# LECTURERS' ATTITUDE TOWARDS THE USE OF SEARCH ENGINES FOR RESEARCH IN UNIVERSITIES IN BAUCHI STATE, NIGERIA

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**ABSTRACT:** This study investigated lecturers' attitude towards the use of search engines for research in universities in Bauchi State. Specifically, the study: (i) determined the lecturers' attitude towards the use of search engines for research; (ii) investigated the lecturers' attitude towards the use of search engines for research based on gender; and (iii) determined the lecturers' attitude towards the use of search engines for research based on area of specialization. A descriptive research design of the survey type was used for the study. The samples were drawn from three faculties namely Education, Sciences and Management from two universities in Bauchi State. The respondents were 252 university lecturers which consists of 208 male and 44 females. The sample were selected using multi-stage sampling procedure. The instrument used for data collection was a researcher-developed questionnaire validated by three experts from educational technology. A pilot study was conducted to establish the reliability of the instrument, coefficient of 0.74 were obtained. The research questions were answered using frequency count, mean and percentages while inferential statistics of $t$-test and ANOVA were used to test the formulated hypotheses at 0.05 level of significance. Findings of the study were that:

i)  university lecturers had positive towards the use of search engines for research (3.2 > 2.5);

ii)  there was significant difference between universities lecturers' attitude towards the use of search engine for research based on gender (t-value 2.279 > t-table 1.960) ; and

iii)  there was significant difference between universities lectures' attitude towards the use of search engines for research based on area of specialisation (F-cal 5.628 > F-tab 2.996).

The study concluded that universities' lecturers had positive attitude towards the use of search engines. The study recommended that management of the universities should organises seminars and workshops to equip lecturers with the

knowledge and benefits of using different search engines and also to provide them with research assistance.

**Keywords:** Attitude, Lecturers, Search engines, Research, Universities

## INTRODUCTION

Education is a powerful instrument of social, political and economic progress, without which neither an individual nor a society can attain professional development. Education is a social medium and process of acquisition of relevant knowledge, skills and attitudes for survival in a changing world (Sanni, Amosa & Danmaigoro, 2017). Moreover, application of Information and Communication Technology (ICT) in education is a ground for achieving the stated aims of education. The innovation that is taking place in ICT has positive effect on the way universities carry out the functions of teaching, learning and research, more especially on the creation, dissemination and application of knowledge.

Globally, ICT has initiated a transition from analogue to digital operations in all aspects of human endeavour making it possible for a lot of activities to be carried out speedily, easily and accurately (Justina, Faben & Michael, 2018). The use of ICT gadgets may enhance professional growth speedily and lecturers who use computer system to work may gain quicker access to study materials through the internet. Similarly, the use of internet to access journals, periodicals, magazines, inaugural lectures, conference papers and so on may help lecturers to grow fast on the job (Effiong & Effanga, 2018). ICT is the means of attaining, processing and distributing of information by combining computers and telecommunication skills and procedure. This technology can be used to offer anticipated results with little flaw or flawless, steady, reliable and interactivity in learning (Amosa, Ogunlade, Obielodan, & Nasiru, 2017). Similarly, ICT can be used to refer to the role of unified communications in association with computers as well as other software, storage and audio visual appliances play in letting the user gain access or store and carryout sophisticated procedures on the net (Usang, et al. 2018). Furthermore, Tabassum

and Shehzadi (2018) submitted that ICT is a set of tools that can help to provide the right people with the right information at the right time which can be accessed through the use of various ICT tools. ICT has varieties of tools that can be used to derive the positive effects of this technology.

Through the use ICT tools particularly Internet facilities, researchers can have the opportunity to access a lot of information in a more contemporary way and reduces the cost because through Internet information can be sent to fellow researchers without having to do it independently (Kpolovie & Awusaku, 2016). Internet can be described as global connections of computers of various sizes, capacity and functionality. These networks are often referred to as information superhighways where computers are interconnected with the purpose of providing services, resources and information across the globe, thus reducing the entire universe to a global village (Abba, 2017). Internet is a network of millions of computers linked together with telecommunication equipment for the purpose of sharing data, resources and information. Internet has become a basic ingredient of information accessibility and dissemination. Similarly, Internet has the ability and capability to provide adequate, current and timely services to information seekers wherever they are (Uloaku, 2017). Similarly, Internet has brought data communication and information exchange into a new level, justified its existence and potential as online information retrieval platform for providing access to myriad source of data and wide range of online information resources, faster rate of data transfer, making information searching more efficient and fulfills the diversified need of user (Kurniasih, et al. 2018).

Search engine is a program that search file, documents or information for specified keywords and returns a list of the documents where the keywords were found, ranked in order of relevancy. It allows one to ask for content meeting specific criteria and retrieves a list of references that match those criteria (Dutta & Bansal, 2016). Similarly, Kurniasih, et al. (2018) opined that, search engine is a program that is used to

search the information on the World Wide Web and FTP servers by using keywords. The researchers further stated that, search engine uses software systems for information retrieval systems from huge databases using a set of queries and they are the avenues through which researchers can access past and current research publications, help to narrow and refine a search for locating relevant information.

As there are cultural, political and geographical differences in the world population, there are a number of search engine to fit the individual needs such as Google, Yahoo, MSN, AOL, Blackle, Ask, Dmoz and Bing among others (Ogbole, 2017). Dutta and Bansal (2016) catigoriesed search engines into four. Crawler based search engine the type of search engine that uses spider or crawler to collect information to the user such as Baidu, AOL; Human powered directories which is the type of search engine that depends on human editors for its listing, search engines such as Dmoz, LookSmart, MSN; Hybrid search engine which is the type of search engine that has the features of crawler based and human powered directories search engines and Meta search engine the type of search engine that uses several multiple search engines to provide information search engines such as Dogpile, Excite and Mama.

The word Yahoo is an acronym for "Yet another Hierarchical Officious Oracle", the term Hierarchical describes how the Yahoo database is arranged in layers of categories and subcategories, Oracle means source of truth and wisdom and the term Officious describes the many office workers who would use the Yahoo search engine database while surfing from work. Yahoo search engine provides numerous web communication services such as Yahoo Messenger, Yahoo Mail, Yahoo Maps, Yahoo Finance and Yahoo Groups (Dutta & Bansal, 2016). Similarly, Yahoo search engine has some interesting search features such as search assistance, site advisor's warning, semantic Web standards and universal search which includes image previews and videos from Flicker (Neralla, Renuka, Nirmala & Swarna, 2014).

Ask.com is crawler-based search engine that presents a stronger set of search options and results. Ask search engine is a search engine that is renowned for its innovation in search technology and search boundary (Hariri, 2013). Ask search engine provides other services such as image search, news, maps, local search, weather and encyclopaedia. It also allow customization of search that enable users search for a location and get not only pages about that location but also maps and details about it, users can search for music and be able to listen to song clips and include a preview feature for its search results (Sahu, Mahapatra, & Balabantaray, 2016).

Attitude of the user towards the use of search engine is another factor that influence the use of this tool. Attitudes have been shown to be an important predictor of usage and implementation of technology. While attitudes are not directly observable, they can be inferred from responses given that show some disposition that has been engaged and appeared to play a central mediating role for system success (Kinley, 2014). Sabzian and Gilakjani (2013) stated that attitude is a relatively enduring organization of beliefs, feelings and behavioural tendencies towards socially significant objects, groups, events or symbols. In other words, attitude is a psychological state of readiness, organized through experience, exerting a dynamic influence upon the individual's response to all objects and situations with which it is related.

Similarly, Ukachi, Onuoha and Nwachukwu (2014) viewed attitudes as evaluated beliefs which influence the individual to respond in a preferential way. Attitudes are formed through a cognitive learning process where one gains information and then form attitudes. The information is gained through experiences with the object, such as the internet or a particular search engine (Israel, 2013). With the high usage of the search engines, it can be assumed that university lecturers have many experiences on the search engines and have formed attitudes towards it is usage for research.

Research is the process of collecting, analysing, synthesising, evaluating and recording of information to solve identified problems involves the adoption of scientific principles. The core components of research include identification of a problem, proffering of solution through the appropriate collection of data and statistical analysis and subsequent presentation of the results to the general public (Kpolovie & Onoshagbegbe, 2017). Similarly, research is the systematic and rigorous investigation aimed at the discovery of previously unknown phenomena, the development of explanatory theory and its application to new situations and the construction of original works of significant intellectual merit (Mahmood, 2011).

The use of Internet to locate data, exchange data, and disseminate data between researchers is becoming increasingly important. In addition, for University lecturers in Nigeria to perform their job efficiency especially in this age of technology knowledge-based and globalization, the use of ICT and Internet resources becomes imperative because Universities all over the world are rapidly incorporating these technologies into all facets of teaching, research and management (Kpolovie & Awusaku, 2016).

Leysens, Roux and Parry (2016) reported that there was no significant difference between male and female respondents in used of search engines. This means that, there was no significant differences on the preferred search engines used by male and female. Similarly, Justina, et al. (2018) reported that lecturers did not differ significantly based on gender on their mean ratings on utilization of ICT resources in South-West Nigeria. However, Isreal (2013) reported that the respondents from higher institutions in Delta and Edo State have positive attitude towards the use of Internet. Area of specialisation refers to the discipline of lecturer in the universities, polytechnics or in colleges. In university system, the area of specialisation can be classified into Science, Education, Agricultural Science, and Engineering, Arts and Management among others (Kpolovie & Awusaku, 2016). Area of specialisation of lecturers influences their utilization of Internet

facilities. Several studies revealed variation on preferences and attitude towards the use of search engines for research across discipline.

Islam (2017) reported that was no significant differences between lecturers of Rajshahi University from different area of specialisation on attitude towards the use of search engines and the lecturers have positive attitudes. Based on the findings of above empirical studies we can deduced that research on lecturers' gender and area of specialization is not conclusive. Therefore, investigated lecturers' attitude towards the use of search engines for research on these variables.

## STATEMENT OF THE PROBLEM

The academic roles of the university lecturers are geared towards achieving the university's goals and objectives which are teaching, research, dissemination of existing and new information, pursuit of service to the community and above all, to publish original research of which they are evaluated for promotion (Ojeniyi, Ojeniyi, & Adetimirin, 2016). Internet is fast, reliable sources of information and does not have restrictions on content or format; it also has a limitless range of facilities, which assist universities' lecturers and researchers to access almost infinite information. It also offers the opportunity for access to up-to-date research reports and knowledge globally which can be accessed through proper utilization of different search engines (Nwokedi & Nwokedi, 2017).

Thus, if universities' lecturers have positive attitude towards the use of search engines the quality and quantity of research and publications in these universities will be enhanced and this could lead to elevation of these universities in terms of research, teaching and learning and publications. It is against this background that the researcher investigated lecturers' attitude towards the use search engines for research in universities in Bauchi State.

## Purpose of the Study

The main purpose of this study was to investigate the lecturers' attitude towards the use of search engines for research in Universities in Bauchi State, Nigeria. Specifically, this study:

i.   Determined the lecturers' attitude towards the use of search engines for research;

ii.  Investigated the lecturers' attitude towards the use of search engines for research based on gender and;

iii. Determined the lecturers' attitude towards the use of search engines for research based on area of specialisation.

## Research Questions

The following research questions were answered in the study:

i.    What is the lecturers' attitude towards the use of search engines for research?

ii.   What is the influence of lecturers' gender on attitude towards the use of search engines for research?

iii.  What is the influence of lecturers' area of specialisation on attitude towards the use of search engines for research?

## Research Hypotheses

The following research hypotheses were formulated and tested at 0.05 level of significance.

$Ho_1$:  Gender will not significantly influence university lecturers' attitude towards the use of search engines for research.

$Ho_2$: University lecturers' areas of specialisation will not significantly influence attitudes towards the use search engines for research.

## METHODOLOGY

### Research Design

The study was a quantitative research of the survey design. A quantitative is a descriptive research and it is a systematic investigation of quantitative properties and their relationships. Survey was chosen because it enables the researcher to collect large amount of data from

the respondents. It means describing properties or phenomena exactly as they are without manipulation of the variables.

## Population, Sample and Sampling Techniques

The population of the study were all the lecturers of three faculties of the two universities in Bauchi State. The target population were all the lecturers of three faculties namely: Faculty of Education, Faculty of Science and Faculty of Management from the two universities because they have only three faculties in common. The sample was selected through multistage sampling procedure. Purposive sampling technique was used to select two universities in Bauchi State, one State and one Federal owned university, purposive sampling technique was also used to select three faculties from the universities; this is because the universities have only three faculties in common, proportionate sampling technique was used to allocate respondents to each of the selected faculties of the universities and accidental sampling technique was used to administered the instrument to the respondents.

The target population of the study were 556 lecturers of the three faculties of the two universities in Bauchi State. Researcher Advisor (2006) claimed that for the population of 556, the sample size for the study will be 227 at 95% confidence and 0.05 degree of accuracy as attached in the appendix. To make the sample more adequate, 5% of the target population (which is 28 lecturers) were added to the sample. Because of that, 255 lecturers from two universities were sampled.

Table 1: List of Universities in Bauchi State, Target Population of the Lecturers from the Selected Faculties and the Sample Size

| S/N | Institutions | | Faculties | Population | Sample Size |
|-----|--------------|---|-----------|------------|-------------|
| 1. | University A | 1 | Education | 103 | 47 |
| | | 2 | Science | 91 | 42 |
| | | 3 | Management | 84 | 39 |
| 2. | University B | 1 | Education | 110 | 50 |
| | | 2 | Science | 73 | 33 |
| | | 3 | Management | 95 | 44 |
| Total | | | | 556 | 255 |

Sources: (Administrative Office of the Institutions 2018)

RESEARCH INSTRUMENT

The instrument for data collection was a researcher-designed questionnaire entitled: Lecturers' Attitude towards the Use of Search Engines for Research in Universities in Bauchi State (LPATUHSER). The instrument was divided into two sections: Section A solicits the demographic information of the respondents, such as gender and area of specialization. Section B contains items on attitudes towards the use of search engines for research and the mode of response Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD).

## Validation of the Research Instrument

The instrument was validated by three lecturers from the Department of Educational Technology, University of Ilorin, for face and content validity so as to ensure the instrument remains valid. Observations and corrections were made to modify the instrument. To determine the reliability of the instrument, a pilot study was conducted on 30 university lecturers from three faculties at university of Jos and out of 30 copies instrument distributed 28 copies were retrieved and analysed. The data obtained from the pilot study were analysed using Crombach Alpha at 0.05 level of significance. The result was 0.74 on lecturers' attitude towards the use of search engines for research.

## Procedure for Data Collection

The researchers sought for permission from the appropriate authorities in the sampled universities; the researchers with the help of research assistants administered the questionnaire to the respondents. Ethical issues were observed in the course of this study, all cited works were listed on the reference, participants were informed about the purposes of the study and they were allowed to participate voluntarily in the study. As part of ethical consideration, the researcher submitted application for seeking permission for data collection through the registrar of the universities and collected introductory letter from the authorities of these institutions. Other ethical issues were observed

before, during and after the administration questionnaire. Retrieval was done immediately after administration to avoid lost.

## RESULTS OF THE RESEARCH QUESTIONS
## Research Question 1:
What is the lecturers' attitude towards the use of search engines for research?

Table 2: Universities' Lecturers Attitude towards the Use of Search Engines for Research in Bauchi State

| S/N | Question Items | SA | A | D | SD | Mean |
|---|---|---|---|---|---|---|
| 1 | I use search engines because they provide me with the most updated information for research | 181 (71.8%) | 64 (25.4%) | 4 (1.6%) | 3 (1.2%) | 3.7540 |
| 2 | Search engines are the fastest means of accessing information for research | 116 (46.0%) | 130 (51.5%) | 3 (1.2%) | 3 (1.2%) | 3.5952 |
| 1. | Search engines are the easiest means of accessing information for research | 104 (41.3%) | 141 (56.0%) | 5 (2.8%) | 2 (0.8%) | 3.4167 |
| 2. | Use of search engines enhance my professional development | 97 (38.5%) | 148 (58.7%) | 5 (2.4%) | 2 (0.8%) | 3.3849 |
| 3. | I use search engines because they provide me with the most precise and relevant information for research | 111 (44.0%) | 134 (53.2%) | 6 (2.4%) | 1 (0.4%) | 3.4405 |
| 4. | Use of search engines give me more confidence in conducting research | 71 (28.2%) | 123 (48.8%) | 50 (19.8%) | 8 (3.2%) | 3.0556 |
| 5. | Search engines can address the need of my research | 72 (28.6%) | 120 (47.6%) | 55 (21.8%) | 5 (2.0%) | 3.0437 |
| 6. | Search engines can replace the printed materials | 75 (39.8%) | 110 (43.7%) | 62 (24.6%) | 5 (2.0%) | 3.0198 |
| 7. | Use of search engines save my time and resources | 75 (29.8%) | 132 (52.4%) | 42 (16.7%) | 3 (1.2%) | 3.1786 |
| 10. | I advise other lecturers to use search engines for their research | 7 (2.8%) | 81 (32.1%) | 126 (50.0%) | 38 (15.0%) | 2.1865 |
| | Grand Mean | | | | 3.2 | |

Table 2, revealed the attitude of universities' lecturers towards the use of search engines for research. From the Table it can be deduced that, lecturers had positive attitude toward the use of search engines for research because 3.2 the grand mean was greater than 2.5 the benchmark.

## Hypothesis One:

Gender will not significantly influence universities lecturers' attitude towards the use of search engines for research.

Table 3: Attitude towards the Use of Search Engines among Universities Lecturers based on Gender

| Gender | N | Mean | SD | t-cal | t-tab | df | Sig. | Dec. |
|---|---|---|---|---|---|---|---|---|
| Male | | 15.0096 | .62932 | 2.279 | 1.960 | 250 | .027 | Rejected |
| | 208 | | | | | | | |
| Female | 44 | 14.5455 | 1.31988 | | | | | |

Table 3, revealed the summary of independent sample t-test on the difference in the attitude of universities lecturers towards the use of search engine for research based on gender. The Table revealed the calculated t-value 2.279 was greater than the t-table value of 1.960, therefore, the null hypothesis was rejected. The findings revealed that there was significant difference between universities' lecturers' attitude towards the used of search engines for research based on gender.

## Hypothesis Two:

Universities lecturers' area of specialisation will not significantly influence attitudes towards the use search engines for research.

Table 4: Attitude of Universities Lecturers towards the Use of Search Engine based on Area of Specialisation

| Sources of Variance | Sum of Squares | df | Mean Square | F-cal | F-tab | Sig. |
|---|---|---|---|---|---|---|
| Between Groups | 77.107 | 2 | | 3.501 | 2.996 | .032 |
| Within Groups | 2741.639 | 249 | 11.011 | | | |
| Total | 2818.746 | 251 | | | | |

Table 4, shows the summary of one-way ANOVA on the difference in the attitude of universities lecturers towards search engines based on area of specialisation, the table revealed that, the calculated value F-cal. 3.501 was greater than the table F-tab. 2.996, therefore, the null hypothesis was rejected on the ground that significant difference exists among the universities lecturers' attitude towards search engines. The Turkey HSD post hock test revealed that the difference exists between lecturers from faculty of education and faculty of management with a mean difference -1.35645 and between lecturers from sciences and faculty of management with the mean difference of 1.35645 at 0.05 level of significance.

## DISCUSSION ON RESEARCH FINDINGS

Hypothesis one stated that gender will not significantly influence universities lecturers' attitude towards the use of search engines for research. The findings of hypothesis three revealed significant difference exist between universities lecturers' attitude towards the used of search engine in Bauchi State based on gender. The findings contradicted with the finding of Abedalaziz, et al. (2013) who reported that both the participants had positive attitude towards the use of Internet regardless of their gender. Farrukh and Singh (2014) who reported that there was no significant difference between the mean attitude score towards Internet facilities usage of lecturers from technical and non technical institutes based on gender. In the same vein, Adekunle (2017) reported that there was no significant differences between male and female lectures on attitudes towards use ICT tools.

Hypothesis two stated that universities lecturers' area of specialisation will not significantly influence attitude towards the use search engines for research. The findings of the study revealed that there was significant difference in the university lecturers' attitude towards the use of search engine for research in Bauchi State based on area of specialisation. The findings of the study agreed with the findings of Olademeji et al. (2017) who reported that there was significant

difference in lectures' attitude towards ICTs usage based on area of specialisation. This contradict the findings of Abedalaziz, Jamaluddin and Leng (2013) who reported that all the participants have positive attitude towards the use of Internet based on area of specialisation. Similarly, Adekunle (2017) reported that there was no significant differences of academic staff attitude towards the use ICT facilities based on faculties.

## IMPLICATION OF THE FINDINGS

The findings of this study have implication for universities lecturers, universities administrators and students. The findings of this study have great implication on use of search engines for research by the lecturers in universities. This is because effective research would be conducted if the universities lecturers use various search engines and have positive attitude towards the use of search engines. The use of search engines would also be useful to the universities management as the level of research output of the lecturers increased, this would lead to elevation the universities among other universities in Nigeria and the world at large.

Furthermore, the study revealed that there was significant difference on universities lecturers' attitude towards the use of search engine based on gender. The implication of this finding is that universities lecturers' gender influenced their attitude towards the use of search engines. Lecturers should have positive attitude towards the use of search engines for research regardless of their gender. Similarly, the study revealed that there was significant difference in the university lecturers' attitude towards the use of search engine for research based on area of specialisation. The implication of this is that, the university lecturers should have positive attitude towards the use of search engines irrespective of their area of specialisation because of the benefits of using this tool in accessing information for research.

## CONCLUSION

Effective research would be conducted through the use various Internet facilities particularly search engines, this is because Internet is the easiest and fastest means of accessing information without restriction of content and format. It also enabled researchers to access present research findings and to collaborate with other researchers globally. The findings of the study revealed that universities lecturers' have positive attitude towards the use of search engines for research and the most preferred search engine used by the lecturers is Google followed by and Yahoo, Ask.com, Bing and DuckDuckGo search engines.

The study reported that, universities lecturers gender influenced their attitude towards the used of search engines and the study established lecturers' attitude towards the use of search engines is associated with gender. In addition, the findings revealed that lecturers' attitude towards the use of search engines is associated with lecturers' area of speciation. Even though, all the lecturers have positive attitude towards the used of search engines but significant difference exist based on area of specialization. The study established that lecturers' area of specialization influenced their attitudes towards the use of search engines.

## Limitations of the Study

The followings are the limitations of this research:

1. In the conduct of this research, samples were drawn from two universities in Bauchi State; therefore, findings from this study may not be generalized to other universities in Nigeria.
2. The study was purely on Lecturers' Attitude towards the Use of Search Engines for Research in Universities in Bauchi State.

## RECOMMENDATIONS

The following recommendations were made from the findings and conclusion of this research:

1.  Universities' lecturers should develop positive attitudes towards search engines irrespective of their gender.
2.  Universities' lecturers from different discipline should have positive attitude towards the use of search engines for research.

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