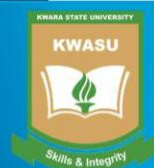


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IMPACT OF GOOGLE SEARCH ENGINE ON STUDENT'S LEARNING ABILITY AMONG BUSINESS EDUCATION STUDENTS IN FEDERAL COLLEGE OF EDUCATION, ZARIA, NIGERIA

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Abstract

This study assessed the impact of Google search engine on student's learning ability among business education students in Federal college of education, Zaria, the study was guide with by one objective and one research question. Quantitative research approach was employed and the targeted population for this study is 692 comprising the NCE students (411) and the B.Ed. students (281) of Business Education Department, Federal College of Education, Zaria. The sample size of the study was 70 this comprises of NCE (42) and B.Ed (28) students serving as the respondents. The sampling techniques used for the study was purposive sampling techniques, taking 10%. The sampling size of each student (NCE and B.Ed) as respondents. The instrument used to collect data for this study is structured questionnaire in gathering information from the students of Business Education Department, Federal College of Education, Zaria. The study makes used of SPSS as a statistical tool and to analyze data generated from the respondents mean and standard deviation was used. The findings of the study revealed that majority of respondents do use the Google search engine for academic purpose. It was concluded that Business Education students at FCE Zaria needed to use the Google search engine for academic purpose frequently as this will help majority of them to know to use the Google search engine for academic purpose. The study recommends that educational technologists and College management needed to encourage each and every department not only Business Education students at FCE Zaria on the use the Google search engine for academic purpose.

Key word; google search engine, ICT, challenges, business education and students

Introduction

Google Search engine is a software system that is designed to search for information on the World Wide Web (WWW). It is an information retrieval system designed to help find information

stored on computer system, such as internet, inside a corporate or proprietary network. It is a kind of information retrieval program and it has two major tasks: Searching through the billions of keywords recorded in the index to find information that match the query sent by the user and ranking retrieved records in order of importance so that the user can choose the most relevant. Search engines serve as source of information to researchers particularly students in higher institutions of learning. They are the vehicles through which researchers can access past and current research publications and help to narrow and refine a search for tracing relevant information. Students can also access information on various courses in the institution through these search engines. This will make them have different information resources and materials for their lectures and research work. Search engines also provide easy access to some reference materials like: gazettes, journals, conference proceeding, magazines and newspapers. Search engines provide e-print in details and other types of digital works by authors in an academic department, schools or institutions which comprise of electronic thesis and dissertations and presentations by authors of different institutions.

The aim of Google search engines according to Renwick (2005) is to search and circumnavigate, meaning that a successful search engine should sustain its users in an efficient search for contents, and bring detailed information resources with ease to various students. Okiki (2012) stated that the search engines obtainable are very many but due to lack of awareness, researchers do not exploit them. Internet and the various search engines have brought information explosion, which means that there is large scale, rapid and spectacular expansion of information. The information explosion may confuse researchers on the information to use (Okella-obura & Ikoja-odogbo, 2010).

Information retrieval is a field concerned with the structure, analysis, organization, storage, searching, and retrieval of information. It is a well-established discipline in Computer Science since the 1950s. It has however recently enjoyed increased significance because of the information explosion caused by the internet WWW and its related technologies. Not only the absolute amount of information, but also new types of information formats have drawn attention to this field (Nnamdi, 2008). While information retrieval used to be a restricted field with specialized users like librarians and information professionals, today millions of people use IR every day to search the web or search their email, resulting in the need for new user interfaces and query languages (Manning, 2012; 2011; Joe, 2011).

According to Goyal (2010), information retrieval "deals with the representation, storage, organization of, and access to information items". IR is finding material (e.g. documents) of an unstructured nature (usually text) that satisfies an information need from within large collections (usually stored on computers)." The most common task in IR is informally ad hoc retrieval: a user expresses an information need by submitting a query to the system, which tries to return documents relevant to this query. Other tasks in IR include support of users in browsing or filtering document collections, text classification, text clustering, cross-language retrieval, and multimedia retrieval (Manning 2012; Cabero, 2001; Roul & Sahay, 2012).

The research is hope to measure the adequacy or otherwise the problems associated with the awareness and use of search engines for information retrieval by students in Federal College of Education, Zaria, which if successfully conducted will no doubt fill in the gap in the area of research and add to the existing body of knowledge in the area of information retrieval. It is also hope that, the study will be significant value to the researchers, more especially the lecturers in enhancing the search engines for information retrieval and to promote their use for research and other scholarly activities.

The problem of this study is the inability of the students to use Google search engine to retrieve information. How does the frequent use of Google for academic purposes affect students' critical thinking and analytical skills, Are students becoming overly reliant on Google as a primary source of information, potentially hindering their ability to seek knowledge through alternative means.

In view of those afore stated problems, Business Education students have now turned their attention to the use of internet (Google search engine for the purpose of studying, conducting research and obtaining general information. This study therefore seeks to know the impact of internet on students learning ability.

Objective of the Study

The following objectives guide the study:

To examine the Impact of Google Search Engine Usage on Information Retrieval and Knowledge Acquisition, critical thinking and research for Academic Purpose

Research Questions

What are the Impact of Google Search Engine Usage on Information Retrieval and Knowledge Acquisition, critical thinking and research for Academic Purpose?

Empirical Review

Search Engine: This is considered a primary activity, such as email and other general activities over the internet. Hence, the search engines are considered a concierge for the digital network ecology (Dijck, 2010). The recent search engines have excellent access to colossal information. The first proto of the search engine was started in 1990 by the students of McGill of Montreal University, who have created a script-oriented content accumulating program that could download various from the FTP directory. Later, the same concept with a few more technical; advancements are being done to reach an enormous database with a huge index of web pages by the advent of technology Google, Yahoo, MSN, etc. are few majorly browsed search engines (Dijck, 2010). A web search engine is designed to search for information on the World Wide Web and FTP servers. The search engine is a service that allows internet users to search for content via the World Wide Web (Dijck, 2010). A user enters keywords or key phrases into a search engine and receives a list of web content.

Internet usage has been tremendously increased in recent days with the easy-to-use search engines like Google, Bing and Yahoo search engines are classified into the following four categories based on how it works, namely crawler-based search engines, human-powered directories, hybrid search engines and other special search engines.

Use of Google Search Engines for Information Retrieval in Institutions of Higher Learning

The internet search engines have positively affected all the social and economic aspects of human development by improving work performance and productivity. According to Cabero (2001), "the flexibilization time-space accounted for by the integration of Internet search engines into teaching and research processes contributes to increase the interaction and reception of information. Such possibilities suggest changes in the communication models and the teaching and research methods used by academics, giving way to new scenarios which favour both individual and collaborative learning". The use of internet search engines in educational settings, by itself acts as a catalyst for change in this domain. Search engines by their very nature are software applications that encourage and support independent teaching and research. Lecturers using search engines for teaching and research purposes become engrossed in the process of teaching and research as more and more academics use computers as information sources and cognitive tools (Reeves & Jonassen, 1996), the influence of the internet search engines on supporting how academics come up with journals articles, conference proceedings and text books will continue to increase. Internet search engines increases the

flexibility of delivery of education so that learners can access knowledge anytime and from anywhere. This in turn would better prepare the academics for lifelong research as well as to improve the quality of teaching. One of the most vital contributions of Internet search engines in the field of education is Easy Access to Learning. With the help of search engines, academics can now browse through e-books, e-journals etc. and can also have an easy access to research resources all over the world.

ICT Infrastructures to Support the Use of Search Engines in Institutions of Higher Learning

According to Vanderlinde and Van Braak (2010), ICT infrastructure measures the perceived availability and suitability of the ICT tools such as hardware, software and peripheral equipment provided in the universities. In Pelgrum's (2001) study, ICT infrastructure refers to the availability of equipment, software, Internet access and other similar resources in the institution of higher learning. Additionally, resources and facilities in universities are designed and enabled in the direction of supporting continuous transformation and use of various search engines to retrieve vast information that will assist lecturer in effective delivery of learning and research (Anderson & Van Weert, 2002). In the year 1998, Krysa conducted a research to determine and examine regularly occurring factors that affect the implementation of the technology among the university lecturers. A qualitative study among four university lecturers was carried out to identify the factors. Based on the findings, it was reported by one of the lecturers that the outmoded hardware limits the use of search engines in the institution of higher learning (Krysa, 1998). The lecturer was not able to effectively use search engines to retrieve information due to the old and outdated hardware. Conversely, one of the informants stated that limited software act as one of the antecedents that prevents the use of search engines as a means of accessing information (Krysa, 1998).

Impact of Google Search Engine on Students Learning Abilities

Ngoumandjoka (2012) categorized internet users into heavy and light users. In his view, academic work is the main reason students use the internet on campus. Students who were classified as heavy users were found to use the internet more for recreational purpose than the light internet users. His study further argued that the more the internet is used for academic work the more it is perceived to exert a positive influence on academic grades. A number of authors (Torres, 2016) equally agreed that internet use has a positive impact on academic performance. They opined that students who tend to use the internet more on educational materials are less likely to fail their examinations. Therefore, the disadvantages of lack of access to internet surpass the advantages.

Internet has become a daily commodity in most people's lives. However, the addictive-like features of the internet make any individual who excessively use it a potential victim of its negative effects. Some of its negative effects include impaired sleeping patterns, social relationships break-ups, job losses, mental and physical health as well as poor academic performance.

Psychological issues ranging from mood swings to altered behavior, withdrawn attitude and loneliness have been reported by (Torres, 2016) to be the main effect of using the internet mainly for social networking and mailing. This is because they remain in some sort of virtual world of the net. (Torres, 2016) found in their study that as academic performance of students deemed successfully increases, their internet addiction average decrease. This implies that, internet addiction has an effect on the academic performance of students.

Similarly results have been obtained by Austin mentioned by Torres (2016) in their study that categorized internet users into light, moderate and intense users respectively. They discovered that students that use the internet at school and at home (moderate use) produce higher grades than those that do not use the internet. The influence of Google search engine on students' learning abilities can be both positive and negative.

1. Google search engine provides students with easy access to a vast amount of information and resources. It enables them to quickly find answers to their questions, explore different perspectives, and expand their knowledge on various subjects. This can greatly enhance their learning experience and improve their ability to gather information efficiently.
2. Google search engine allows students to explore different formats of information such as text, images, videos, and more. This can cater to different learning styles and preferences, making it easier for students to grasp concepts and understand complex ideas.
3. Google search engine can have some negative effects on students' learning abilities. It may lead to a lack of critical thinking and independent research skills. Students may become reliant on the first few search results presented to them, without critically evaluating the credibility and accuracy of the information they find.
4. The vast amount of information available through Google search engine can be overwhelming for students. They may struggle to filter through the results and identify the most relevant and reliable sources. This can result in students wasting time on irrelevant or inaccurate information.
5. Additionally, the ease of access to information may discourage deep learning and thorough understanding of concepts. Students might be tempted to settle for superficial knowledge instead of delving deeper into a subject. This surface-level understanding can hinder the development of critical thinking and analytical skills.

Challenges Facing in Accessing the Google Search Engine

Manning (2012) and Nnamdi, (2008) outlined the following challenges in assessing Google search engine.

1. **Technical Issues and poor internet connection:** Many students are not provided with the high bandwidth or the strong internet connection that online courses require, and thus fail to catch up with their virtual course mates: Their weak monitors make it hard to follow the Course Management System and their learning experience becomes a problem. Adaptability Struggle Switching from traditional classroom and face to face lecturing online makes the learning experience entirely different for students. While passive listening and notes taking are expected in a traditional classroom, online discussions or creating a web page demand springing into action. Students with a "traditional" mindset find it difficult to adapt Computer Literacy.
2. **Lack of computer literacy is a major issue among students today:** Many of them cannot operate basic programs such as Microsoft Word and PowerPoint and therefore are not able to handle their files. Furthermore, many students find fixing basic computer problems troublesome, as they have no information in this area.
3. **Time Management:** Time management is a difficult task for students, as online research requires a lot of time and intensive work. Students turn out to be addicted to the internet as they do their regular research on it and also the news on social media can keep students on the internet the whole day thereby causing them to decline in their learning outcomes.
4. **High cost of subscription and Self-Motivation:** The cost involved in subscribing internet packages is quiet expensive, leading to frustration in accessing the internet for learning. Though the internet allows students to learn or access education irrespective of their location however some students lack self-motivation in eLearning essential requirement. After enrolling in distance learning courses, many learners fall behind and nurture the idea of giving up, as difficulties in handling a technological medium.

Methodology

Expo-facto approach was employed and the targeted population for this study is 692 comprising the NCE students (411) and the B.Ed. students (281) of Business Education Department, Federal College of Education, Zaria. The sample size of the study was 70 this comprises of NCE (42) and B.Ed (28) students serving as the respondents. The sampling techniques used for the study was purposive sampling techniques, taking 10%. This is because the student are available or willing or easy to asses on a practical level and its require less resources and time then most traditional method. The sampling size of each student (NCE and B.Ed) as respondents, the instrument used to collect data for this study is structured questionnaire in gathering information from the students of Business Education Department, Federal College of Education, Zaria. The study makes used of SPSS as a statistical tool and to analyze data generated from the respondents mean and standard deviation was used.

Result and Discussion

Table 1: Opinion of respondent on impact of Google Search Engine Usage on Information Retrieval and Knowledge Acquisition, critical thinking and research for Academic Purpose

S/N	Items	\bar{x}	Std. Dev.	Remark
1.	How frequently do you use the Google search engine for academic purpose?	3.06	1.75	Frequently
2.	Using the Google search engine help find relevant information for my academic assignment.	3.08	1.77	Agreed
3.	The Google search engine has improved my ability to acquire knowledge in my study field.	2.23	1.31	Disagreed
4.	Using the Google search engine encourages me to think critically when evaluating information.	2.86	1.69	Agreed
5.	I have developed better research skills due to my use of the Google search engine.	2.19	1.27	Disagreed

Table 1: shows on the Impact of Google Search Engine Usage on Information Retrieval and Knowledge Acquisition, critical thinking and research for Academic Purpose. The table shows that majority of the respondents were of the opinion on how often do you use the Google search engine for academic purpose, this has the highest mean response of 3.06 and standard deviation of 1.75. This implies that the number of respondent do use the Google search engine for academic purpose. The table also shows that majority of the respondents were of the opinion that they use Google search engine help find relevant information for my academic assignment, as this statement attracted the highest mean response of 3.08 with 1.77 as its standard deveiation. This means that use Google search engine help find relevant information for my academic assignment. From the table also, the least number of respondents were of the opinion that Google search engine has improved my ability to acquire knowledge in my study field, the statement attracted the lowest mean response of 2.23 with 1.31 standard deviation. This implies that they use Google search engine has improved my ability to acquire knowledge in my study field. The table shows that majority of the respondents were of the opinion that they use the Google search engine encourages us to think critically when evaluating

information, as this statement attracted the highest mean response of 2.86 with 1.69 as its standard deviation. From the table also, the least number of respondents were of the opinion on the developed better research skills due to my use of the Google search engine as this statement attracted the lowest mean response of 2.19 with 1.27 as its standard deviation. The result implies that despite that they developed better research skills due to the use of the Google search engine has improved students ability to acquire knowledge in various fields of study.

Discussion of findings

Research question shows the Impact of Google Search Engine Usage on Information Retrieval and Knowledge Acquisition, critical thinking and research for Academic Purpose, it was revealed that majority of respondents do use the Google search engine for academic purpose. This is in line with the study of Okiki (2012) stated that the search engines obtainable are very many but due to lack of awareness, researchers do not exploit them. Internet and the various search engines have brought information explosion, which means that there is large scale, rapid and spectacular expansion of information. It has however recently enjoyed increased significance because of the information explosion caused by the internet and its related technologies. Not only the absolute amount of information, but also new types of information formats have drawn attention to this field (Nnamdi, 2008). Conveniently this shows negative impact of Google search engine, making student to be lazy in the class room as most of them even miss lectures.

It was revealed that majority of respondents disagreed that use of Google search engine has improved my ability to acquire knowledge in my study field. This is according to the study of Reeves & Jonassen, (1996), the influence of the internet search engines on supporting how academics come up with journals articles, conference proceedings and text books will continue to increase. Internet search engines increases the flexibility of delivery of education so that learners can access knowledge anytime and from anywhere. This in turn would better prepare the academics for lifelong research as well as to improve the quality of teaching. One of the most vital contributions of Internet search engines in the field of education is - Easy Access to Learning. It was revealed that majority of respondents agreed that they developed better research skills due to my use of the Google search engine. This also goes in line with the review on the study of Ngoumandjoka (2012) categorized internet users into heavy and light users. In his view, academic work is the main reason students use the internet on campus. Students who were classified as heavy users were found to use the internet more for recreational purpose than the light internet users. His study further argued that the more the internet is used for academic work the more it is perceived to exert a positive influence on academic grades. A number of authors (Torres, 2016) equally agreed that internet use has a positive impact on academic performance. It was observed that majority of respondents encountered many challenges and drawback when relying heavily on the Google search engine for academic research and learning processes. It was also noted that these challenges and drawbacks affect their academic performance and overall learning experience. This is in accordance with the study of Krysa (1998), the lecturer was not able to effectively use search engines to retrieve information due to the old and outdated hardware. Conversely, one of the informants stated that limited software act as one of the antecedents that prevents the use of search engines as a means of accessing information. It is however easy to understand that in this study some of the respondents agree to the items in the table as they were taught with ICT in the lecture room while other disagreed as they understand nothing in terms of ICT due to over crowdedness in the lecture room.

Conclusion

The study concludes that Business Education students at FCE Zaria needed to use the Google search engine for academic purpose frequently as this will help majority of them to know to use the Google search engine for academic purpose. Google search engine be provided by the college to improve students ability to acquire knowledge, Google search engine needs to be one of the ICT programme that will make students developed better research skills. So also learning through Google search needed to be a mandatory course so as for students not to encountered challenges and drawback in learning processes.

Recommendations

The study recommends that:

- Educational technologists and College management needed to encourage each and every department not only Business Education students at FCE Zaria on the use the Google search engine for academic purpose.
- Google search engine should be provided by the college management so as to improve student's ability to acquire more knowledge for academic pursuit.
- Department and schools should in one way or the other encourage the use of Google search engine and inclusion of ICT programme in their course outline as this will make students developed better research skills.
- Students should be encourage researching through Google search engine and it should be a mandatory course for students so as to know their way out on challenges and drawback in learning processes.

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