Awareness and Utilization of Information Retrieval Tools by Undergraduates: A Comparative Study

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ABSTRACT
The research focused on a comparative study of the awareness and utilization of information retrieval tools by undergraduates in Federal Polytechnic Ondo (a public institution) and Hallmark University (a private institution). The research employed the survey research method in which 331 sample was chosen to represent the 2,400 population of the Federal Polytechnic Ondo; while 116 sample was chosen to represent the 165 population of Hallmark University. The research found out that undergraduate students of the public institution are more aware of traditional information retrieval tools while undergraduate students of the private institution are more aware of the online information retrieval tools. However, both set of undergraduate students prefer utilizing the online information retrieval tools than the traditional information retrieval tools. And the major challenges militating against using information retrieval tools are lack of training on how to use information retrieval tools and lack of steady internet connectivity. The research recommends that library professionals should train library patrons on how to utilize information retrieval tools in the library and library users should be provided with access to steady internet connectivity.
Key words: Information retrieval tools, Traditional information retrieval tools, Online information retrieval tools, Federal Polytechnic Ondo, Hallmark University

I.   INTRODUCTION
The term Information retrieval was coined in 1952 and gain popularity in the research communities from 1961. At that time, information retrieval's organizing function was seen as a major advance in libraries that were no longer just storehouses of books, but as places where information was catalogued and indexed. This is in accordance with the assertion of Akanwa&Udo-Anyanwu (2017) information retrieval is concerned with the exploitation and extraction of information and other contents of documents from different information sources.

Owing to information explosion and the emergence of new technologies, information needed by students is now found in different formats in university libraries, technology centres and computer laboratories. These technologies have brought an alternative to facilitate access to scholarly information for teaching and learning. Consequently, students' information needs for research are met without difficulties. Their information needs can be satisfied from primary sources like journal articles and research reports or secondary sources such as textbooks and reference books like the dictionary and encyclopedia. According to Edom (2012) the traditional stock in trade of libraries all over the world is information resources. In order to provide effective and efficient services to the users of the library, information resources in print and non-print formats are acquired to enhance the knowledge the users need to excel in their various endeavours.

This massive information that abound both electronically and in paper form has made the need for information retrieval tools (IRTs) to retrieve the information apparent. These tools have developed into widely used services and have become essential tools for finding information. Information retrieval is concerned with the exploitation and extraction of information and other contents of documents from different information sources. For Ajiboye, et. al (2013),

information retrieval as the activity of obtaining information resources relevant to an information need from a collection of information sources. The researchers went further to explain that many universities and public libraries use information retrieval systems (tools) to provide access to books, journals and other documents. From the foregoing, information retrieval tools (IRTs) therefore is the means or applications through which information can be accessed from various sources.

Libraries have always been concerned with storing and retrieving of information. As the quantities of information grew widely libraries were forced to make maximum use of information retrieval tools to facilitate the storage and retrieval process (Atanda&Sherrifider, 2018). Information retrieval tools are widely used for library services in locating information resources (Rahoo, Nagar and Bhutto, 2019). It also plays a vital role in meeting the functions of the academic library by aiding the retrieval of information easily from the library. For proper utilization of library resources, there is a need for access to the needed information and the ability to retrieve it. As such, libraries have always been concerned with storing and retrieving information in the media it is created on. As the quantities of information grew exponentially, libraries were forced to make maximum use of information retrieval tools to facilitate the storage and retrieval process. These major tools are Catalogues, Classification Schemes, Indexes, Abstracts, Bibliographies. Other Information Retrieval tools in the library include the following: Encyclopedia, Directories, Dictionaries, Almanacs, Handbooks, Atlases, Periodicals, and Concordances among others.

However technological prowess has innovatively strategized and provided some information retrieval tools to assist users in the retrieval and utilization of library information resources. The online public access catalogue (OPAC) provides facilities for library users to carry out online catalogue searches and then check the availability of the item. It is the fastest way to access information and a searching tool for users by Author, Title and Subject Keyword (Saha, 2018). The challenge however is that despite the continuous user education programmes conducted in libraries, preliminary investigation shows that undergraduate students do not know how to effectively use these information retrieval tools effectively; hence the need for this research to investigate the attitude towards use of information retrieval tools by undergraduate.

OBJECTIVES OF THE STUDY
1. To identify the level of awareness of information retrieval tools by undergraduates.
2. To determine the level of utilization of information retrieval tools by undergraduates.
3. To examinethe challenges of using information retrieval tools by undergraduates.

II. LITERATURE REVIEW
For the proper utilization of information contents in information-bearing materials, whether in the library or not, there have to be necessary tools put in place. These necessary tools are used to retrieve the information contained in those information-bearing materials. David-West (2020) observed that information retrieval tools can be either print or digitized forms. The researcher further cited Edom (2012) who outlined these tools as OPAC, CD-ROMS, online databases, internet search engines, among others. Though these are strictly digitized forms, thereare various kinds of print tools used in libraries, and they include; abstracts, indexes, catalogues, etc.

Presently, the proliferation of technology made various tools availableat the disposal of users for accessing the information they need.A library is an organized collection of sources of information, made accessible to a defined community for reference or borrowing purposes. Little wonder Atanda and Adeyemi (2018) see a library as an institution that provides physical or digital access to materials and it may be a physical building or room, or a virtual space, or both. This goes to show that there is a paradigm shift from a library holding to access. That is, while libraries pride themselves in the past with the number of collections they have, now more emphasis is placed on whether and how those collections can be retrieved, accessed, and utilized.

The concept of information retrieval presupposes that there are some documents or records containing information that has been organized in an order suitable for easy retrieval. An information retrieval system is designed to retrieve the documents or information required by the user community. It should make the right information available to the right user. Thus, an information retrieval system aims at collecting and organizing information in one or more subject areas to provide it to the user as soon as it is asked for. According to Adeyemi and Atanda (2018), the term information retrieval was coined in 1952 and gain popularity in the research communities from 1961. At that time, information retrieval's organizing function was seen as a major advance in libraries that were no

longer just storehouses of books, but as places where information was catalogued and indexed.

The proliferation of technologies has made information overload a common phenomenon. Information overload is the situation where one has more information than can be handled. This massive information that abounds both electronically and in paper form has, according to Ajiboye, et. al (2013), made the need for information retrieval tools to retrieve the information more apparent. These tools have developed into widely used services and have become essential tools for locating information. Information retrieval is concerned with the exploitation and extraction of information and other contents of documents from different information sources.

Whether or not there is a proliferation of technologies, it is undeniable that information is pivotal to human survival and we need this information for a lot of activities, such as solving problems, making a decision, reducing uncertainty, resolving conflict, answering questions and satisfy curiosity (Shuib, Abdullah and Ismail, 2010);provision of effective and efficient services to the users of the library (Echem and Udo-Anyanwu, 2018); and meeting the legal needs of clients (Anyim, 2020). As noted by Echem and Udo-Anyanwu (2018), to be able to provide effective and efficient services to the users of the library, information resources in print and non-print formats must be acquired to enhance the knowledge the users need to excel in their various endeavours. However, the absence of these resources amounts to the challenges of their underutilization as faced by some libraries.

With the volume of information available today, it is difficult to find accurate information that suits students' learning needs. When a student seeks information on a particular subject, he looks at all possible information sources such as books, articles or journals and ends up with mountains of information. The problem is to find the right information for his needs. The material retrieved is often not suitable to the student's learning style (Shuib, et. al, 2010). For effective utilization of information resources, they are not only acquired but organised in such a way they can be easily accessed and retrieved by users.

Information retrieval, as seen by Echem and Udo-Anyanwu (2018), is concerned with the exploitation and extraction of information and other contents of documents from different information sources; while Anyim (2020) sees information retrieval as a process through which reference application is utilized to access relevant information. As cited by Kani, Makama and Yahaya (2018), Lancaster (2012) explained that information retrieval tools do not change the knowledge of the user on the subject of his enquiry; it merely informs him of the existence and whereabouts of documents relating to his request. The information retrieval tools serve as a bridge between the worlds of creators or generation of information and the users of that information.

The major functions of information retrieval systems as described by Shuib, et. al (2010) are:

To identify the information (sources) relevant to the areas of interest of the target users' community; to analyze the contents of the sources (documents); to represent the contents of the analyzed sources in a way that will be suitable for matching users' queries; to analyze users' queries and to represent them in a form that will be suitable for matching with the database; to match the search statement with the stored database; to retrieve the relevant information; to make necessary adjustments in the system based on feedback from the users.

Information retrieval tools are systems designed to retrieve information or documents that are required by the users. Ajiboye, et. al (2013) opined that massive information that abounds both electronically and in paper form has made the need for information retrieval tools (IRTs) to retrieve the information more apparent. Information retrieval tools make the right information available to the right user at the right time. Onwuchekwa and Jegede (2011) have observed that information retrieval tools are basic building blocks for a system that organizes recorded information collected by information organizations. This is to establish control of contents for information use as well as for the promotion of users' ease of access.

For the retrieval of information to be effective, library users must be taught.Ajiboye, et. al (2013) observed that post-graduate students of selected universities in the south-western region of Nigeria knew how to use information retrieval tools through their university library's user education and information literacy programme, which forms the main source of their knowledge of the usage of these tools. This shows that their university libraries play a major role in assisting the respondents to make use of information retrieval tools. Also, Echem and Udo-Anyanwu (2018) showed that information retrieval tools provided in the library record a very strong and positive relationship with students' use of the library. And the research of David-West (2020) implied that online databases, internet search engines, e-

journals, e-books, web publishing influences information retrieval among academic staff for effective dissemination of knowledge to the learner.

III.   METHODOLOGY

The research adopted the survey research design. The populations of the study consist of the 2,400 undergraduate students of The Federal Polytechnic, Ondo, a Public Institution and the 165 undergraduate students of Hallmark University, a Private Institution. The study seek to investigate if there is any difference in the awareness and utilization of common information retrieval tools by these different set of students, owing to the popular assumption that students of private institutions are from wealthier homes and often have access to functional libraries and ICT facilities.

For the different set of respondents, the sample size will be determined using Krejcie and Morgan (1970) sample size determinant. Hence,

the sample size for 2400 population is 331 and that of 165 is 116; and the researchers administered an online questionnaire to them. The questionnaire was subjected to a pilot study, using students from one Public Institution and one Private Institutionfrom other populations outside the population for this study, and the Cronbach's Alpha method was used to determine the reliability of the instrument; showing for the Public Institution, a reliability coefficient of 0.84 and that of the Private Institution was 0.92. The overall reliability coefficient was 0.88. Thus, the instrument was considered reliable to elicit data from the research respondents. Data from the instruments are analysed using descriptive statistics.

IV.   FINDINGS AND DISCUSSIONS

The findings of the research are analysed below, using Mean and Standard Deviation (S. D.) and a Criterion Mean of 2.5.

Table 1: Extent of awareness of information retrieval tools

Information Retrieval Tool	Federal PolytechnicOndo		Hallmark University	
	Mean	S. D.	Mean	S. D.
Index	3.4	0.9	2.56	0.06
Abstract	3.2	0.7	2.24	0.26
OPAC	2.95	0.45	3.04	0.54
Bibliography	3.1	0.6	1.52	0.98
Catalogue	3.55	1.05	2.72	0.22
Subject Heading List	2.45	0.05	1.4	1.1
Finding Aids	2.4	0.1	1.6	0.9
Register	3.3	0.8	1.6	0.9
Online database	3.35	0.85	3.04	0.54

Table 1 shows the extent of awareness of information retrieval tools by students of the Federal Polytechnic Ondoand Hallmark University. He Table shows that students of Public Institutions are more aware of the traditional information retrieval tools like indexes, abstracts, bibliographies, catalogues and registers; they are also aware of online databases but not so aware of OPAC. This finding is in line with those of Echem and Udo-Anyanwu (2021) that card catalogues, bibliographies, abstracts and indexes are provided

for in the library and students are aware of their availability.

On the contrary, students of private institutions are more aware of the online related information retrieval tools like OPAC and online databases. But they are scarcely aware of the traditional information retrieval tools. This finding is in agreement with those of Anyim (2020) that law library patrons are aware of the availability of OPAC, Search engines, indexes and shelves guide while they are not aware of abstract and bibliographies.

Table 2: Extent of utilization of information retrieval tools

Information Retrieval Tool	Federal PolytechnicOndo		Hallmark University	
	Mean	S. D.	Mean	S. D.
Index	2.95	0.45	2.4	0.1
Abstract	2.5	0	2.8	0.3
OPAC	2.7	0.2	3.44	0.94

Bibliography	2.65	0.15	1.2	1.3
Catalogue	2.95	0.45	2.6	0.1
Subject Heading List	2.75	0.25	1.0	1.5
Finding Aids	2.4	0.1	1.28	1.22
Register	3.3	0.8	1.12	1.38
Online database	3.0	0.5	3.36	0.86

Table 2 shows the extent of utilization of information retrieval tools as used by undergraduate students in public and private institutions in Federal Polytechnic Ondo and Hallmark University. While students of the Federal Polytechnic utilize more of Registers and Online Databases, students of Hallmark University utilize more of the OPAC and Online Databases. The findings are in line with those of Ajiboye, et al (2013) who discovered that the main information retrieval tools made use of by the respondents is the Internet Search Engines. David-West (2020) also reported that online databases, OPAC and internet search engines have a positive influence on information retrieval among academics.

A close look will reveal that both set of students are inclined to the utilization of online information retrieval tools, which seem easier to use because of the removal of the barriers of time and location (Solomon and Bakare, 2022).

Table 3: Challenges encountered using information retrieval tools

Challenges in using Information Retrieval Tool	Federal PolytechnicOndo		Hallmark University	
	Mean	S. D.	Mean	S. D.
Lack of training on how to use information retrieval tools	3.05	0.55	2.6	0.1
Difficulty in location relevant information	2.75	0.25	2.44	0.06
Lack of steady internet connectivity	3.05	0.55	3.68	1.18
Lack of search skills needed to use information retrieval tools	3.1	0.6	1.6	0.9
Inadequate time for using information retrieval tools	2.8	0.3	1.0	1.5
Most information retrieval tools in the library are out-dated	2.75	0.25	2.08	0.42

Table 3 shows the challenges undergraduate students in Federal Polytechnic Ondo and Hallmark University encounter in using information retrievaltools. For the students of the Federal Polytechnic Ondo, the major challenges they encountered in using information retrieval tools are lack of training on how to use information retrieval tools, lack of steady internet connectivity and lack of search skills. While for the undergraduate students of Hallmark University, the major challenges they encountered in using information retrieval tools are lack of steady internet connectivity and lack of training on how to use information retrieval tools; but not lack of search skills. These findings are in agreement with those of Ajiboye, et al (2013) who found out that library's user education and information literacy programme forms the main source of library users' knowledge of information retrieval tools' usage; and that a major constraint of use information retrieval tools is Internet fluctuations.

V. CONCLUSIONS AND RECOMMENDATIONS

The research shows that while undergraduate students of public institutions are more aware of traditional information retrieval tools like abstracts, indexes and catalogues, undergraduate students of private institutions are more aware of online information retrieval tools. This could be because they have functional electronic libraries in their institutions and they can even access the library holdings from the comfort of their hostels. But both set of respondents are more in tune with using information retrieval tools that are online based. The use of online based information retrieval tools comes with the major challenges of lack of steady internet connectivity and lack of user education on the art of the library professionals.

Following the research findings and discussions, the following recommendations are made:

1. Library professionals should take out time to organize series of user education where they teach library patrons on how to use the different information retrieval tools in the library.
2. Academic libraries should be more involved in training students to acquire the skills for using information retrieval tools. Also emphasis should be on different search and retrieval strategies that can adequately retrieve information for learning and research.
3. The Institutions' management should endeavour to provide steady internet connectivity for the libraries, so the libraries can in turn provide internet access to their users.
4. Library patrons should be educated on how to use both online and offline information retrieval tools, so that in cases of failure in internet connectivity or power supply, the offline information retrieval tools can be utilized.

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