graduate students. It has become compelling to equip users with knowledge about access tools available to them in order to assist in exploring opportunities provided in a new information environment. Therefore, it is against this back ground that the researchers investigate the use of information retrieval system for library services by undergraduate students in Prof. Festus Aghagbo Nwako Library, Awka.



Purpose of the Study

The main purpose of the study is to examine the use of information retrieval system for library services by undergraduate students in Prof. Festus AghagboNwako library Awka. Specifically the study was to determine:

1. The library information retrieval system available for library services to undergraduate students in Prof. Festus Aghagbo library, Awka
2. The use of information retrieval system for library services to undergraduate students in Prof. Festus Aghagbo Nwako library ,Awka
3. The constraints to the use of information retrieval system in provision of library services to undergraduate students in Prof. Festus Aghagbo Nwako library, Awka
4. The ways to improve the use of information retrieval system in provision of library services to undergraduate students in Prof. Festus AghagboNwako library, Awka

Research Questions

The following research questions guided the study

1. What are the information retrieval systems available for library services to undergraduate students in Prof. Festus Aghagbo library Awka?
2. What is the use of information retrieval system available for library service to undergraduate students in Prof. Festus Aghagbo Nwako library Awka?
3. What are the constraints to the use of information retrieval system in provision of library services to undergraduate students in Prof. Festus Aghagbo Nwako library Awka?
4. What are the ways to improve the use of library information retrieval system in provision of library services to undergraduate students in Prof. Festus Aghagbo Nwako library Awka?

Review of Related Literature

Information Retrieval (IR) is the process by which a collection of data is represented, stored, and searched for the purpose of knowledge discovery as a response to a user request (query) (Anwar,2010). This process involves various stages initiate with representing data and ending with returning relevant information to the user. Intermediate stage includes filtering, searching, matching and ranking operations. The main goal of information retrieval system is to find relevant information or a document that satisfies user information needs, to achieve this goal, IRS usually implement following processes: In indexing process the documents are represented in summarized content form, in filtering process all the stop words and common words are remove, Searching is the core process of Information retrieval System.

Information retrieval systems are tools designed to retrieve documents or information required by the users; make the right information available to the right user at the right time. Information retrieval tools are basic building blocks for a system that organize recorded information collected by information organizations. This is to establish control of contents for information use as well as for promotion of users' ease of access. In order to organize knowledge, librarians and information professionals have to create a variety of retrieval tools (Carlson, 2016). Traditionally, the methods of information retrieval have been catalogues, bibliographies, printed indexes and abstracts. Presently, computerized databases and their indexes are also important in the organization of knowledge. These are gradually replacing the traditional methods in a number of applications. At this point, the traditional methods and the computer based methods provide a unified approach to the organization of knowledge. (Swanson, 2017). Itsekor and Ugwunna (2014) emphasized that ICT has transformed the face of librarianship as



the role of library and information science professionals shift from custodian of books to information professionals, with the responsibility of creating, processing, storing, manipulation and disseminating information electronically. Therefore, a lot of information's are available on the internet; however, skills are required in order to be able to gather and retrieve this information on the web.

In other to access various information resources in the library, librarians have to device a means to locate such information by using search engines. Agboola and Shuaibu (2019) opined that search engine is a practical application of information retrieval to large scale document collections such as firefox, google chrome, bing, yahoo, ask.com, baidu, internet archive, opera, yandex.ru and etcetera. Search engine is an information retrieval system designed to help find information stored on a computer system. With significant advances in computers and communications technologies, people today have interactive access to enormous amounts of user-generated distributed content on the Web. This has spurred the rapid growth in search engine technology, where search engines are trying to discover different kinds of real-time content found on the Web. (Agboola & Shuaibu, 2019).

Another tool for information retrieval is catalogue which serve as a window to the library collection. A catalogue is the record of the collection in the library. A library catalogue comprises of a number of entries, each entry representing or acting as a surrogate for a document. There may be several entries per document or merely one, these include the author, title, author/title and subject catalogues. (François, Ranwez & Montmain, 2015). It is also a systematic arrangement of items in an alphabetical or other logical order including brief description. A library catalogue is a list of books and other reading material available in a particular library. The card catalogue has been a familiar sight to library users for generations. But it has been effectively replaced by the Online Public Access Catalog (OPAC) which most of the student are not aware of as a retrieval tool (Adunola, 2011).

In recent times, a good number of academic libraries in Nigerian universities have automated their house keeping operations and most of these libraries are providing Online Public Access Catalogue (OPAC) as public interface to users to search and retrieve documents from their library holdings. (Godwin, & Godwin, 2019) A couple of studies and reviews have been carried out by scholars and researchers to determine the strength, weaknesses and usability of OPAC as information access tools and to determine the efficiency of the search capabilities of the tool. Dike and Edem (2015) which examined the extent of use of library catalogues as retrieval tools by students of Federal University of Technology, Owerri library, Nigeria, it was revealed that low awareness of catalogue use as a retrieval tool was a factor in the under-utilization of its library resources.

If library service is to be effectively applied in libraries, the importance of the librarian' awareness of its existence cannot be over emphasized as they are the ones that mediate between information and information user. Their knowledge of particular information affects users either positively or negatively. The observations of Anunobi and Nwabueze (2016) that internal and external environment of the library services is changing at an ultrahigh speed and there is no possibility that the Library and Information Science professionals are aware of the change and its implications is a critical case that should be seriously looked into. Some librarians fail to understand that the library of today is no longer what it used to be and needed to equip themselves in a way that will enable them meet up with the new environment. They further states that RIS is the most demanding of the entire library services and close to the patrons. Management of reference section in academic library is the most difficult task facing



librarians in the world today therefore; electronic information retrieval is highly needed such as e-mail for interaction between the library user and the librarian.

Furthermore, in the use of retrieval system for the provision of library services to users, libraries are increasing day by day in searching and deploying its high rate of adopting new system. According to Echem and Udo-anyanwu (2018) stressed that the effectiveness of a library as an instrument of learning is determined by the success with which it is able to provide the users with the necessary tools capable of accessing and retrieving the information they seek. Retrieval tools enable information seekers to quickly and efficiently search, find/or locate and retrieve the resources that they seek. It therefore, becomes necessary for university libraries to deploy information retrievals tools for effective services to their users. It is also, perceived that undergraduates do not utilize library information resources due to inadequate skills for information searching and retrieval. There are other cogent factors, either from the end of service providers, users or due to environmental factors, which serve as constraints to utilization of library information resources and services. In the use of IRTs by the students face many problems so but the maximum 21% the problems is faced by the students is a large amount of data is available so they cannot organized it in proper way. (Ali, Ali, & Bhutto, 2019)

Many library users are not aware of the various services being offered by libraries and the comfort and convenience associated with such services. To address the problem of inadequate awareness of library services, Tella, (2017) observed that one of the goals of library and information centers is to satisfy their users by providing user education and awareness services, in order to achieve this aim, library and information centers need to know what the needs of their users are, and how best to meet those needs. Bhatti (2019), identified the problems faced by the libraries and their patrons and which needed to be addressed as inadequate funding; inadequate staffing; insufficient communication between various departments and librarians; users' lack of information literacy skills; inadequate copies of library materials for users; and lack of enabling infrastructure including IT infrastructure; insufficient information resources; insufficient OPAC and Internet terminals; outdated materials; mutilated books and long service queues; missing books, unreliable photocopying services and unfriendly security personnel. Observing the challenges from the user's perspective, Okello-Obura and Ikoja-Odongo (2018) on their own noted that attitudes towards e-resources access is a constraint and believed this could be attributed to problems faced when accessing e-resources. One of the major problems militating against student's effective use of the library is how to search for information of their needs. It has been observed that a reasonable number of students in tertiary institutions are not in the know of the existence of different information channels as well as the availability of information retrieval tool in libraries and information centers. (Manasse, Nongo, & Ona, 2017). However, if the number of information is huge, then it becomes unpractical to go through all the sources to locate the required piece of information; hence, the user is faced with an information retrieval problem. The information retrieval deals with automatically retrieving only those documents that satisfy the need of information of the user minimizing the quantity of irrelevant information. (Salton & McGill, 2016; Van, 2017).

Methodology

The study employed the descriptive survey research design. A descriptive survey aims at gathering data and relating it in a systematic way, the design allows the description of conditions as they occur in their natural background Nworgu (2015). The target population of this study comprises of all the 100 level to 400 Level regular undergraduate students in the Department of Library and Information Science in Nnamdi Azikiwe University, Awka. 308



regular students serve as the population for this study. Simple random sampling technique was used for the study. The sample of the study consists of and 30 students and were drawn from each of the levels (Level 1- Level 4). A total of 120 students were sampled. The instrument for data collection is a self-developed structured questionnaire. The questionnaires were administered by the researchers to the respondents. Out of 120 copies of the questionnaire that were administered, 100 copies have been retrieved and found usable for the study. Descriptive statistics was used as instrument for data analysis presented in tables.

Results

Research Question 1: What are the library information retrieval system services available to students in Prof. Festus Aghagbo Nwako Library, Awka?

Table 1: Mean response on the availability of information retrieval services.

S/N	Item	\bar{X}	Decision
1	Card catalogue	2.64	Accept
2	OPAC	2.56	Accept
3	Internet	2.68	Accept
4	CD-ROM/Databases	2.58	Accept
5	Directories/Handbooks	2.63	Accept
6	Bibliography	2.66	Accept
7	Encyclopedias	2.68	Accept
8	Search engines	2.72	Accept
9	Indexes	2.64	Accept
10	Audio-Visual	2.56	Accept
11	Abstracts	2.70	Accept

The result in table 1 indicates that information retrieval services are available for use by undergraduate student among the retrieval services available are card catalogue, OPAC, CD-ROM, Bibliography, Indexes, Audio visual and others. All 11 information retrieval services in the table were accepted as being available for the students.

Research Question 2: What is the level of use of information retrieval system available in Prof. Festus Aghagbo Nwako library Awka?

Table 2: Mean response on the level of use of Library Information Resources available to students.

S/N	Use of information retrieval system	\bar{X}	Decision
13	Academic purposes/course works	2.64	Accept
14	Complete assignments	2.56	Accept
15	For research purposes	2.68	Accept
16	Communicate with friends and colleagues	2.39	Reject
17	Online application/ registration	2.63	Accept
18	Source for materials for project writing	2.66	Accept

The result in table 2 shows that the undergraduates aware of information retrieval system available and use it for their academic purposes like course work, complete their assignments, for their research work and source for materials for projects. This is indicated by their mean response of 2.64, 2.56, 2.68, 2.63, and 2.66 respectively.

Research Question 3: What are the constraints to the use of library information retrieval system in provision of library services in Prof. Festus AghagboNwako library Awka?



Table 3: Mean response on the constraints to Library Information Resources and service utilization

S/N	Constraints	\bar{X}	Decision
19	Unreliable power supply	2.73	Accept
20	Inadequate information and Communication technology (ICT)	2.54	Accept
21	Poor maintenance culture	2.63	Accept
22	Inadequate funding	2.70	Accept
23	Low bandwidth of internet access	2.76	Accept
24	High cost of information materials	2.10	Reject
25	Information literacy	2.33	Reject
26	Distance	2.66	Accept
27	Lack of awareness	2.74	Accept
28	Lack of time	2.29	Reject

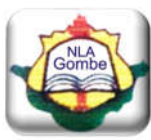
In the table 3 the study shows that the undergraduate students do not utilize library information retrieval system to a fuller extent. This is as a result of some conditions or constraints. The result showed that the students were faced with unreliable power supply, poor maintenance culture, low bandwidth of internet access, lack of awareness among others factors. Out of 10 items presented in the table, 7 were accepted as constraints hindering student's utilization of library information retrieval services, while 3 respondents stated otherwise.

Research Question 4: What are ways to improve the use of library information retrieval system in provision of library services in Prof. Festus Aghagbo Nwako Library, Awka?

Table 4: Mean response on Suggestions for Improvements to Information Retrieval System Utilization

S/N	Suggestions for Improvements	\bar{X}	Decision
29	Computer skills of students should be improved.	2.75	Accept
30	First year students should be introduced to ICTs and information literacy.	2.57	Accept
31	Lecturers should insist on students using e-resources for coursework.	2.60	Accept
32	Librarians should be trained to know how to work with students.	2.80	Accept
33	More networked computers should be purchased by the University.	2.70	Accept
34	The university should introduce e-resources fee to be paid by students.	2.17	Reject
35	The OPAC system should be made more functional.	2.71	Accept
36	University Libraries should improve on awareness campaign of resources.	2.73	Accept

Table 4 shows that respondents strongly agreed that University Libraries should improve on awareness campaign of e-resources to a possible ways to improve the use of library information retrieval system in provision of library services Eight (8) suggestions were presented, seven (7) were accepted as possible ways to improve in the use of library information retrieval system



Discussion of Findings

The study revealed that information retrieval services are available for use by undergraduate student in the library among the retrieval services available are card catalogue, OPAC, CD-ROM, Bibliography, and Indexes. This study is in line with the study conducted by Godwin and Godwin (2019) whose studies revealed that a high number of students use library catalogues and other retrieval tools to access library materials. Adunola, (2011) states that library catalogue of one particular library alone may be available in different physical forms to cover different information resources for easy access.

The study also, revealed that the undergraduate students utilize of information retrieval system available in the library and use it for their academic purposes such as assignments, reference services and source for materials for projects. The study disagrees with that of Agboola and Shuaibu, (2019). Their result revealed that there are limited ICT resources for information retrieval and services in the library which is the reason for underutilization of library services.

The result also, shows that the undergraduate students are faced with unreliable power supply, poor maintenance culture; low bandwidth of internet access and lack of awareness as factors that hinder the utilization of library information retrieval system. This study is contrary to the study of Agboola and Shuaibu, (2019). On one of their objectives which revealed that 38 (63%) respondents strongly agreed that limited equipment (computers, scanners and printers) is among the challenges that confront students whenever they are using retrieval system.

The study revealed that OPAC system should be made more functional to improve in the use of library information retrieval system for provision of library services. The study agree with the study of Manasse, Nongo, & Ona, (2017) non-printed formats or internet sources such as Online Public Access Catalogue (OPAC), online databases, CD-ROM resources, and internet navigation, and selected Web sites which should be used to improve information retrieval. Considering the nature and range of information resources in each of the sources, the writers believed that academic libraries remain the only established social institution with varied sources of information for information search and retrieval.

Conclusions

The study concluded that information retrieval services are available for use by undergraduate student in the library among the retrieval services available are card catalogue, OPAC, CD-ROM, Bibliography, and Indexes. The study also concluded that the undergraduate students utilizes information retrieval system available in the library and use it for their academic purposes, assignments, and source for materials for projects. The study concluded that the undergraduate students faced with unreliable power supply, poor maintenance culture; low bandwidth of internet access, and lack of awareness as factors that hinder the utilization of library information retrieval system and The study concluded that OPAC system should be made more functional to improve in the use of library information retrieval system for provision of library services

Recommendations

From the findings of the study, the following recommendations were made:

1. The management of the institution should provide Integrated Library Management Software (ILMS) such as Koha, with high Internet connectivity so that users can retrieve information resources
2. Library management should lay more emphasis on the use of library so as to encourage library users (students) to patronize and to make full utilize library resources and services that are available



3. Library management should provide the library with power back up such solar system in order to curtail shortage of power supply and there should be constant maintenance of the library equipment.
4. The university management should adequately fund the library to avoid over dependent on donors for subscriptions of various databases in order to enhance fully access and retrieval of information resources in the library.

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