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SEARCH ENGINE AND SOCIAL NETWORKING UTILIZATION AS CORRELATES OF KNOWLEDGE SHARING PRACTICES AMONG UNDERGRADUATES IN FEDERAL UNIVERSITY OYE-EKITI, EKITI STATE, NIGERIA

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ABSTRACT

Search engine is a software system designed to retrieve information from the Internet or other digital sources, returning relevant results based on user queries. The use of search engine and social networking by students in the tertiary institutions has been generously attracting scholastic approaches from researchers of diverse areas of study vis-à-vis, sciences, technology, language, arts, social sciences, humanities, commerce and among others. It is against this background that this study investigated search engine and social networking utilization as correlates of knowledge sharing practices among undergraduates in Federal University Oye-Ekiti, Nigeria. Questionnaire formed the basic instrument adopted for this research work. The questionnaire was administered to 359 undergraduate students in Federal University Oye-Ekiti. The questionnaire was divided into four sections. The data collected for this study was analyzed and interpreted using simple percentages. The findings revealed the search engines used by the undergraduates are Google, Yahoo, Research Gate, Bing and Academia.edu. Facebook, Instagram, WhatsApp, YouTube, Twitter and Snapchat were the social networking tools used. The study also found that the use of search engines and social networking platforms facilitates students' knowledge sharing among the undergraduates. The study recommended that lecturers should conduct online tutorials on search engine optimization and social media marketing among students.

Keywords: Search Engine, Social Networking, Knowledge Sharing Practices, Undergraduates

Introduction

A search engine constitutes a software-based information retrieval system, facilitating the retrieval and presentation of pertinent information from digital repositories in response to user-initiated search queries. Search engine companies always make significant attempts to improve their search results because of their enormous economic worth. Only the user's daily information

demands may be used to gauge how satisfied they are with a particular search engine, as can their subjective evaluation of the usefulness of the results they receive. Currently, social networking has emerged as one of the most significant means of communication. Conversely, social networks are accessible through websites that house millions of individuals with diverse interests. Social networks enable individuals to post blogs, exchange messages, and have real-time chats, in addition, to allowing them access shared data, images, and videos. These networks are referred to as social networks because they enable users to connect with friends, coworkers, and other internet users and strengthen their relationships. The most well-known social networking sites are Facebook (facebook.com), Twitter (twitter.com), My Space (myspace.com), and others.

Statement of the Problem

The widespread adoption of search engines and social networking platforms among undergraduates has transformed the way they access, share, and utilize knowledge. However, despite their potential to facilitate knowledge sharing, there is a lack of understanding about how these tools influence knowledge sharing practices among undergraduates. Specifically, the relationship between search engine and social networking utilization and knowledge sharing practices among undergraduates seemingly remains unclear. This knowledge gap raises important questions about how undergraduates use these tools to share knowledge, and how these tools impact their knowledge sharing practices. Against this background, this study aims to investigate the correlation between search engine and social networking utilization and knowledge sharing practices among undergraduates.

Objective of the Study

The main objective of the study is to investigate search engine and social networking utilization as correlates of knowledge sharing practices among undergraduates in Federal University Oye-Ekiti, Nigeria.

Research Questions

The study aims to provide answers to the following research questions:

1. What are the types of search engines used by the undergraduates in Federal University Oye-Ekiti?
2. What are the social networking tools used by the undergraduates in Federal University Oye-Ekiti?
3. What are the effects of search engines and social networking utilization on the knowledge sharing practices among undergraduate in Federal University Oye-Ekiti?
4. What are the challenges encounter in using search engine and social networking for knowledge sharing practices among undergraduates in Federal University Oye-Ekiti?

Review of Literature

In today's digital era, search engines and social networking platforms have become indispensable tools for undergraduates, influencing how they seek, process, and disseminate information. A comprehensive

understanding of the relationship between these technologies and knowledge sharing practices is crucial for optimizing academic outcomes. This literature review provides an overview of the current state of knowledge on search engine and social networking utilization as correlates of knowledge sharing practices among undergraduates, examining the empirical evidence, conceptual frameworks, and emerging trends.

Conceptual Review

According to Salako and Tiamiyu (2017), search engines and metasearch engines (Metacrawler, Dogpile, StartPage, etc) are online tools that assist users in finding information on the ever-expanding Internet. They went on to say that a search engine is a collection of computer programs that search the Internet for web pages, index those pages in a database, and then make the database searchable by information seekers using an appropriate user interface on its website. Sunitha and Narayan (2020) stated that social networking sites, also known as blogs, podcasts, Facebook, and Twitter, are becoming more and more commonplace on the internet as tools and technologies. In addition, Web-based services known as social network sites enable individuals to create a public or semi-public profile in a confined system, identify other users they are connected to, and browse and examine both their list of connections and those made by other users (Boyd & Ellison, 2021). The use of search engines among students in institutions of higher learning globally has as well grown by leaps and bounds and it is still on the increase. More importantly, Nigerian undergraduate students are strategically positioned in the higher institution of learning because, at that level they are expected to carry out some course works that will require presentations, assignment as well as project works which will inadvertently need the use of search engines. Although, there are numerous search engines and online directories, becoming familiar with a few of the more well-known ones will be sufficient to get one's online research presence. This study uses Google, Altavista, Lycos, Ask Jeeves, MSN, Netscape, Dogpile, Yahoo, and Excite as its primary search engines.

Empirical Review

A growing body of empirical research has investigated the relationship between search engine and social networking utilization and knowledge sharing practices among undergraduates. This empirical review synthesizes the findings of existing studies, examining the correlations, trends, and patterns that have emerged in the literature to date.

Social Networking and Education

Mazman and Usluel (2020) as well as Cortijo, Arteage and Javed (2021) identified major ways social networking contributes to student learning experience, such as; interaction, collaboration, active participation, information sharing, critical thinking and social benefits. Social media sites such as blogs (Huffington Post), networks (such as Facebook, Twitter, LinkedIn, ResearchGate etc.), video sharing (e.g., YouTube) audio sharing (Podcast), mobile sites (2go etc.), image or picture sharing (such as Instagram, Flicker), are

generally identified as having the capacity to ignite these traits because of their open, conversational nature, connectedness (interconnected) textual and audio-visual characteristic appeals. For instance, YouTube, Facebook, wikis, and blogs provide a huge amount of material on a wide range of subjects. Thus, students can turn to any of these tools for further explanations or clarifications.

Challenges to Use of Social Networking in Education

According to Ajayi, Adebiyi and Ogunyomi (2018), Nigerian students face several challenges when using social networking in education. They include lack of access to the internet and computers, lack of knowledge on how to use social networking platforms, and fear of cyberbully and online harassment. These challenges were identified as major barriers to the effective use of social networking in education, particularly in promoting student's engagement, motivation, and learning outcomes. Okeke, Okorie and Nwosu (2019) reported that lack of infrastructure, including poor internet connectivity and inadequate computer facilities was a significant challenge to the use of social networking in education.

Types of Search Engines used by the Undergraduates

Cheong (2019) found that majority of undergraduates used Google, Bing and Yahoo and that undergraduate rely on general-purpose search engines, which are designed to provide a broad range of information and results. Mills (2021) discovered that majority of undergraduates used academic search engines, such as Google Scholar, Microsoft Academic, and Semantic Scholar, to search for academic articles and research papers. To the undergraduates, search engines serve as an indispensable resource for academic research, assignments, and general knowledge acquisition. Search engines are the most commonly used by undergraduates due to their broad scope and ease of use. These search engines are designed to index a vast array of web pages and provide results based on keyword queries. The most popular general-purpose search engines include Google, Bing, and Yahoo.

Social Networking Tools used by the Undergraduates

Chen (2018) submitted that majority of undergraduate students use social networking sites, with Facebook being the most popular platform. Similarly, Dhir and Mishra (2016) revealed that undergraduate students use social networking sites to connect with friends, share information, and access educational resources. The authors further disclosed that the widespread use of social networking tools among undergraduate students is likely due to their ease of use, accessibility, and ability to facilitate communication and collaboration. Dziuban, Moskal and Williams (2018) found that social networking tools can enhance student engagement and participation in online courses and noted that it improves student motivation and self-efficacy in online learning environments.

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The Effects of Search Engines and Social Networking Utilization on the Knowledge Sharing Practices among Undergraduates

In the 21st century, the advent of the internet has revolutionized many aspects of human life, including education. Among the most significant changes are the utilization of search engines and social networking platforms. Idakwo (2017) found that students who used social networking platforms such as Facebook and Twitter share knowledge and collaborate with their peers. Natarajan and Bezawit (2022) revealed that students who used search engines and social networking platforms frequently and for longer periods engage in knowledge sharing practices. The effective utilization of search engines and social networking platforms play a crucial role in promoting knowledge sharing practices among undergraduates (Natarajan and Bezawit, 2022)

These tools have fundamentally transformed how students access information, collaborate with peers, and engage with educational content. This essay explores the profound effects of search engines and social networking on education, discussing both the positive impacts and potential challenges associated with their use.

Challenges Encountered in Using Search Engine and Social Networking on the Knowledge Sharing Practices among undergraduate

Vannucci, Flannery and Ohannessian (2017) found that students often encounter difficulties in finding reliable and relevant information on the internet, which can lead to the dissemination of misinformation and the wasting of time. Also, students often struggle to evaluate the credibility of online sources, which result in the use of untrustworthy sources for research purposes. Baruh and Popescu (2017) discovered that students often faced challenges in navigating social networking platforms to find relevant and accurate information, which can hinder their ability to share knowledge effectively. The use of search engines and social networking has become integral to education in the 21st century. While these tools offer substantial benefits, they also present various challenges that impact on students' learning experiences.

Methodology

A survey method of descriptive research design was adopted in this study. The population of the study comprised of forty five thousand (45,000) undergraduates in Federal University Oye-Ekiti as at the beginning of 2023/2024 academic session. Undergraduates in Federal University Oye-Ekiti are classified into nine (9) faculties; Agriculture, Engineering, Social Sciences, Sciences, Arts, Law, Management Sciences, Pharmacy and Education. Proportionate stratified sampling technique was used to select 359 undergraduate students from the 9 faculties which represent 4% of the population. A structured questionnaire was used for data collection. A total of 322 copies were retrieved and valid for analysis which gave a response rate of 89.7%. The data collected was analyzed using descriptive statistical method and simple percentage frequency. The study adhered to ethical

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research practices. Participation in the study was voluntary, and informed consent was obtained from all respondents.

Table 1: Sample size

S/N	FACULTIES	POPULATION OF STUDENTS	SAMPLE SIZE
1	Faculty of Agriculture	4,678	37
2	Faculty of Arts	4,230	33
3	Faculty of Education	6,834	55
4	Faculty of Engineering	5,959	48
5	Faculty of Law	1,462	12
6	Faculty of Management Sciences	5,950	47
7	Faculty of Pharmacy	3,489	28
8	Faculty of Sciences	6,678	53
9	Faculty of Social Sciences	5,720	46
TOTAL		**45,000**	**359**

Source: Registrar's Office, Federal University Oye-Ekiti, 2024

Results

Demographic Variables of the Respondents

Table 2: Distribution of the Respondents by Demographic Variables

Gender	**Frequency**	**Percent**
Male	176	54.7
Female	146	45.3
Total	**322**	**100.0**
Age	**Frequency**	**Percent**
18 – 25	230	71.4
26 – 30	88	27.3
31 and above	4	1.2
Total	**322**	**100.0**
Level of Study	**Frequency**	**Percent**
100	20	6.2
200	68	21.1
300	102	31.7
400	108	33.5
500	24	7.5
Total	**322**	**100.0**
Faculty	**Frequency**	**Percent**
Agricultural Sciences	28	8.7
Engineering	30	9.3
Social Sciences	54	16.8
Sciences	48	14.9
Arts	24	7.5
Law	8	2.5
Management Sciences	30	9.3
Pharmacy	22	6.8
Education	78	24.2
Total	**322**	**100.0**

Source: Researcher's Field Work, 2024

Table 2 shows the distribution of the respondents by demographic variables. The findings revealed that majority of the respondents were male, 176 (54.7%), 230 (71.4%) of the respondents were between the ages of 18 and 25 years, majority of the respondents 108 (33.5%) were in 400 level and majority of the respondents 54 (16.8%) respondents were in Faculty of Social Sciences.

Research Question One: What are the types of search engines used by the undergraduates in Federal University Oye-Ekiti?

Table 3: Types of Search Engines Used by the Undergraduates

S/N	STATEMENT	Mean	SD
1	Google	4.84	0.687
3	Yahoo	3.96	1.084
7	ResearchGate	3.45	1.132
2	Bing	3.42	1.091
8	Academia.edu	3.16	1.483
4	DuckDuckGo	2.85	1.145
9	JSTOR	2.77	1.289
10	arXiv	2.73	1.282
5	StartPage	2.69	1.293
6	Qwant	2.67	1.227
	Criterion Mean	**3.00**	

Source: Researcher's Field Work, 2024

Table 3 shows the type of search engines used by the undergraduates in Federal University Oye-Ekiti. The criterion mean is 3.00. Any individual mean greater or equal to criterion mean shows the agreement of the respondents with the type of search engines used by the undergraduates in Federal University Oye-Ekiti. The result revealed that Google (Mean = 4.84), Yahoo (Mean = 3.96), Research Gate (Mean = 3.45), Bing (Mean = 3.42) and Academia.edu (Mean = 3.16) were the search engines used by the undergraduates in Federal University Oye-Ekiti. This implies that Google followed closely by Yahoo were the major search engines used by the undergraduates students in Federal University Oye-Ekiti.

Research Question Two: What are the social networking tools used by the undergraduates in Federal University Oye-Ekiti?

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Table 4: Social Networking Tools Used by the Undergraduates

S/N	STATEMENT	Mean	SD
1	Facebook	4.88	0.504
2	Instagram	4.76	0.637
3	WhatsApp	4.75	0.670
6	YouTube	4.45	0.886
4	Twitter	4.26	0.970
9	Snapchat	4.16	1.248
5	LinkedIn	4.02	1.200
7	TikTok	3.84	1.105
8	Discord	3.77	1.386
10	Reddit	3.11	1.529
	Criterion Mean	**3.00**	

Source: Researcher's Field Work, 2024

Table 4 shows the social networking tools used by the undergraduates in Federal University Oye-Ekiti. The criterion mean is 3.00. Any individual mean greater or equal to criterion mean shows the agreement of the respondents with the social networking tools used by the undergraduates in Federal University Oye-Ekiti. Majority of the respondents agreed that the social networking tools used by the undergraduates in Federal University Oye-Ekiti were Facebook (Mean = 4.88), Instagram (Mean = 4.76), WhatsApp (Mean = 4.75), YouTube (Mean = 4.45), Twitter (Mean = 4.26) and Snapchat (Mean = 4.16). In sum, the study indicated that majority of the students use Facebook, followed by Instagram.

Research Question Three: What are the effects of search engines and social networking utilization on the knowledge sharing practices among undergraduate in Federal University Oye-Ekiti?

Table 5: Effect of Search Engines and Social Networking Utilization on the Knowledge Sharing Practices

S/N	STATEMENT	Mean	SD
1	Search engines and social networking platforms facilitates students' knowledge sharing	4.68	0.607
2	It enhances collaboration with peers on assignments, projects, and discussions	4.67	0.588
3	It enhances students' engagement with individuals from diverse backgrounds and perspective	4.63	0.630
10	It helps students connect with professionals, experts, and mentors	4.52	0.865
4	It enables students to quickly communicate and share information with their peers	4.51	0.806
9	It allows students to share their creative works, ideas, and projects	4.46	0.732
5	Students can share articles, research papers, and other educational resources through social networking platforms	4.45	0.820
7	It facilitates student engagement with educational content	4.45	0.812
8	It enhances students understanding of complex concepts and topics.	4.34	1.048
6	Students can seek help, advice, and feedback from their peers and professors through social networking platforms	4.29	0.840
	Criterion Mean	**3.00**	

Source: Researcher's Field Work, 2024

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Table 5 shows the effects of search engines and social networking utilization on the knowledge sharing practices among undergraduate in Federal University Oye-Ekiti. The criterion mean is 3.00. Any individual mean greater or equal to criterion mean shows the agreement of the respondents with the effects of search engines and social networking utilization on the knowledge sharing practices among undergraduate in Federal University Oye-Ekiti. The result revealed that majority of the respondents agreed that search engines and social networking platforms facilitates students' knowledge sharing (Mean = 4.68); it enhances collaboration with peers on assignments, projects, and discussions (Mean = 4.67); it engenders students' engagement with individuals from diverse backgrounds and perspective (Mean = 4.63); it helps students connect with professionals, experts, and mentors (Mean = 4.52); and it enables students to quickly communicate and share information with their peers (Mean = 4.51). The findings implied that majority of the students' use of search engines and social networking platforms facilitates students' knowledge sharings

Research Question Four: What are the challenges encounter when using search engine and social networking among students on the knowledge sharing practices among undergraduates in Federal University Oye-Ekiti?

Table 6: Challenges in Using Search Engine and Social Networking

S/N	STATEMENT	Mean	SD
4	Privacy concerns	4.04	0.943
5	Lack of digital literacy skills	4.04	0.963
6	Limited access to reliable internet connection or devices	3.97	0.896
2	Inaccurate or Unreliable of information	3.94	1.142
10	Cyberbully or online harassment	3.94	1.174
8	Filter bubbles	3.93	0.974
7	Poor time management skills among students	3.90	1.239
1	Information overload	3.78	1.361
9	Lack of Intellectual property rights	3.69	1.156
3	Distractions	3.66	1.182
	Criterion Mean	**3.00**	

Source: Researcher's Field Work, 2024

Table 6 shows the challenges encountered when using search engine and social networking on knowledge sharing practices among undergraduates in Federal University Oye-Ekiti. The criterion mean is 3.00. An individual mean greater or equal to criterion mean indicates the agreement of the respondents with the challenges stated on the scale. Majority of the respondents agreed that the challenges encounter in using search engine and social networking among the respondents were privacy concerns (Mean = 4.04), lack of digital literacy skills (Mean = 4.04), limited access to reliable internet

connection or devices (Mean = 3.97), inaccurate or Unreliable of information (Mean = 3.94) and cyberbully or online harassment (Mean = 3.94). The finding implies that privacy concern was the greatest challenge faced by the students due to its highest mean score followed by lack of digital literacy.

Discussion of Findings

The findings revealed that the type of search engines mostly used by the undergraduates were Google, Yahoo, Research Gate, Bing and Academia.edu. This study is in line with Cheong (2019) who found that majority of undergraduates used Google, Bing and Yahoo. This finding is also in tandem with Mills (2021) who submitted that majority of the undergraduates used academic search engines, such as Google Scholar, Microsoft Academic, and Semantic Scholar, to search for academic articles and research papers.

The findings revealed that social networking tools mostly used by the undergraduates were Facebook, Instagram, WhatsApp, YouTube, Twitter and Snapchat. This study is in line with Chen (2018) who found that majority of the undergraduate use social networking sites, with Facebook being the most popular platform. Similarly, Dhir and Mishra (2016) revealed that undergraduate use social networking sites to connect with friends, share information, and access educational resources and observed that the widespread use of social networking tools among undergraduate students is likely due to their ease of use, accessibility, and ability to facilitate communication and collaboration.

The findings revealed that use of search engines and social networking platforms facilitates students' knowledge sharing, enhances collaboration with peers on assignments, projects, and discussions, enhances students' engagement with individuals from diverse backgrounds and perspective, help students connect with professionals, experts, and mentors, and it enables students to quickly communicate and share information with their peers. This finding is in tandem Idakwo (2017) who reported that students who used social networking platforms such as Facebook and Twitter share knowledge and collaborate with their peers. Similarly, Natarajan and Bezawit (2022) revealed that students who used search engines and social networking platforms frequently and for longer periods engage in knowledge sharing practices. The authors added that the effective utilization of search engines and social networking platforms play a crucial role in promoting knowledge sharing practices among undergraduates.

The findings revealed that challenges encounter when using search engine and social networking among the students on the knowledge sharing practices were privacy concerns, lack of digital literacy skills, limited access to reliable internet connection or devices, inaccurate or Unreliable of information and cyberbully or online harassment. This finding is in line with Vannucci, Flannery and Ohannessian (2017) who found that students often encounter difficulties in finding reliable and relevant information on the internet, which can lead to

the dissemination of misinformation and the wasting of time. The authors further observed that students often struggle to evaluate the credibility of online sources, which can result in the use of untrustworthy sources for research purposes. This finding also corroborates a study by Baruh and Popescu (2017) who noted that students often face challenges when ~~in~~ navigating social networking platforms to find relevant and accurate information, which can hinder their ability to share knowledge effectively.

Conclusion and Recommendations

The study confirmed the types of search engines used by the undergraduates as Google, Yahoo, Research Gate, Bing and Academia.edu. It was revealed that the social networking tools used by the undergraduates were Facebook, Instagram, WhatsApp, YouTube, Twitter and Snapchat.

The study confirmed that search engines and social networking platforms facilitates students' knowledge sharing, enhances collaboration with peers on assignments, projects, and discussions, enhances students' engagement with individuals from diverse backgrounds and perspective, help students connect with professionals, experts, and mentors, and it enables students to quickly communicate and share information with their peers. Finally, the study revealed the challenges the undergraduates faced when using search engine and social networking such as, privacy concerns, lack of digital literacy skills, limited access to reliable internet connection or devices, inaccurate or unreliable of information and cyberbully or online harassment.

Based on the findings the following recommendations were suggested;

i. Lecturers should conduct online tutorials on search engine optimization and social media marketing among students, university management in conjunction with lecturers should encourage students to use academic search engines like Google Scholar and JSTOR.

ii. Lecturers in conjunction with library management should organize workshops on effective online research and retrieval skills, and information literacy for the undergraduates

iii. The undergraduates should be encouraged to utilize social media platforms like Facebook, Twitter, and LinkedIn for disseminating knowledge sharing resources.

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