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## **Impact of Internet and Search Engines on Students' Understanding of Consumer Behaviour and Choices In Tertiary Institutions of Learning In Abuja, Nigeria.**

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### **ABSTRACT**

Understanding consumer behaviour and choices are crucial for marketing students in tertiary institutions of learning. Thus, the paper examined the impact of the internet and search engines on students' understanding of consumer behaviour and choices in tertiary institutions of learning in Abuja. Three research objectives and three research questions guided the study. The study adopted a descriptive survey research design. The population comprised 1,126 students that were drawn from three tertiary institutions in the FCT. A sample of 291 students was used for the study, using Krejcie, and Morgan's (1970) sample size determination table. Sixteen items self-structured questionnaire was used as the instrument for data collection. Content validity was used. Test-retest method of reliability was used to obtain the internal consistency. The reliability index was obtained through Cornbrash's alpha (0.86). 274 questionnaires were returned valid, representing a 94% success rate. Data collected were imputed into the SPSS (25) software package where descriptive statistics, in the form of graphs and tables were generated. The study discovered among others that Google is the most used search engine by students in tertiary institutions of learning in the Federal Capital Territory. Internet search engines have positive impacts on students' understanding of consumer behaviour and choices in tertiary institutions of learning in Abuja. The study recommended among others that Faculty and Departmental lecturers should educate students on how to identify junk information while surfing through the search engines, students should attend special ICT training programmes to improve their internet search skills and the cost of internet subscription should be made affordable for students and other subscribers.

**Keywords:** Impact, Internet, search engines, consumer behaviour and choices

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## 1. INTRODUCTION

Consumer behaviour highlights every aspect of individuals, groups, or organizations and the processes they use to select, secure, use or dispose of products, services, experiences or ideas to satisfy needs and the impacts that these processes (marketing tools, research process and new message formats) have on the consumer and society (Imouokhome, Okeke, Samaila, Adegbola, Katagum and Gbadeyan, 2015). The knowledge of consumer behaviour and choices is critical for influencing decisions almost in every sphere of life where an exchange is inevitable. Communication with consumers and receiving feedback from them is a crucial part of consumer behaviour which is of interest to marketers. This is why Imouokhome, et al (2015) viewed consumer behaviour as involving the acquisition and use of information. Consumers may consist of individuals or groups. Consuming groups include families, clubs and organizations, purchasing units within organizations, and government. Also, behaviours such as collecting, preparing, wearing, sharing and storing equally play important roles in consumer behaviour. Each of these behaviours can involve goods, services, ideas and experiences. Reasons for the teaching and learning of consumer behaviour and choices must be properly understood by students.

Understanding consumer behaviour and choice are crucial for marketing students in tertiary institutions of learning. According to Statt, Priest and Carter (2013), understanding consumer behaviour helps managers to identify appropriate people to target. It also helps to design and communicate attractive offerings to consumers. Imouokhome, et al (2015) added that many firms attempt to influence consumers via product features, adverts, packages or store environments. Given the magnitude of these direct and indirect influence attempts, it is important that consumers accurately understand the strategies and tactics being used. Therefore, students of marketing are supposed to understand every element of consumer behaviour and choices treated in the classrooms. However, the acquisition of knowledge and understanding of consumer behaviour and choices is not limited to a classroom setting. The world has become a global village where at the tap of a computer, information about consumer behaviour and choices across the globe and in different institutions is retrieved within seconds. This is made possible through the internet and search engines. According to Ayush (2013), a search engine is a web software program or web-based script available over the Internet that searches documents and files for keywords and returns the list of results containing those keywords. Today, there are several search engines on the Internet, each with its techniques and specialties.

It is on this note that this paper examined the impact of the internet and search engines on students' understanding of consumer behaviour and choices in tertiary institutions of learning in Abuja.

### 1.1 Statement of the Problem

The information explosion has given rise to the quest for more knowledge and its application to varied fields of study. Several advanced technologies have been created and used during this era of globalization in an academic environment. The development of web search engines has provided an alternative for undergraduates to access the needed information for their research activities without utilizing library resources, especially reference sources. The researcher however observed that many students spend more time on social media like Facebook, Twitter, TikTok, and WhatsApp, among others; instead of deploying their time to further research about their course of study on internet search engines. Many students are limited to knowledge acquired in the classroom from their lecturers. The general perception is that undergraduates prefer to use search engines for academic purposes only when they are mandated to do research. This problem necessitated the current study on the impact of the internet and search engines on students' understanding of consumer behaviour and choices in tertiary institutions of learning in Abuja.

### 1.2 Objectives of the Study

The specific objectives of the investigation were to:

- Find out the internet search engines mostly used by students to understand consumer behaviour and choices in tertiary institutions of learning in Abuja.
- Examine the impact of the internet and search engines on students' understanding of consumer behaviour and choices in tertiary institutions of learning in Abuja.
- Ascertain the problems associated with the use of internet search engines by students in understanding consumer behaviour and choices in tertiary institutions of learning in Abuja.

### 1.3 Research Questions

The following research questions were raised to guide the investigation:

- What are the internet search engines mostly used by students to understand consumer behaviour and choices in tertiary institutions of learning in Abuja?
- What are the impacts of the internet and search engines on students' understanding of consumer behaviour and choices in tertiary institutions of learning in Abuja?
- What are the problems associated with the use of internet search engines by students in understanding consumer behaviour and choices in tertiary institutions of learning in Abuja?

## 2. LITERATURE REVIEW

The Internet is a global network of computers that connects millions of smaller networks. According to Williams and Sawyer (2003), a connection to the internet enables access to extremely powerful communication tools and a vast information resource. The internet is an interconnected system of computers all over the world that stores information in multimedia form. A search engine on the other hand, according to Asekhome (2014) is a software program that searches the Internet (a bunch of websites) based on the words that one designates as search terms (query words). Search engines look through their databases of information to find what it is that someone is looking for.

In the modern-day delivery of educational goals and research objectives, 'user adoption or acceptance of technology', remains a key factor (Smarkola, 2007). Incidentally, students and teachers are among key users of educational technology, and they constantly contend with the choice of appropriate types and forms of technologies suited for teaching and learning. User acceptance of technology is a demonstrated behaviour or willingness on the part of a user to employ technology for the tasks it is designed to support (Teo, Lee, & Chai, 2008). The **technology acceptance model (TAM)** is an information system theory that models how users come to accept and use a technology.

Today, a lot of research on user technology acceptance focuses on significant factors that influence users' intention to use (ITU) or actual use of technologies (e.g., Ma, Andersson & Streith, 2005; Wu & Wang, 2005). This study on the impact of the internet and search engines on students' understanding of consumer behaviour and choices is to strengthen the integration and use of technology in teaching and understanding of several concepts in education. The impact of the choice of internet and search engines on students' understanding of consumer behaviour expatiates in the Diffusion of innovations theory that seeks to explain how, why, and at what rate new ideas and technology spread. Diffusion is the process by which an innovation is communicated over time among participants in a social system; in this case, students and teachers in an educational institution.

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Rogers (2003) opines that communication channels are one of the five main elements that influence the spread of a new idea: others are the innovation itself, adopters, time, and a social system. Given the constantly increasing information overflow of the digital age, the importance of information retrieval tools has become critical (Asekhame, 2014), especially for teaching, learning and research.

In a study by Ayush (2013), the search engine was divided into the following types:

- **Full-Text Search Engine:** It retrieves information from the internet, establishes a database and retrieves the records according to the user's query. It can be divided into two parts: the first one has its crawler. Another one is to hire other search engine databases.
- **Directory Search Engine:** This cannot be called a true search engine. It retrieves all the entries of the directory listing.
- **META Search Engine:** provides search results from multiple search engines simultaneously according to the user's query.
- **Vertical Search Engine:** focuses on the specific search field and searches demand.

There are many search engines like Google, Yahoo, Bing, Alta, Vista, Excite and Ask but the most popular search engine is Google.

According to Mostafa (2005), Google has become synonymous with research. Google is still the most visited search engine by the cyber community. In a study of 10 search engines with the highest market share in June 2018 by Kurniasih, et al (2018), Google (71.98%), Baidu (14.04%), Bing (7.76%), Yahoo (4.44%), Yandex (0.92%), Ask (0.33%), DuckDuckGo (0.23%), Naver (0.12%), AOL (0.05%) and Dogpile (0.04%). In the context of teaching and learning, search engines become gateways used to track various information needed by students. Research results show that some students depend on search engines and other online learning resources to understand various concepts thought in school (Al-Hariri & Al-Hattami, 2015). In a study by Kurniasih, et al (2018) on the utilization of search engines by students of the Library and Information Science Program at Universitas Padjadjaran, almost all respondents (80%) know the internet and use the search engines since junior high school, and a small percentage of them (20%) have known the internet and used search engines since elementary school. The search engines that are most often used by almost all respondents (90%) are Google, only a small percentage use Yahoo (0.6%) and Bing (0.4%).

A search engine is seen to impact positively on students' research activities. Rieger (2009) also studied the search engine use behaviour of students and faculty to examine their perception, and provide a basis for further research. A qualitative research method was employed and an interview was conducted with 32 respondents. Interestingly all the respondents agreed that Google was the search engine of choice. Some of the comments of the interviewee were; "Google delivers", "I always start my research at Google" and "Google is my search engine". The respondents also consistently described Google as reliable, efficient and fast. The adjectives used during the interviews in the description included "thorough", "comprehensive", "easy", "clean" and "accurate". Amanda and Suryono (2018) found that the internet is needed as a learning resource for students. This is because of the incomplete books owned by the teacher and the high cost of buying textbooks such as consumer behaviour and choices of textbooks or other printed media used in learning. For this reason, the internet is one of the effective and efficient learning resources and access costs are also relatively cheap for students. Students understand learning strategy by utilizing various learning resources in internet search engines as it helps to increase the level of students' mastery of the subject matter including consumer behaviour and choices.

The internet search engine is effective in students' understanding of consumer behaviour and choices. Kurniasih, et al (2018) argued that the advantage of the internet as a learning resource is that it can access data exchange quickly between users. The internet also contains up to date information on consumer behaviour and choices. Search results from the internet directly focus on the sub-topics that will be searched and can be accessed in many places by students of marketing because of the large number of internet service providers. Search engines can facilitate students in finding learning resources in consumer behaviour and choices. Through search engines, students can find the information they want on consumer behaviour and choices by typing related keywords.

Although there are several challenges associated with internet search engines. Işıl, Mehmet, Serkan and Elif (2010) identified some of these problems to include: accessing irrelevant information, accessing insufficient information, accessing websites with virus threats, the difficulty of accessing scientific resources, and accessing websites requiring membership. Ivwighreghweta and Igere (2014) argued that the major problem associated with the use of internet search engines by students in Nigeria is power supply. This implies that power outage is the greatest impediment to the use of the internet for academic purposes. This conforms with Udende and Azeez (2010) who found that 181 (47%) of their respondents were of the view that the general power outage in the country affects them in accessing the internet for academic purposes.

### 3. RESEARCH METHODS

The study adopted a descriptive survey research design. The population comprised 1,126 students that were drawn from the Business Education Department of FCT College of Education Zuba, Abuja, and the Departments of Business Administration and Management of the University of Abuja and Dorben Polytechnic Bwari, Abuja. These tertiary institutions were chosen because they represent public and private tertiary institutions in the Federal Capital Territory. A sample of 291 students was used for the study, using Krejcie, and Morgan's (1970) sample size determination table. Sixteen items self-structured questionnaire titled "Internet/Search Engines and Students' Understanding of Consumer Behaviour and Choices Questionnaire" was used as the instrument for data collection. Content validity was used. A pilot study was conducted. Test-retest method of reliability was used to obtain the internal consistency. The reliability index was obtained through Cornbrash's alpha (0.86).

The questionnaire was designed and self-administered by the researcher. The researcher explained her intentions and after the full consent of the respondents was secured, the questionnaire was administered. It took the researcher four days to complete the exercise. Out of the 291 questionnaires that were administered, 274 were returned valid, representing a 94% success rate. The analyses of data collected were carried out based on the specific objectives and research questions of the study. Data collected were imputed into the SPSS (25) software package where descriptive statistics, in the form of graphs and tables were generated. The simple percentage was used to determine the impact of the internet and search engines on students' understanding of consumer behaviour and choices at tertiary institutions. Discussions of findings were done immediately after data analysis.

#### 4. RESULTS

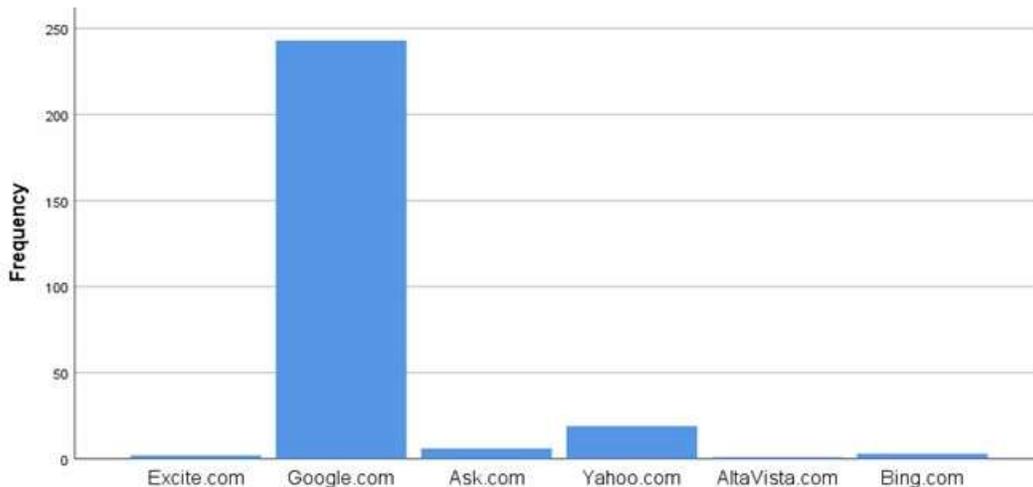
**Research Question One:** What are the internet search engines mostly used by students to understand consumer behaviour and choices in tertiary institutions of learning in Abuja?

**Table 1: Internet Search Engines Mostly Used By Students**

	Variables	Frequency	Valid Percent	Cumulative Percent
Valid	Excite.com	2	0.7	0.7
	Google.com	243	88.7	89.4
	Ask.com	6	2.2	91.6
	Yahoo.com	19	6.9	98.5
	AltaVista.com	1	0.4	98.9
	Bing.com	3	1.1	100.0
	Total	274	100.0	

**Source:** SPSS version, 25

Table 1 revealed that large percentage of the students, 243 (88.7%) use Google search engine to facilitate understanding of consumer behaviour and choices in tertiary institutions of learning in Abuja. 19 (6.9 %) use Yahoo search engine, while 6 (2.2%) of the students use Ask.com, 3 (1.1 %) use Bing.com search engine, 2 (0.7%) use Excite.com and 1 (0.4%) use AltaVista.com. The findings implied that majority of students in tertiary institutions of learning in the Federal Capital Territory use Google.com as major search engine. This was further highlighted in Figure 1 below:



**Figure 1. Vertical Bar Chart showing Internet Search Engines Mostly Used By Students To Understand Consumer Behaviour and Choices in Tertiary Institutions of Learning in Abuja**

An overview of figure 1 showed that a large percentage of students (88.7%) at tertiary institutions of learning in Abuja use Google.com as major search engine to facilitate the understanding of consumer behaviour and choices

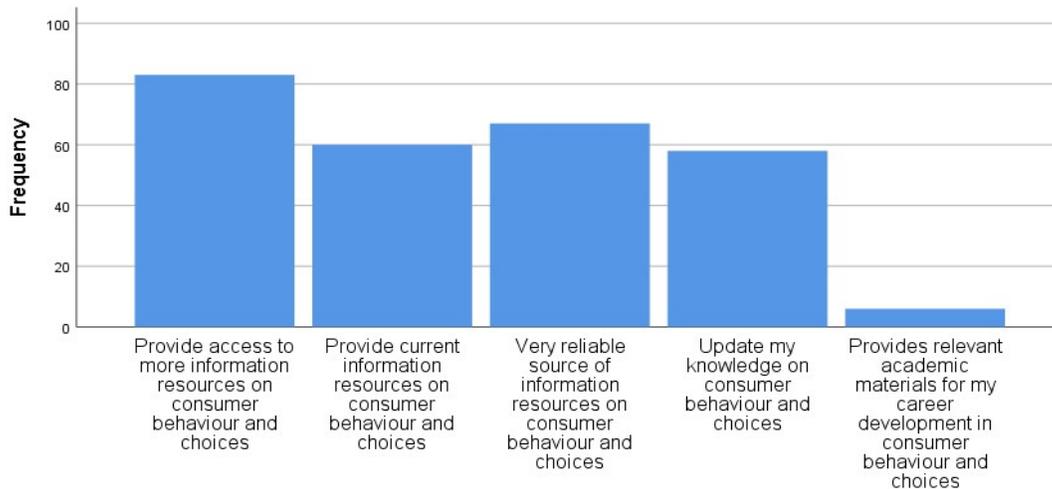
**Research Question Two:** What are the impacts of internet and search engines on students' understanding of consumer behaviour and choices in tertiary institutions of learning in Abuja?

**Table 2: Impacts of internet and search engines on students' understanding of consumer behaviour and choices**

	<b>Variables</b>	<b>Frequency</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	Provide access to more information resources on consumer behaviour and choices	83	30.3	30.3
	Provide current information resources on consumer behaviour and choices	60	21.9	52.2
	Very reliable source of information resources on consumer behaviour and choices	67	24.5	76.6
	Update my knowledge on consumer behaviour and choices	58	21.2	97.8
	Provides relevant academic materials for my career development in consumer behaviour and choices	6	2.2	100.0
	Total	274	100.0	

**Source:** SPSS version, 25

Table 2 revealed that a large percentage of the students 83 (30.3) were of the view that internet search engines provide them with access to more information resources on consumer behaviour and choices, and 67 (24.5%) were of the view that it provides them with a very reliable source of information resources on consumer behaviour and choices, 60 (21.9%) were of the view that it provides them with current information resources on consumer behaviour and choices, while 58 (21.2%) of the students were of the view that it updates their knowledge on consumer behaviour and choices, 6 (2.2%) believed that it provides them with relevant academic materials for career development in consumer behaviour and choices. The findings showed that internet search engines have positive impacts on students' understanding of consumer behaviour and choices in tertiary institutions of learning in Abuja. This conclusion is arrived at because a large percentage of the students 83 (30.3%) agreed that internet search engines provide them with access to more information resources on consumer behaviour and choices. This was further highlighted in figure 2 below:



**Figure 2. Vertical Bar Chart showing impact of Internet search engines on students' understanding**

An overview of figure 2 showed that a large percentage of the students 83 (30.3) agreed that internet search engines provide them with access to more information resources on consumer behaviour and choices and also, a very reliable source of information resources on consumer behaviour and choices.

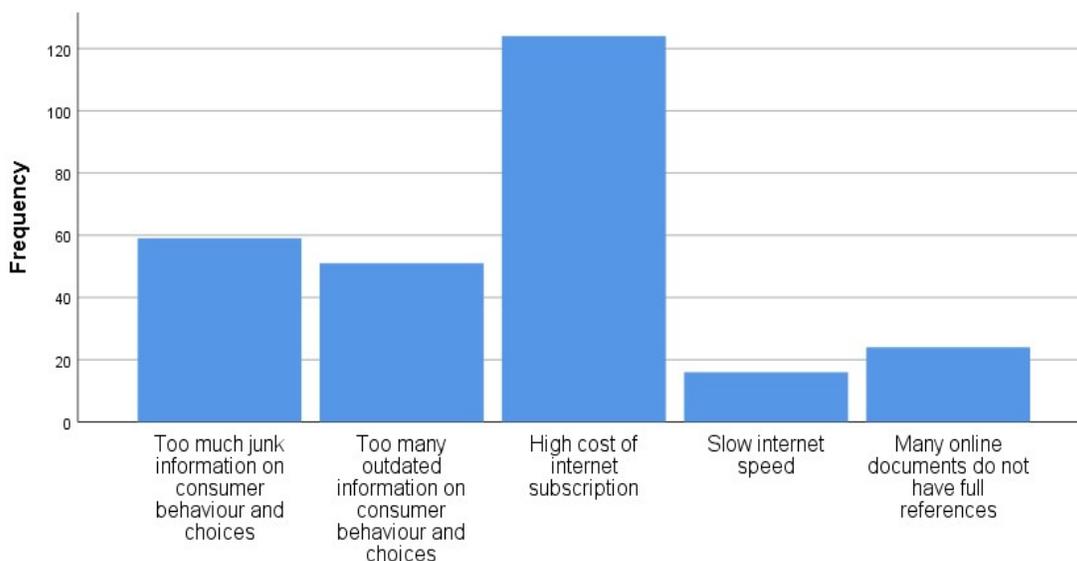
**Research Question Three:** What are the problems associated with the use of internet search engines by students in understanding of consumer behaviour and choices in tertiary institutions of learning in Abuja?

**Table 3: Problems associated with the use of internet search engines by students in understanding of consumer behaviour and choices**

	Variables	Frequency	Valid Percent	Cumulative Percent
Valid	Too much junk information on consumer behaviour and choices	59	21.5	21.5
	Too many outdated information on consumer behaviour and choices	51	18.6	40.1
	High cost of internet subscription	124	45.3	85.4
	Slow internet speed	16	5.8	91.2
	Many online documents do not have full references	24	8.8	100.0
	Total	274	100.0	

Source: SPSS version, 25

Table 3 revealed that a large percentage of the students 124 (45.3%) were of the view that the high cost of internet subscription is a problem associated with the use of internet search engines by students, 59 (21.5%) were of the view that the problem is too much junk information on consumer behaviour and choices on search engines, 51 (18.6%) were of the view that too many outdated information on consumer behaviour and choices is the problem. While 24 (8.8%) of the students were of the view that many online documents that do not have full references are the problem, 16 (5.8%) believed that that problem is slow internet speed. From the findings, a conclusion can be drawn that the high cost of internet subscriptions and junk information on consumer behaviour and choices on search engines were major problems associated with the use of internet search engines by students in understanding consumer behaviour and choices in tertiary institutions of learning in Abuja. This was further highlighted in figure 3 below:



**Figure 3. Vertical Bar Chart showing problems associated with use of Internet search engines**

An overview of figure 3 showed that a large percentage of the students (45.3%) agreed that the high cost of internet subscription and too much junk information on consumer behaviour and choices on search engines (21.5%) were the major problems associated with the use of internet search engine by students.

#### 4. DISCUSSION OF FINDINGS

The findings in Table 1 revealed that Google (88.7%) is the most used search engine by students in tertiary institutions of learning in the Federal Capital Territory, Abuja to facilitate understanding of consumer behaviour and choices. This finding agreed with the study by Mostafa (2005) who found that Google has become synonymous with research. Google is still the most visited search engine by the cyber community. It is also in line with the study by Kurniasih, et al (2018) on the top 10 search engines with the highest market share in June 2018 where Google occupied 71.98%, Baidu (14.04%), Bing (7.76%), Yahoo (4.44%), Yandex (0.92%), Ask (0.33%), DuckDuckGo (0.23%), Naver (0.12%), AOL (0.05%) and Dogpile (0.04%). There is no doubt that Google is still the leading search engine being used by the cyber community.

The findings in Table 2 revealed that internet search engines have positive impacts on students' understanding of consumer behaviour and choices in tertiary institutions of learning in Abuja. It revealed that internet search engines provide students with access to more information resources on consumer behaviour and choices. Also, it provides students with a very reliable source of information resources on consumer behaviour and choices. These findings also corroborated with the study by Amanda and Suryono (2018) who found that the internet search engine is needed as a learning resource for students. The internet search engine is one of the effective and efficient ways of accessing learning resources that are relatively cheap for students. It helps to increase the level of students' mastery of the subject matter including consumer behaviour and choices.

The findings in Table 3 revealed the major problems associated with the use of internet search engines by students including the high cost of internet subscriptions and too much junk information on consumer behaviour and choices on search engines. These findings contradicted the earlier studies by Ivwighreghweta and Igere (2014) who found that the major problem associated with the use of internet search engines by students in Nigeria is power supply. That power outage is the greatest impediment to the use of the internet for academic purposes. It also contradicted the findings by Udende and Azeez (2010) which revealed that the general power outage in the country affects students in accessing the internet for academic purposes. However, this current study shows that students are more concerned with the high cost of internet subscriptions than any other associated problems.

## 5. CONCLUSION

Receiving classroom lectures by students is not only the avenue to understand consumer behaviour and choices, students could get further knowledge by surfing the internet using different search engines. This study thus concluded that Google remains the most widely used search engine by students in tertiary institutions of learning. It also concluded that internet search engines have positive impacts on students' understanding of consumer behaviour and choices in tertiary institutions of learning in Abuja. The high cost of internet subscriptions is a major associated problem with the use of internet search engines.

## 6. RECOMMENDATIONS

Based on the findings of the study, the following recommendations are put forward:

- a. Faculty and Departmental Lecturers should educate students on how to identify junk information while surfing through search engines. This is particularly important for lecturers on consumer behaviour and choices.
- b. Students should attend a special ICT training programme to improve their internet search skills. This will enable them to locate at ease current information on consumer behaviour and choices in search engines.
- c. The Federal Government of Nigeria should provide a conducive business environment where internet service providers can operate with a minimum cost of production. This will make the cost of internet subscriptions affordable for students and other subscribers.
- d. The Federal Government of Nigeria through its relevant agencies should coordinate the activities of internet service providers to ensure high internet speed for students and any other subscribers.
- e. Developers of search engines should establish a system that will automatically reject the uploading of academic documents on search engines that do not have full references to back up citations in the documents.

## 7. LIMITATION OF STUDY

One of the limitations of this study is that of the nine tertiary education institutions located in Abuja, three were featured in the study and respondents were selected from only these three institutions. A wider sample size may reveal more robust search engine choices that impact students' understanding of consumer behaviour and choices.

## 8. DIRECTION FOR FUTURE RESEARCH

Further research on this topic should expand the scope of this study to include:

- a. tertiary education institutions in the **mega** cities of Nigeria, especially those located in geopolitical and demographic zones different from Abuja, in order to test search engines preferences of students in understanding consumer behaviour and choices; and,
- b. specific interactive digital channels (LinkedIn, Instagram, Research gate, etc) that spread word-of-mouth information, real life experiences, user feedbacks, reviews and recommendation that could also influence students' understanding of consumer behaviour and choices.

### Author Biographies

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