

EXAMINATION OF UTILISATION OF TRUNCATION SEARCH STRATEGIES FOR ACCESS TO ELECTRONIC INFORMATION RESOURCES: A FOCUS ON POSTGRADUATE STUDENTS IN SELECTED NIGERIAN UNIVERSITIES

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Abstract

This study was focused on the utilization of truncation search strategies by postgraduate students in accessing library databases for research in Universities of Technology in South-East, Nigeria. The purpose of the study is to find out the types of library databases available in the universities of technology south- East zone and to determine the extent of application of truncation search strategies in accessing the available databases. The researchers adopted descriptive survey design and the population of the study was 540 post graduate students. Questionnaire and observation checklist were used for data collection. The questionnaire was validated, pilot study conducted and the reliability was determined using Cronbach Alpha. The data collected for the study was analyzed using mean and standard deviation to address the research questions; while the null hypotheses were tested using Pearson's production moment correlation. Two research questions and one hypothesis were used for the study. Findings reveal that a good number of library databases are available in the universities studied. The postgraduate students in these universities use truncation search strategies in retrieving information from the library databases moderately. It was recommended that the university management should sensitize the post graduate students by creating further awareness through training to acquire required information search and retrieval skills that will help them accessing the databases to a high extent for research purposes.

Keywords: library databases, information retrieval, search strategies, truncation.

Introduction

In the digital age, libraries have evolved from being repositories of physical books to comprehensive information hubs housing vast collections of digital resources. The major objective of the university libraries is to support the academic programmes of the university by providing relevant information so as to respond to the ever- increasing information needs of the

users who comprise the students and the academic staff of the university (Nkamnebe, Udem and Nkamnebe, 2014). In performing this function, the university libraries stock thousands of information resources in printed and electronic format and provide access to them (Akpan and Akpan, 2018). These resources are meant to be accessed by the post graduate students and other researchers.

The easiest way to find and access relevant and current information resources for research in the universities is through the scholarly databases, which are in two main groups-; the offline and online databases. Offline library databases can be viewed without internet connectivity (Usman, Binta, & Abdullahi, 2018). The offline information content is recognized as prominent electronic database for searching the latest literature conveniently without internet connectivity such as The Essential Agricultural Library (TEAL), eGranary, Digital Library Cataloguing and others. In the other hand the online databases can be accessed with the use of internet. Online databases are equally grouped into two main large families; referral databases (Bibliographic) and source databases (full-text) (Larson, 2017). Referral library databases are made up of different classes such as index or bibliographical databases and abstract databases, while sources databases are full text databases, which are in all electronic resources like e-journals, e-books, e-thesis and dissertation, e-newspapers, e-magazines, video, text images, tables, diagrams, etc.

Based on the available information resources, there is a need to utilize information search strategies in order to access and retrieve exact result from the overwhelmed information over the internet. To overcome this challenge, truncation search strategies play a crucial role in refining

and optimizing the retrieval process for the users particularly to the post graduate students who require speedy and timely access to information.

The postgraduate student is expected to show their originality in the application and to understand how the boundaries of knowledge are advanced through research (Olibie, Agu & Uzoechina, 2015). The postgraduate students in university of technology can significantly enhance their research process by applying these search strategies to access the vast collection of resources available in the library databases.

Truncation is one of strategies in accessing electronic databases that allow one to search for multiple endings of root words (Rider University libraries, 2022). The use of truncation search strategy helps broaden the search scope, accounting for various word forms and related terms. By the uses of truncation search strategies, students can effectively navigate the databases, uncovering relevant scholarly articles, books, and other materials.

This study borders on accessing library databases for enhancement of research, the use of truncation search strategies, post graduate students in the faculty of engineering in Enugu State University of science and technology (ESUT) and Federal University of Technology Owerri (FUTO). These universities of technology in South East Nigeria do subscribe to library databases to assist researchers. Users seem to grapple with the skills of retrieving needed information to meet their information needs. Based on the past literature reviewed and oral information from the digital librarians there are indications that subscribed databases seem to be underutilized by the postgraduate students in the university under study. Such underutilization also amounts to waste of resources applied in subscription. Against this backdrop, the purpose of

this study is therefore to verify if the student applies truncation search strategies in accessing databases.

Research Questions

The following research questions guided the study:

1. What are the types of library databases utilized by the post graduate students for research in the universities of technology
2. What is the extent of utilization of truncation search strategy by postgraduate students in accessing the library databases for research in these Universities?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance

H₀₁: There is no significance relationship between truncation search strategy and access to information among postgraduate students

Literature Review

A library database is an electronic system that allows data to be stored, easily accessed, manipulated and updated (Lakshay, 2018). A library database is a searchable electronic index of published reliable resources (Deptula, 2019). Library databases is an indexed collection of magazines, journals articles, abstract, and other information, which has been checked for accuracy and reliability by publishers and then licensed for distribution in online/ electronic format (St Luke School Library 2020). Usually, the libraries pay for access of these databases (subscribed), eg JSTOR, Gale, ProQuest etc (Urhiewhu and Omah, 2016) while some databases are free to use (open access). The information retrieval is meant for probing and retrieving of cognizance predicated information from database (Balwinder, Kumar, &Yikram, 2014).

Information retrieval (IR) deals with the construction of automatic system that allows users to inquire about textual data of any kind through natural language queries (Agboola & Shaibu, 2019). It can also be described as software program that deals with the organization, storage, retrieval and evaluation of information from document repositories, particularly textual information (Siddhi, 2020). Therefore, information retrieval deals with the production, representation, organization, storage, retrieval, use, or evaluation of information, along with the tools and techniques associated with these processes.

A search strategy is an organised structure of key terms used to search a database. The search strategy combines the key concepts of your search question in order to retrieve accurate results (Adile, & Bülent, 2018, Tony and Jon, 2017). Some searches are more methodical in the construction of search strategies than others, every search aims to retrieve sufficient relevant result and avoid; retrieving irrelevant records, too many records and too few records (Echem & Adaora 2018). Truncation is a searching technique used in databases in which a word ending is replaced by a symbol (Butte College Library, 2016). Truncation is also known as wildcard searching (Kelvin Smith Library, 2021). Frequently used truncation symbols include the asterisk (*), a question mark (?) or a dollar sign (\$).

Truncation enables different forms of a word to search for simultaneously, and increases the number of search results found. For example: If the truncation symbol is *, then the truncated word, laugh*, will retrieve all information containing laugh, laughter, laughing etc. truncation is also called wildcards (Bachchhav, 2016). (Massachusetts, 2018) stated that, “truncation, also called stemming, is a technique that broadens a search to include various word endings and spellings. Truncation symbols may vary by database, common symbols include: *, !

,?, or # ” (NCU Library, 2020). Truncation gives opportunity to search for a word that could have multiple endings (Massachusetts, 2018). The symbol for truncation is usually an * at the point where the spelling of the word could change. Truncation is very useful when one of the search terms that has several endings are known.

Research method

The study adopted survey research design which was carried out in universities of technology South-East, Nigeria. These universities include Enugu state University of Science and Technology (ESUT) and Federal University of Technology Owerri (FUTO). The population for the study was 540 post- graduate students in Faculties of Engineering of the Federal University of Technology Owerri 260 and Enugu State University of Science and Technology 280, the researcher used sample size of 230 approximately of post graduate students using Taro Yamane formula. The instrument used was a structured questionnaire and observation checklist on the access to electronic resources and examination of search strategies of postgraduate student in selected Nigeria universities. Mean and standard deviation was used for data analysis while Pearson's production moment correlation was used to test the hypothesis.

Table 1: Availability of library databases for utilization by postgraduate students

S/N	Items – Databases	Federal (FUTO)		State (ESUT)	
		AV	NAV	AV	NAV
1	HINARI	√		√	
2	OARE	√		√	
3	ARDI	√		√	
4	GOALI		√	√	
5	AGORA	√		√	
6	Taylor and Francis		√	√	
7	EBSCOHOST	√		√	
8	ProQuest	√			√

9	TEEAL	√			√
10	Z-Library		√	√	
11	JSTOR		√	√	
12	DOAJ	√		√	
13	DOAB	√		√	
14	LEXISNEXIS		√		√
15	PUBMED	√		√	
16	University OPAC	√		√	
17	Institutional Repository	√		√	
18	SCI-HUB		√	√	
19	AJOL	√		√	
20	Science Direct	√		√	

Table 1 shows the results of the types of databases in the university libraries utilized by postgraduate students in the universities of technology in South east Nigeria. Based on the findings, databases are grouped according to their forms, availability and access. They are categorized inform of an open access base and subscription (fee) base, referral (bibligraphic) and full-text, then as online and offline databases. There are different types of databases available in the universities of technology under study such as ProQuest, JSTOR, Z- Library, AGORA, HINARI, ARDI, AORE and Others (Urhiewhu and Omah,2016).

Table 2: Mean responses on the extent of utilization of truncation search strategy in accessing the library databases.

S/N	ITEMS- DATATBASES	FEDERAL UNIVERSITY (FUTO) N=101			STATE UNIVERSITY (ESUT) N=115		
		X	SD	DECISION	X	SD	DECISION
1	HINARI	2.02	.92	Moderate extent	2.03	.93	Moderate extent
2	OARE	2.00	.94	ME	1.73	.91	ME
3	ARDI	1.83	.91	ME	2.09	1.03	ME
4	GOALI	1.77	.83	ME	2.19	1.17	ME
5	AGORA	1.93	.93	ME	2.42	1.16	ME
6	Taylor and Francis	1.92	.96	ME	1.80	1.0	ME

						5	
7	EBSCOHOST	1.86	.92	ME	1.74	.97	ME
8	ProQuest	1.93	.89	ME	2.23	1.07	ME
9	TETEAL	1.87	.89	ME	1.89	.94	ME
10	Z-Library	2.56	.98	HE	3.22	.87	HE
11	JSTOR	2.34	.83	ME	2.57	1.22	GE
12	DOAJ	2.25	.91	ME	2.21	1.11	ME
13	DOAB	2.02	.95	ME	2.17	1.12	ME
14	MEXISNEXIS	2.27	1.08	ME	1.83	.99	ME
15	PUBMED	2.09	.92	ME	1.85	1.01	ME
16	University OPAC	2.55	1.05	HE	3.14	1.21	HE
17	Institutional Repository	2.26	.89	ME	2.48	1.22	ME
18	SCI-HUB	1.83	.83	ME	2.36	1.18	ME
19	AJOL	1.90	.95	ME	2.04	1.24	ME
20	Science Direct	2.29	1.13	ME	2.66	1.24	HE
	GRAND MEAN & SD	2.07	0.94	ME	2.23	1.08	ME

Table 2 shows the results of the responses of postgraduate students on the extent to which they use truncation search strategy in accessing the library databases. Evidence from the result indicates that the students utilized truncation search moderately, probably, due to poor search skills of the students. As Kelvin Smith Library (2021) had earlier stressed on the complex nature of truncation search which often scare away students from using it, since it is often based on the use of symbols. Massachusetts, (2018) stated that, truncation, which is also called stemming, is a

technique that broadens a search by inclusion of various word endings and spellings which required some basic skills, which many of the students may not have.

Recommendations

1. The library management should sensitize the postgraduate students by creating further awareness through training to possess required information search and retrieval skills that will enhance their access to the information resources to a higher extent for research purposes.
2. Secondly, the postgraduate students on their own should improve on their skills in exploring, accessing and utilizing the different search strategies for accessing electronic information resources through regular training.
3. It was also recommended that the universities of technology management should provide adequate funding to the university libraries to ensure adequate provision/ subscription to electronic databases so as to sustain their availability to the users, especially the postgraduate students.

Conclusion

Information resources like library databases, contain current and updated information which is mostly needed in science and technology-based researches. It has been observed that a reasonable number of online databases are available in the university libraries which require standard information search/retrieval strategies to access for research. These databases are made up of both subscribed and free ones. Some of the available databases are HINARI, AGORA, OARE, DOAB, DOAJ, Taylor & Francis, University OPAC, Institutional Repositories among others. However, it was also revealed that the postgraduate students do utilize some search strategies but to a moderate extent. These postgraduate students also utilized truncation and

phrase search strategies in accessing the library databases in these universities not to a high extent but to a moderate extent. Only few databases like Z-Library, Institutional repositories, university OPAC, Science Direct that are accessed using the different search strategies to a high extent.

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