

## Sourcing Methods Utilized by Students in Searching for Information Resources in Colleges of Education in Delta State

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### Abstract

Information sourcing is the system of searching through sources by an information seeker so as to retrieve necessary information for decision making. The purpose of the study is to investigate the information sourcing methods students in colleges of education in Delta State use while searching for information. To achieve the purpose of the study, five objectives were stated to guide to the research. The population of the study consists of students from three colleges of education in Delta State. A multi stage sampling technique was employed to draw the sample for this study. This gives a sample size of 540 students. The instrument for data collection was a structured questionnaire and data collected were analyzed using percentage. . The findings indicate that students seek for information to write assignments, projects, to prepare for examination etc. They search for these information in the library by browsing through the shelves and also use the library catalogue. In searching through search engines, they hardly use the Boolean methods, wildcard and truncation technique, instead they type full phrase on the search engines. Thus, the study recommends strategized methods of teaching user education in both lectures and libraries and installing high powered generating set and databases that can support teaching learning and research

**Keywords:** *Information sourcing, Information retrieval, sourcing methods, information resources, Nigeria*

### Introduction

Information is vital in our daily activities, whether in learning, working or for personal reasons. However observations have shown that most students in tertiary institutions find it difficult, to access information due to lack of knowledge of the methods of sourcing information in both print and electronic formats. Information is the message being conveyed or knowledge communicated concerning a particular fact which changes the recipient's knowledge base (Vigo, 2011). Students seek for information for the purpose of writing their assignment, updating their lecture, prepare for examinations and research purposes. This entails that the students need information for both academic and research purposes. To ensure that the informational needs of these students are met, they must be empowered to have access to information and learn how to search or source for information. The system of searching through sources by an information seeker so as to retrieve the one that would help in decision making is known as information sourcing.

The goal of every sourcing program is to find the right information at all levels which can help actualize the organization's or individual objectives. To source for information an individual may interact with people, printed materials and digital media such as the internet (Alison and Eisenberg, 2009). This shows that information are sourced both in traditional and technologically based methods. The traditional methods of searching for information in the library involve searching for information in a printed material (catalog card) in an esoteric filing method like the Dewey decimal classification system under author title and subject cards (Salt, 2011). In recent times, traditional methods of providing information are changing. Most libraries in Nigeria are now operating highbrid libraries in other to provide information needs of their users.

The technological method of sourcing for information emphasizes on the use of search engines. These search engines help in retrieving a vast variety of information through a single search (Guildben, 2013). This technological methods of sourcing offers

access to up to date research reports and global knowledge, so it has become an important component of electronic service in academic institutions. Oduwole and Idowu (2011) emphasized that students knowledge in information sourcing methods, both traditionally and technologically will lead to prompt access to information needed and improvement of quality of research work. This is emphasized by Udofot and Echezona (2015) who said that a researcher needs a thorough grasp of search skills and strategies to enable him have a successful research experience. Notwithstanding the importance of information sourcing, it has been observed that students experience difficulty in locating items from the library collection.

Moscovic (2000) identified technical problem, a situation whereby the students are not aware of the information sources or procedures for accessing these sources. This is manifested in their confused movements around the library. This inability to retrieve needed information or delay in search for information causes a lot of frustration to students. This leads to non-retrieval of needed information or delay in search for information. This situation calls for urgent attention as their lack of knowledge in sourcing for information might affect their success in school related activities and in achieving life endeavour in today's information based society. As a result this paper tries to investigate the level of students' knowledge in information sourcing in some colleges of education and to find out the technical problems they experience while sourcing for information. Therefore the objectives of this study are as follows.

### **Objectives of the Study**

1. To identify the purpose of seeking for information by students
2. To find out the information sourcing methods students use in colleges of education.
3. To examine the effectiveness of these information sourcing methods students use in colleges of education.
4. To find out the problems encountered by students while sourcing for information.
5. To determine the Strategies to be used in solving the problems encountered by

students in the course of searching for information.

### **Literature Review**

Students seek information for their academic knowledge which comprises knowledge about concepts, theories, models and hypotheses. Also they seek for empirical knowledge and research methods (Maylors & Blackman's, 2005). Tella (2007) acknowledged that university undergraduates seek information for personal development, health related matters and majorly for academic development. Therefore, the students require different methods of sourcing information. Wilson (2005) stated that in the course of sourcing for information some people may interact with manual information system, like the face to face methods or a library or with computer based systems. However, the methods of information sourcing and retrieval in the library are seen as the traditional methods and the technologically based methods. The university of Queensland publication (2011) stated that the library catalogue is the traditional way of locating books. They further stated that to search for materials in the catalogue, the users should think of broader search terms and search the keywords in the topics. The subject headings and call numbers should be used while searching for information.

Searching for information using technological method emphasizes the use of search engines. Estabrook et al (2007) stated that searching for information using technologically based methods can be easy if the following principles are observed: the use of a controlled vocabulary to describe the content of the articles in the database of a computer index; the use of keyword searching which involves gathering the relevant search terms from several sources like dictionaries and the thesaurus. Making use of the Boolean search methods which allows one to join terms may narrow or broaden the search depending on the information the user wants to retrieve; and making use of truncation and wildcard search techniques would enable one to retrieve information on similar words. The Open University system provides a database for practicing search techniques. This involves using the right keywords, Boolean logic,

phrase searching, truncation and wildcard. The exploration learning studio explained how the Boolean operators "AND", "OR" and "NOT" will be used to obtain results that are relevant to a research. The "AND" operators ensure that all the terms one requests appear in the search result. Using "AND" returns very broad and sometimes very surprising results particularly when searching full text files, such as those in the web. The term "OR" retrieves records that contains either two or more terms, while "NOT" is used to ensure that certain words don't appear in the search selections.

Sourcing with these technological methods enables flexibility, agility and quicker decision making in the supply chain from any device, at any location and at any point in time (Szpak, 2011). It improves students' performance as information providers. These devices give useful advice and solve the problem of information seekers, despite their lack of personal connection with the seekers. Also searching for information using an advanced search eliminates unwanted results as it weeds out unwanted websites thereby reducing items retrieved. It saves time and helps to retrieve relevant information. Maylor & Blackman (2005) adds that searching the library catalogue and database using keywords can be very effective, in providing selected terms that accurately describe what one is looking for.

Although the catalogue was the most essential library searching tool, it is the most avoided and least consulted by students. Agboola and Bamigbo (2011) also noted that students approached the library resources by first going to the shelves instead of the catalogues. This, according to Moscovici (2000) is a technical issue in search whereby the students are not aware of the procedure for access to these sources. Students' ignorance or wrong approaches in using the library is as a result of lack of training. This lack of training has been strongly supported by Barsky and Barham (2005) as the cause of the problems experienced by students in sourcing for information. This also affects the participants who used the online search engines in searching for information, as most students lacked knowledge about how to use advanced search strategies such as Boolean operators and truncation. Chem (2003) noted the difficulties in formulating search queries, claiming that

most students have trouble generating alternative search items. They also have difficulty of narrowing a search.

To effectively use online sources, Ojedokun and Owolabi (2003) explained that teachers need to learn new skills to teach students how to search for and use information from the internet. Many undergraduate students ought to be equipped to use information technology from the onset, to overcome obstacles in retrieving and managing the growing amount of online and offline information that are available. Anasi (2006) suggests the integration of the internet and computer literacy into compulsory general studies programmes in tertiary institutions. Through this computer literacy, students will understand the use of CD-Rom technology required for the basic search concepts, such as the use of Boolean operators and other delimiter features that would expatiate the search. Also skills in the use of catalogues and the location of items sought should be developed.

## METHODOLOGY

The design of this study was descriptive survey. The instrument for data collection was questionnaire. The questionnaire has 48 items with the answering mode of ticking the appropriate answer on each statement in the column. To collect data for this study, 540 sets of the questionnaire was distributed in the three selected colleges of education in Delta State, namely Federal College of Education (Technical) Asaba, College of Education Agbor and College of Education Warri. The 540 respondents that were selected from the population were used as sample data for this study. A multi stage sampling technique was employed to select the sample. The copies of questionnaire were administrated through the help of research assistants who were staff of various colleges of education. The assistants were briefed on how to administer the questionnaire. The completed questionnaires were returned within two weeks. The data collected were analysed using percentage.

## Findings and Discussion

Copies of questionnaire distributed to various colleges of Education were, FEC (T) Asaba(190), COE Warri(176) and COE Agbor(174) giving a total of 540 respondents. Then, the percentage return of the copies of

questionnaire were as follows: FCE(T) Asaba, 170(89.5%), COE Warri 155(88.1%) and COE Agbor 160(91.9%).

In Table 1 below contains percentage of purposes of seeking information by students in colleges of Education in Delta States.

**Purposes of seeking for information students in Colleges of Education**

Table I: Percentage rating on the purposes of seeking information by students in Colleges of Education in Delta State.

S/N	Purpose of Seeking for Information	FCE (T), ASABA		COE WARRI		COE AGBOR		OVERALL		DECISION
		YES	NO	YES	NO	YES	NO	YES	NO	
1.	Information to write assignment	131 (77%)	39 (23%)	101 (65%)	54 (35%)	136 (85%)	24 (15%)	368 (76%)	117 (24%)	
2.	Materials to prepare for examination	126 (74%)	44 (26%)	101 (65%)	54 (35%)	142 (89%)	18 (11%)	369 (76%)	116 (24%)	
3.	Materials to write project	115 ((91%)	15 (9%)	115 (74%)	40 (26%)	101 (63%)	59 (37%)	371 (76%)	114 (24%)	
4.	Information for higher studies	131 (77%)	39 (23%)	101 (65%)	54 (35%)	118 (74%)	42 (26%)	350 (72%)	135 (28%)	
5.	Making reference to project works	131 (77%)	39 (23%)	101 (65%)	54 (35%)	115 (72%)	45 (28%)	347 (71%)	138 (29%)	
6.	Information on educational policies	131 (77%)	39 (23%)	101 (65%)	54 (35%)	80 (50%)	80 (50%)	312 (64%)	173 (36%)	
7.	Information to beef up lecture notes	121 (71%)	49 (29%)	81 (52%)	74 (48%)	107 (67%)	53 (33%)	319 (63%)	176 (37%)	
8.	Information on current affairs	117 (69%)	53 (31%)	88 (57%)	67 (43%)	90 (56%)	70 (44%)	295 (61%)	190 (39%)	
9.	Materials to write lesson plans for teaching practice	129 (76%)	41 (24%)	104 (67%)	51 (33%)	59 (37%)	101 (63%)	292 (60%)	193 (40%)	
10.	Information on disease preventions.	117 (69%)	53 (31%)	81 (52%)	74 (48%)	80 (50%)	80 (50%)	278 (57%)	207 (43%)	
11.	Information to write term papers	112 (66%)	58 (34%)	101 (65%)	54 (35%)	40 (25%)	120 (75%)	253 (52%)	222 (48%)	
12.	Information on job opportunities	102 (60%)	68 (40%)	88 (57%)	67 (43%)	48 (30%)	112 (70%)	238 (49%)	247 (51%)	
13.	Information on government policies	107 (63%)	63 (37%)	90 (58%)	65 (42%)	40 (25%)	120 (75%)	237 (49%)	248 (51%)	

A large percentage of the respondents indicated that they seek information for the purpose of writing assignment, reading for examination, writing projects, making references to project works, to beef up lecture notes, seek for materials to write lesson plans for teaching practice etc. This aligns with Kakai, Ikoja-Odongo and Kigongo-Bukenya (2004) submission that students seek information as a result of the need to complete course assignments, prepare for class discussion, seminars, or write final year research papers. Tella (2007) also submits that university undergraduates source for

information; for their personal development, health related matters and majorly for academic development. Majority of the students source for information to handle their academic needs like writing assignments, preparing for examinations and writing for research work and to keep themselves abreast of current happenings.

**Students Information Sourcing Methods**

The data represented in Table 2 below shows the way Collage of Education students in Delta State source for information for their different activities.

Table 2: Percentage response in information sourcing methods employed by students

S/N	Methods Employed by Students	FCE (T), ASABA %	COE WARRI %	COE AGBO R %	AVERA GE %	RANK
1	Browse through the shelves	84.5	88.8	84.5	86.5	1 <sup>st</sup>
2.	Pulling down books from the shelves to go through.	79	82.3	76	79	2 <sup>nd</sup>
3.	Consult the catalogue subject heading and using the call number to trace the shelf	79	79.3	78.6	79	2 <sup>nd</sup>
4.	Keyword searching	70.3	79.3	86.8	78.6	4 <sup>th</sup>
5.	Citation methods to retrieve articles that have the original key author, article cited in the bibliography	71	77.5	78.6	76.3	5 <sup>th</sup>
6.	Type full sentence on the search colon	74.5	70.5	66	70.3	6 <sup>th</sup>
7.	Phrase search	66	67.3	68	67	7 <sup>th</sup>
8.	Simple search	69.5	70.8	60.5	66.8	8 <sup>th</sup>
9.	Using Boolean operators to narrow or broaden search	60.3	63.3	61.3	61.5	9 <sup>th</sup>
10.	Use of OPAC to search computerized database	55.5	62.5	61.3	59.8	10 <sup>th</sup>
11.	Truncation technique with its symbol of asterisks	56	57.8	58.8	57.5	11 <sup>th</sup>
12.	Making use of wild card technique with the symbol of exclamation or question mark	64	61.8	45	56.3	12 <sup>th</sup>

The data presented in Table 2 reveals that nine items out of the 12 items had an overall 60% and above. This includes browsing through the shelves, pulling down books from the shelves to browse through, consulting the catalogue subject headings and using the call number to trace the shelf, citation methods and typing full sentences in the search column of the search engine. Through these findings, it was observed that students mainly browse through the shelves, pull down books from the shelves to browse through, typing full sentence on the search column. However some also consult the subject catalogue and use the call numbers to trace the shelf. They do not highly use such methods like the Boolean operators, wildcard techniques and truncation technique. The frequent use of browsing through the shelves, pulling down books on shelves and browsing shows that the students are not yet grounded in the methods of searching for information. This

is due to the fact that consulting the catalogue subject heading and using the call numbers to trace the shelf remains the best traditional method of searching library materials. Also the frequent typing of full sentence on the search box proves that they don't maintain Guildben principles of obtaining meaningful result in a search engine which involves the principle of using a controlled vocabulary to describe the content, keyword searching, Boolean search methods, truncation and wildcard search technique. Chem. (2012) confirmed that most students find it difficult to formulate search queries and also have difficulties in narrowing search questions. This will lead to generating general information from the web that is not specific to a particular information need. The students inability to use these approved principles might lead to inability to find the materials they desire and need on a "just in time" basis.

**Effectiveness of Information Sourcing Methods**

Table 3: Percentage response on the effectiveness of information Sourcing methods.

S/N	Effectiveness of Information Sourcing Methods	FCE (T) ASABA %	COE WARRI %	COE AGBOR %	OVERA LL %	RATING
1.	Consulting the catalogue subject heading and using the call number to trace the shelf.	90.0	93.8	73.8	85.8	1 <sup>st</sup>
2.	Keyword searching.	91.3	88.0	76.2	85.0	2 <sup>nd</sup>
3.	Simple search method	88.5	81.0	79.8	83.0	3 <sup>rd</sup>
4.	Phrase search	79.0	73.0	70.0	82.3	4 <sup>th</sup>
5.	Citation method retrieves article cited in a bibliography.	88.8	79.3	76.3	81.3	5 <sup>th</sup>
6.	Type full sentence on the search colon.	86.3	83.8	72.0	80.8	6 <sup>th</sup>
7.	Use of OPAC to search for information in a computerized database.	67.8	65.0	68.8	67.0	7 <sup>th</sup>
8.	Use of Boolean methods to narrow or broaden information.	66.8	70.0	62.5	66.3	8 <sup>th</sup>
	Truncation techniques with the symbol of asterisks.	66.3	68.8	62.5	65.8	9 <sup>th</sup>
10.	Wildcard techniques with the symbol of exclamation or question mark.	65.0	65.5	63.75	64.8	10 <sup>th</sup>
11.	Browse through the shelves.	57.5	53.0	56.5	55.8	11 <sup>th</sup>
12.	Pulling down books from the shelves To go through	53.0	54.0	53.3	53.5	12 <sup>th</sup>

The findings in Table 3 shows that consulting the catalogue subject heading and using the call number to trace the shelf is one of the most effective methods of searching for information. The use of catalogue as a traditional method serves as an index, directing users to the position of each library materials. It opens wide to the readers the resources of a library by

subject. Akande (2003) supports this by writing that access to documents in a library serves as indexes to the library holdings. However student's inability to value highly the effectiveness of most technological methods like wildcard, truncation and Boolean methods is on the fact that they do not highly use it as indicated in Table 2.

**The Constraints to Information Sourcing**

Table 4: response on the constraints to information sourcing

S/N	Constraints to Information Sourcing and Utilization of Library Resources	FCE (T), ASABA %	COE WARRI %	COE AGBOR %	AVERAGE %	RANK
1.	Difficulty in locating books on the shelves	67.8	61.5	60	63	1st
2.	Inability to use the internet facilities	65	62.5	60.3	62.5	2nd
3.	Difficulty in the use of library catalogue	60	58	69.5	62.5	3 <sup>rd</sup>
4.	Students not computer literate to search through online resources	70.8	58	56.3	61.8	4 <sup>th</sup>
5.	Items in catalogue not found on shelves	53.5	51.5	57.5	54.3	5 <sup>th</sup>
6.	Library staff not willing to assist the students.	49.3	51.5	59.5	53.3	6 <sup>th</sup>

The findings' on the Table 4 indicated that the major constraints are the inability to locate books on the shelves, difficulty in the use of library catalogue and inability to use the internet facilities. This is because most students lack the basic searching skill. Morris

and Balatoukas (2006) link it to inability to use the information retrieval systems. This inability to use the library catalogue and the internet facilities affects the type of information obtained.

Table 5: Percentage response on the Strategies for overcoming the problem encountered by students while sourcing for information

S/N	STATEMENT	FCE (T), ASABA %	COE WARRI %	COE AGBOR %	AVERAGE %	RANK
1.	Provision of adequate and regular library instructions.	85	84.	92.5	87.5	1 <sup>st</sup>
2.	Computer literacy courses should be made a compulsory General Studies course to enlighten students on how to operate the web.	82.5	82.5	82.8	82.6	2nd
3.	Regular updating of library catalogue	79.5	77.8	80	79	3rd
4.	Library staff should assist in information search	85	74.3	75	78	4th
5.	Provision of internet facilities in the library and ensuring that they are functioning.	82.8	78.3	70	77	5 <sup>th</sup>
6.	Proper organisation of searching tools for easy retrieval.	81.3	73.5	76	77	5th

Data in Table 5 indicates that the major strategy for overcoming the problem of sourcing is provision of adequate and regular library instructions. Library instructions in the use of library resources and services will help students meet their information needs, thus user-education/information literacy should be re-emphasized. Edem, Okon and Ocheibi (2009) stated that one of the ways of stimulating the active use of the resources/services of the library is by teaching the library users, especially undergraduates students, how to search for and retrieve materials in the library to support learning and research. Eke, Omekwu and Agbo (2014) also added that students trained in the use of computers and the surfing of internet can search, retrieve and manipulate information electronically. Library instruction can help alleviate the problems experienced by students while searching for information because when students are adequately informed on the methods of sourcing for information, it will enable them search for these information with ease both in the library and outside the library environment.

### Conclusion and Recommendation

Information sourcing strategies are indispensable tools for the success of every academic activity in colleges of education. The

independent lifelong learning productivity of the Nigeria students and the academic study and research effectiveness as demanded by the pervading shift in the knowledge based economy can only be enhanced via adequate knowledge of sourcing strategies, organizing informational materials for easy accessibility and retrieval and putting inadequate user education and library orientation.

Findings from this study have necessitated the following recommendations for effective information sourcing in colleges of education.

1. The traditional and technological methods of sourcing for information should be effectively packaged for easy accessibility and retrieval of information. The catalogue cards should be effectively filed and the shelf guide properly placed to direct users.
2. The college management/library administrators should ensure the installation of current technical infrastructures such as high speed local networks and fast internet connectivity for online databases
3. Librarians should be empowered by training and retraining in new ICTs skills. This will help them acquire the needed skills to tackle the current global changes in information searching strategies.

4. The librarians should also strategize methods of educating students in effective ways and methods of searching for information to enhance retrieval. User education and library orientation should go beyond lecture room level and to be done in the library for a practical demonstration of these strategies for easy understanding.

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