

ASSESSING THE ADOPTION AND UTILIZATION OF ONLINE MEDIA TECHNOLOGIES IN ACADEMIC RESEARCH AMONG THE STUDENTS OF KADUNA STATE TERTIARY INSTITUTIONS

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Abstract

The online media technologies have become part and parcel of students' life and it has been contributing tremendously towards students' academic life particularly the aspect of academic research. Therefore, this study assessed the adoption and utilization of online media technologies in conducting academic research by the students of Kaduna State owned tertiary institutions, viz: Kaduna State University, Kaduna, Nuhu Bamalli Polytechnic, Zaria, College of Health Sciences and Technology, Makarfi, College of Education, Kafancan. Academic research refers to researches conducted by scholars and students in higher institutions of learning like universities, polytechnics and colleges of education etc. The objectives of the study are: To determine the level of awareness of the online media technologies among the students of Kaduna State owned Tertiary Institutions in conducting academic research. To find-out if the students of Kaduna State owned Tertiary Institutions use online media technologies in conducting academic research. This study adopted Uses and Gratification and Diffusion of Innovation Theories as theoretical framework. The total population of this study was 5,134 and the sample size was approximated at 514 using 10% from the population as supported by Gay (1987) and Maikaba (2015). This study adopted Survey Method and Simple Random Sampling Technique was used to select the sample. Questionnaire was used as instrument for data collection and therefore 514 questionnaires were distributed, but only 470 were

retrieved. The major findings of this study revealed that majority of the students of Kaduna State owned tertiary institutions were aware of online media technologies that can aid academic research like Google Scholar, Research Gate, Digital Libraries etc, and the level of awareness was very high.

Keywords: Assessment, Adoption, Online Media Technologies, Academic Research, Students.

Introduction

Online media technologies have become an integral part of people's lives, especially for students. They use online media technologies for various purposes, including information, entertainment, socializing, education, and research (Buhari, 2023). The author further stressed that research is one of the most important requirements for students to graduate. Online media technologies, as a recent development in the world today, can greatly assist students in conducting their final year projects if used properly. He also added that it can save them time and money, while also providing access to rich and up-to-date data and literature.

Asemah and Edegoh (2013) note that students can access online media technologies through various devices, such as computers, laptops, smartphones, CDs, and flash drives. Alhassan (2020) also noted that the internet is a digital platform accessible from many devices, including desktop computers, wireless laptops, and smartphones. According to Asemah and Edegoh (2013) today, we celebrate advancements in communication technology, which have expanded the way we communicate through Information and Communication Technologies (ICTs). Modern communication technology has turned the world into a “Global Village.” However, technology has two sides. It brings both positive and negative effects. It helps people stay informed, enlightened, and aware of global developments. Technology also offers better methods for accomplishing tasks. The rapid evolution of new technology has shifted our reliance toward it as the primary means of exploring a vast area of knowledge (Asemah &

Edegoh, 2013).

Similarly, Wells in Alhassan (2020) points out that the internet serves as a communication tool that allows individuals to access a wide range of information and unique technologies. It offers a variety of international resources that are often well organized, making information easy to access and share. The internet can be a double-edged sword. Students can find any educational database and learn about different countries. However, they can also encounter inappropriate and troubling topics. It's important to note that today, devices connected to the internet play significant roles in education (Nentwich, 2017). The awareness of these internet-enabled devices among Nigerian students has drawn research interest (Pew Research Centre in Shuaibu, 2021).

The growth of internet technology has made it the preferred medium for communication. Two-thirds of the world's internet users visit new media or blogging sites, which act as tools for connection. New media sites (SNSs) are online communities where users interact about shared interests, whether personal, business, or academic (Williams cited in Buhari & Yahaya, 2020). The millions of new media platforms have turned the idea of a global village into a reality, allowing billions of people to communicate through these channels. Many benefits come from distant communication using new media platforms (Peace et al, 2021).

Kyoshaba in Susanna, et al, (2022) highlighted that academic achievement plays a significant role in a person's placement, whether in schools or in jobs. Because of this, many people are interested in finding ways to improve their academic performance. The focus on academic excellence, which is common worldwide, has led to many studies about the conditions that support it. Academic achievement is a key predictor of life success, influencing placement in schools and higher education as well as employability in careers (Kyoshaba cited in Susanna, et al, 2022).

Academic performance, measured by exam results, is a major goal of schools. Hoyle, in Susanna (2022), stated that schools exist to provide knowledge and skills to students, with the underlying goal of fostering good academic performance. Annie, Howard, and Mildred in Peace (2021) pointed out that academic performance is the result of education, reflecting how well a student, teacher, or institution has met its educational goals. We usually measure academic performance through exams or continuous assessment, but there is no consensus on the best way to test it or which aspects, like skills or facts, are most important. Therefore, this study assesses how students of Kaduna State-owned tertiary institutions use online media technologies for academic research.

Statement of the Problem

The advent of online media technologies has greatly influenced teaching and learning as well as research. It therefore simplified the conduct of academic research particularly among the students of higher institutions of learning. The internet according to Baker in Alhassan (2020) allows students and teachers to exchange greetings, engage in intellectual discourse, conduct meetings, share knowledge, offer emotional support, make plans, brainstorm ideas, learn about other cultures and otherwise broaden their mental horizon. It is against this background that this study assesses the adoption and utilization of online media technologies among the students of Kaduna State owned tertiary institutions in conducting academic research.

Objectives of the Study

The general objective of this study is to assess the adoption and utilization of Online Media Technologies in conducting academic research among the students of Kaduna State owned Tertiary Institutions. The study has the following specific objectives:

- 1) To determine the Level of Awareness of the Online Media Technologies among the Students of Kaduna State owned Tertiary Institutions in conducting Academic Research.

- 2) To find-out if the Students of Kaduna State owned Tertiary Institutions use Online Media Technologies in conducting Academic Research.
- 3) To know the Contribution of Online Media Technologies in conducting Academic Research among the Students of Kaduna State owned Tertiary Institutions.
- 4) To examine the Challenges faced by the Students of Kaduna State owned Tertiary Institutions in using Online Media Technologies for conducting Academic Research.

Research Questions

- 1) What is the level of Awareness of the Online Media Technologies among the Students of Kaduna State owned Tertiary Institutions in conducting Academic Research?
- 2) Do the Students of Kaduna State owned Tertiary Institutions use Online Media Technologies in conducting Academic Research?
- 3) What is the Contribution of Online Media Technologies in conducting Academic Research among the Students of Kaduna State owned Tertiary Institutions?
- 4) What are the Challenges faced by the Students of Kaduna State owned Tertiary Institutions in using Online Media Technologies for conducting Academic Research?

Literature Review

Conceptual Review

The digital transformation of higher education according to Al-Rahmi, Othman and Yusuf (2018) has redefined the conduct of academic research, online media technologies have become central to how students seek information, collaborate, and produce scholarly work. Kaplan and Haenlein (2016) noted that these technologies encompass a broad range of internet-based platforms including academic social networks, messaging apps, video platforms, and AI-powered tools that support knowledge creation

and dissemination.

In Nigeria, systematic challenges such as inadequate library funding, high cost of academic materials, and disruptions from COVID-19 have pushed students toward digital alternatives (Oduwale & Akpati, 2021).

Boyd and Ellison (2018) noted that online media technologies are digital platforms that enable interactive communication, user generated content, and network collaboration. They further explain that online media technologies can be classified into four groups:

- 1) **Academic Discovery Networks:** Google Scholar, Research Gate, Academia. edu, Semantic Scholar. These platforms provide access to full-text papers and citation networks, especially important where institutional databases are limited (Nicholas et al., 2017).
- 2) **Collaborative Social and Messaging Platforms:** WhatsApp, Telegram, Twitter/X, LinkedIn. Students use these for peer discussion, sharing of articles, and forming research groups (Manca & Ranieri, 2016). In Nigeria, WhatsApp groups are now the dominant channel for circulating past questions and project topics (Sani & Aliyu, 2021).
- 3) **Instructional and Multimedia Platforms:** YouTube, Podcasts, Blogs, Slide Share. These are used to learn research methods, data analysis and academic writing (Giannakos, 2017). Head and Eisenberg (2018) also explain that 89% of undergraduates globally start research with YouTube tutorials.
- 4) **AI and Research Productivity Tools:** ChatGPT, QuillBot, Grammarly, Zetoro, Mendeley. These tools support literature synthesis, paraphrasing, and reference management (Dwivedi et al., 2023). Rasul et al (2023) in a study found that 68% of students in developing countries use ChatGPT for academic writing.

Rogers (2016) is of the view that adoption has to do with the process of deciding to make use of an innovation. Venkatesh, Thong and Xu (2016) said

adoption in technology research is operationalized as awareness, access, and behavioral intention to use. For the purpose of this study adoption simply refers to the awareness and decision of Kaduna State Students to use online media technologies in academic research.

Burton and Straub (2016) noted that utilization has to do with the extent, frequency, and purpose of actual use. Madhusudan (2018) further explained that high utilization in research means integration across the research cycle: identifying gaps, literature review, instrument design, data analysis, and dissemination. Several studies show that many Nigerian students adopt online media but utilization remains shallow-mainly for downloading rather than critical synthesis (Akanbi & Kolade, 2020). According to Cresswell and Cresswell (2018) academic research is a systematic investigation to establish facts and reach new conclusions. They also noted that academic research at tertiary level includes assignments, SIWES reports, undergraduate projects and post graduate theses. They further explained that the quality of academic research depends on access to current, credible information, which online media technologies increasingly provide.

Empirical Review

Njideka (2015) examined how student-teachers in universities in North Central Nigeria use Information and Communication Technology (ICT). The study also looked at how gender affects the use of ICT among student-teachers and used a descriptive survey method. The findings showed that university student-teachers in North Central Nigeria had an average level of ICT use. It also revealed that there was no significant difference in ICT usage between male and female student-teachers, and that the use of ICT among student-teachers in Arts, Science, and Social Sciences was quite similar. The study suggests that universities should encourage student-teachers to integrate ICT into teaching methods and other educational activities.

Wilson and Lawan (2015) examine Internet Access and Use among female undergraduates at the University of Maiduguri, Nigeria. The findings of the study show that the University Computer Centre (University Cyber Café) is the major Internet access point among the respondents. Research (information searches and learning) ranked first in the uses of the Internet among the respondents. However, financial constraints were the major challenges discovered by the study and most respondents do not post or contribute material or information on the web. Their interaction with the web involves mostly downloading. The study finally concludes that Internet in spite of the issue of finance posing a major challenge to Internet access and use, female undergraduates still spend time using the Internet, mostly for research purposes and they find women related websites useful.

Oberiri, (2016) studies the influence of social media on the academic performance of undergraduate students of Taraba State University, Jalingo, Nigeria. Quantitative Survey was used in the study. The findings of the study show that students of Taraba State University have access to the Internet and they do so through different medium such as smart phones, tablets and computers. The study further reveals that students who spend more time on social media are likely to perform poorly in their academic activities than those who do not. The study finally recommends that students should reduce their usage of social media and give more attention to their studies.

Udoudo and Ojo (2016) appraise the use of the new media by students in Obio/Akpor Local Government Area of Rivers State, Nigeria. The study identifies the extent of use of new media and the challenges experienced while using new media for learning in schools in the Local Government Area. The findings of the study reveal that some of the schools were truly new media based but under-utilized by the students in learning. The challenges experienced by the students differed from one school to another. The study

recommends that teachers should be retrained. Adequate new media facilities should be made available in school curriculum to include new media practice in all subjects.

Oluwaferanmi (2017) argues that today's students are the luckiest because they have easy access to modern technology. In the past, students relied mainly on their books and what they could find in libraries. Scholars believe that the internet can boost students' academic work by improving its quality.

Basri et al. (2018) conducted a quantitative study to investigate how universities adopt ICT and its impact on students' academic success. The study also looks into how factors like gender, GPA, and majors affect the relationship between ICT and academic achievement. The findings show a clear link between adopting ICT and better academic performance in a conservative environment. The research also finds that female students benefit more from ICT adoption than male students. However, majoring in IT does not seem to affect students' academic results.

Rogers (2019) explains that social media is a constant part of everyday life. It offers users an easy way to engage and connect with others without face-to-face meetings. According to Rogers (2019), this form of communication provides many opportunities for companies and individuals to reach large audiences. He poses questions about the purpose of social media and its connection to science. The answers depend on your network and how active your social media presence is. Is there a benefit to sharing research on social media? Rogers notes that the advantages come from active participation and creating new, engaging content. Research is about producing new information, and social media presents unique chances to showcase it. While all social media platforms can reach a wide audience, the key lies in who you connect with. However, the rapid nature of social media can cause cautious researchers not to publish. Nonetheless, positive

interactions and quick responses can enhance a researcher's credibility.

Rogers (2019) also emphasizes that when scientists publish their research, they want to share it with as many colleagues and interested people as possible. Almost all researchers start by emailing their colleagues and others at their institution to promote their work. What if you went a step further and reached out to the scientific community on social media? You likely have some social media accounts, including one related to the scientific field. ResearchGate is a popular academic social media platform. It allows scientists to share and discuss their research and find collaborators. If you post your research on your personal account, only your connections will see it. However, if you engage in various community or special interest pages that relate to your study area and participate in discussions with other researchers, you may achieve a much wider audience. Ultimately, it all comes back to what you want to accomplish with your research.

Abubakar and Muhammad (2020) in Quantitative Survey assessed the influence of social media on the academic performance of students of Nuhu Bamalli Polytechnic, Zaria. The study discovers that majority of the respondents were engaged in the use of social media platforms with Facebook as the predominant social media site used by the respondents. The study also shows that majority of the respondents strongly agreed that social media had influence on their academic performance positively. Additionally, they used the social media for assignment and research to improve their academic activities. The study finally recommended that the use of social media by the students of Nuhu Bamalli Polytechnic, Zaria should be guided and supported in an effort to contribute to task of educating them more and prevent them from accessing negative contents that can jeopardize academic activities.

Buhari and Yahaya (2020) in a study examine the implications of new media on journalism education with a special focus on the staff and students of Mass Communication, Nuhu Bamalli Polytechnic, Zaria. The study adopted Survey Method of research. The study reveals that new media has

contributed positively in improving journalism education and the new media platform patronized most by the respondents was social media. The study also discovers that New media was mostly used for general information, research and assignment. And the most common challenge of using new media discovered by the study were poor network and lack of facilities. The study finally recommends that there is need for the school authority to provide new media facilities and ensure constant training for both staff and students of Mass Communication.

Ezeanyaeji and Mgbeafulike (2020) study the Role of Information and Communication Technology (ICT) in carrying out research work and how it will help in improving an existing system. The study uses Survey Method of research. The also study identifies some problems of research before the invention of ICT, some of which include scarcity of research facilities, scanty information base, illiteracy, lack of good statistical analysis tools, security issues etc. The further reveals that majority of the participants, about 27% placed a high importance on having an Internet to have good access to information. 19% of the rest of the participants attributed high importance to learning to interact with the online learning management system blackboard. The other participants agreed that social media should be more actively utilised for diversified activities for academic research purposes. The study finally recommends that more research is needed in order to effectively integrate the use of ICT in the field of higher education.

Dong and Chan (2020) in a study titled “Social Media and the Modern Scientist: A Research Primer for low and middle-income Countries” noted that social media has changed the way we communicate. Wherever you are in the world, various forms of social media are being used by individuals to share information and connect without borders. Due to its ubiquity, social media holds great promise in linking clinicians, scientists, investigators, and the public to change the way we conduct scientific discourse. They present in their research a step-by-step guide on optimizing your social media strategy

with regards to: research/scholarly practice (discourse, collaboration, recruitment) knowledge translation, dissemination, and education.

Alhassan (2020) investigates how the internet affects the reading culture of students at Government Secondary School, Anguwan Romi. The study uses Uses and Gratification Theory to explain the link between internet usage and the reading habits of secondary school students. It employs a survey method. The findings indicate that students at Government Secondary School Anguwan Romi are familiar with the internet and use it to enhance their reading culture and other academic activities. However, some students misuse the internet due to a lack of guidance on positive usage, which distracts them. The study concludes that the internet has improved students' reading culture and has decreased the practice of going to the library to read. It recommends that the government provide schools with reading resources like e-libraries and teach students how to use the internet to find reading materials and support academic work.

Peace et al. (2021) assess how social media contributes to the academic performance of students. The study finds that most students use WhatsApp and Facebook, spending 3 to 5 hours daily on these platforms. However, 82.2% of them access social media every day, and most do not provide clear reasons for their usage. Surprisingly, they acknowledge that social media has impacted their academic performance positively, rating this influence as average. The main challenge identified is poor network connectivity. The study recommends that KASU management incorporate Facebook, WhatsApp, and Twitter as channels for academic activities.

Spike and Tunca (2022) research the challenges students face regarding internet access for academic research and learning. They also examine how students leverage the internet to aid their studies. The findings show a lack of digital preparedness at their institution, the absence of an electronic library for easy access to scientific journals, insufficient cybercafés, and inadequate internet facilities as major barriers to internet use. Despite these challenges, the study highlights that students still find ways to

utilize the internet with their smartphones. They believe that using the internet allows them to conduct research in advance, manage multiple assignments, expand their reading and learning, promote self-learning, and foster peer learning.

Susanna, Sa'adu, and Rasheedat (2022) explore the impact of new media on students' academic performance. The study finds that most respondents use new media, primarily social media. They have been using new media for over five years, with many spending four or more hours daily on these platforms. The study reveals that most respondents agree that new media significantly contributes to their education, feeling the impact is positive. They believe that new media has improved academic performance, especially in research. The study recommends that higher education institutions establish Information and Communication Technology (ICT) centers with all necessary resources and tools to facilitate research work.

Adeyi, Annie and Tsegba (2024) investigate the utilization of social media platforms for research productivity by postgraduate students in universities in Benue State, Nigeria. The findings of the study show that Facebook, Twitter, Google+, Wikis (Wikipedia, wikia, wikispaces), Blog, Academia, LinkedIn and WhatsApp among others are the social media platforms available to be utilized for research productivity by postgraduate students in universities. The study also reveals that the extent to which postgraduate students utilize social media platforms for research in universities is high. It indicates that undermined privacy of research, security issues, copyright and intellectual property issues and lack of institutional support were the challenges faced by postgraduate students in utilizing social media for research productivity. The study concludes that postgraduate students in universities have access to a range of social media platforms, with Google+ being the most utilized to enhance their research productivity. The study recommends that universities should organise workshops and training sessions for postgraduate students in order to familiarize them with social media platforms features, benefits and best practices for enhancing research

productivity and universities should invest more in upgrading Internet facilities and infrastructures on campus to ensure seamless and affordable access to the Internet for all postgraduate students.

Theoretical Framework

This study was anchored on Diffusion of Innovation and Uses and Gratification Theories.

Diffusion of Innovation Theory

Diffusion of Innovation Theory (DOI) was first developed by Ryan and Gross in 1943, it is one of the oldest social science theories. It originated in communication to explain how over time an idea, or product gains momentum, and diffuses (spread) through a specific population or social system. Doing something differently than what they had previously. The key adoption is that the person must perceive the idea, behavior or product as new or innovative. It is through this that diffusion is possible.

Diffusion is the process of spreading a given idea or practice over time, via specifiable channels, through a social structure such as Neighborhoods. (Katz, et al. 1963). Their work on the diffusion of innovations records that for a new idea or innovation to diffuse, there must be;

- a. Awareness stage
- b. Interest stage
- c. Evaluation stage
- d. Trial and adoption stage.

Different types of innovations require different kinds of adoption units; Bittner (1984) recognizes that the media can lead someone into getting aware of the existence of an item. From there he gets interested in, makes attempt to evaluate it, and gives it a trial touch before making up his mind to acquire it.

The diffusion of innovation theory by Rogers (1983) was set to examine how new ideas are spread among people through media. It is a theory that seeks to explain how, why and at what rate new ideas and technology spread through cultures. Adoption of a new idea, behavior, or product does not

happen simultaneously in a social system; rather it is a process whereby some people are more apt to adopt the innovation than others. Everett Rogers, a professor of rural sociology popularized the theory in his 1962 book; *Diffusion of innovation*. The categories of adopters are; innovators, early adopters, early majority, late majority, and laggards (Rogers, 1962).

Uses and Gratification Theory

The focus of this theory is on media use. Okunna observes that the functional use of mass communication is what the Uses and Gratification Theory explains. The Uses and Gratification Theory is also called Functional Theory (Okunna, 1999). Katz, Blumler & Gurevitch, the main thrust of the theory as current perspectives on gratifications research (Blumler and Katz, 1974).

1. "The audience is conceived as active".
2. "In the mass communication process much initiative in linking gratification and media choice lies with the audience member".
3. "The media compete with other sources of satisfaction".
4. "Methodologically speaking, many of the goals of mass media use can be derived from data supplied by individual audience members themselves".
5. "Value judgments about the cultural significance of mass communication should be suspended while audience orientations are explored on their own terms".

Methodology

This study adopted Quantitative Survey Method and Simple Random Sampling Technique was used to select the sample. Questionnaire was used as instrument for data collection. The population of the study comprises all undergraduate students from the following purposively selected departments of the four Kaduna State owned Tertiary Institutions. Namely: Mass Communication from Nuhu Bamalli Polytechnic, Zaria, Computer Science from Kaduna State University, Kaduna, Dental Health from College of Health Sciences, Makarfi and Agric/Economics from College of Education,

Kafanchan.

The total number of the students of Mass Communication Department, Nuhu Bamalli Polytechnic, Zaria was estimated at 677 (Muhammad, 2025), the total number of the students of Computer Science Department, Kaduna State University was estimated at 1,100 (Alkasim, 2025) while the total number of the students of Dental Health Department, College of Health Sciences, Makarfi was estimated at 1,557 (Nasir, 2025) and finally the total number of the students of Agric/Economics Department, College of Education, Kafanchan was estimated at 1,800 (Jacob, 2025). These were summated to 5,134, which made the total population for this study. These were collated in 2025 i.e during the 2024/2025 academic session from the selected institutions. The sample size was 513.4, which was approximated at 514 using 10% from the entire population of the study. In line with this, Maikaba (2015) noted that using 10% from a population can serve as minimum sample size for a study. Gay (1987) also supported that a sample of 10% of the population is considered minimum. This study mostly focused on academic research especially on how the students of Kaduna State owned tertiary institutions adopt and utilize online media technologies in their research.

DATA ANALYSIS AND INTERPRETATION

Table 1: Are you aware of online media technologies (e.g social media, online data bases, digital libraries) that can aid academic research?

Responses	Frequency	Percentage
Yes	437	93.0%
No	33	7.0%
Total	470	100%

Table 1 indicates that as many as 437 respondents (93.0%) were aware of online media technologies that can aid academic research, while 33 respondents (7.0%) were not aware. This shows that majority of the respondents (93.0%) were aware of online media technologies that can aid academic research.

Table 2: Do you have access to online media technologies for academic research?

Responses	Frequency	Percentage
Yes	411	87.4%
No	59	12.6%
Total	470	100%

Table 2 indicates that 411 respondents (87.4%) have access to online media technologies for academic research, while 59 respondents (12.6%) don't have access to them. This shows that majority of the respondents (87.4%) have access to online media technologies for academic research.

Table 3: How often do you use online media technologies for academic research?

Responses	Frequency	Percentage
Regularly	194	41.3%
Rarely	50	10.6%
Sometimes	190	40.4%
Not at all	36	7.7%
No Response	04	0.9%
Total	470	100%

Table 3 indicates that 194 respondents (41.3%) use online media technologies for academic research regularly, 50 respondents (10.6%) rarely use them, 190 respondents (40.4%) use them sometimes, while 36 respondents (7.7%) never use them at all. This signifies that majority of the respondents (41.3%) use online media technologies for academic research regularly, followed by 190 respondents (40.4%) who use them sometimes.

Table 4: Which online media technologies do you use most frequently for academic research?

Responses	Frequency	Percentage
Google Scholar	211	44.9%
Research Gate	58	12.3%
Social Media	122	26%
Digital Libraries	39	8.3%
Others	40	8.5%
Total	470	100%

Table 4 indicates that 211 respondents (44.9%) use Google Scholar most frequently for academic research, 58 respondents (12.3%) use Research Gate most frequently, 122 respondents (26%) use Social Media most frequently, 39 respondents (8.3%) use Digital Libraries most frequently,

while 40 respondents (8.5%) use other online media technologies for academic research. This reveals that majority of the respondents (44.9%) use Google Scholar most frequently for academic research.

Table 5: What do you primarily use online media technologies for in your academic research?

Responses	Frequency	Percentage
Literature Review	139	29.6%
Data Collection	175	37.2%
Collaboration	62	13.2%
Data Analysis	64	13.6%
Others	30	6.4%
Total	470	100%

Table 5 shows that 139 respondents (29.6%) primarily use online media technologies for literature review, 175 respondents (37.2%) use them for data collection, 62 respondents (13.2%) use them for collaboration, 64 respondents (13.6%) use them for data analysis, while 30 respondents (6.4%) use them for other purposes. This clearly signifies that majority of the respondents (37.2%) use online media technologies for data collection.

Table 6: What benefit have you experienced from using online media technologies in your academic research?

Responses	Frequency	Percentage
Improved Access to Information	290	61.7%
Increase Productivity	70	14.9%
Information Sharing	100	21.3%
Others	10	2.1%
Total	470	100%

Table 6 indicates that 290 respondents (61.7%) said the benefit they experience from using online media technologies in their academic research is improved access to information, 70 respondents (14.9%) said increase productivity, 100 respondents (21.3%) said information sharing, while 10 respondents (2.1%) indicated other benefits. This indicates that majority of the respondents (61.7%) said the most important benefit gain from using online media technologies in their academic research is improved access to information.

Table 12: What online media technologies would you recommend for academic research?

Responses	Frequency	Percentage
Google Scholar/Research Gate	211	44.9%
Chat GPT/ Gemini/ Meta AI/ Deep Seek/ Chrome/ Claude etc.	153	32.6%
Social Media/ Digital Libraries	46	9.7%
Others	60	12.8%
Total	470	100%

Table 12 indicates that 211 respondents (44.9%) have recommended Google Scholar/Research Gate for academic research, 153 respondents (32.6%) recommended Chat GPT/ Gemini/ Meta AI/ Deep Seek/ Chrome/ Claude etc, 46 respondents (9.7%) recommended Social Media/Digital Libraries, while 60 respondents (12.8%) recommended other online media technologies. This reveals that majority of the respondents (44.9%) have recommended Google Scholar/Research Gate for academic research.

Table 13: Suggest the best way online media technologies can be improved to better support academic research?

Responses	Frequency	Percentage
Adequate Orientation/Awareness/Training	210	44.7%
Provision of Facilities	140	29.8%
Provision of Stable Network/Power Supply	79	16.8%
Policy/Ethical Guidelines from the institutions guiding students on the responsible way of using online media technologies	07	1.5%
Free Data/Wireless Network	34	7.2%
Total	470	100%

Table 13 shows that 210 respondents (44.7%) have suggested that the best way online media technologies can be improved to better support academic research is by providing adequate orientation, awareness and training to students, 140 respondents (29.8%) suggested provision of facilities, 79 respondents (16.8%) suggested provision of stable network/power supply, 7 respondents (1.5%) suggested the need for

Policy/Ethical Guidelines from the institutions guiding students on the responsible way of using online media technologies, while 34 respondents (7.2%) suggested that the institutions should provide wireless network/free data to students. This clearly reveals that majority of the respondents (44.7%) have suggested that the best way online media technologies can be improved for academic research is by providing adequate orientation, awareness and training to students.

Discussion of Findings

Objective One: To determine the Level of Awareness of the Online Media Technologies among the Students of Kaduna State owned Tertiary Institutions in conducting Academic Research.

To answer this question, the data on table 1, 2 and 3 were analyzed, table 1 indicates that as many as 437 respondents (93.0%) were aware of online media technologies that can aid academic research, while only 33 respondents (7.0%) were not aware. This shows that majority of the respondents (93.0%) were aware of online media technologies that can aid academic research like Google Scholar, Research Gate, Digital Libraries etc. This happens as a result of the fact that the target respondents were students and most of them are in their youthful age, which makes them familiar with online media technologies. And the level of awareness is very high which is up to 93.0%. Table 2 further indicates that as many as 411 respondents (87.4%) have access to online media technologies for academic research, while 59 respondents (12.6%) don't have access to them. This shows that majority of the respondents (87.4%) have access to online media technologies for academic research.

This also confirms that most of these young people are not only aware of online media technologies for academic research, but the highest number of them (87.4%) have access to them. And majority of them use online media technologies regularly as depicted on table 3, which shows that 194 respondents (41.3%) use them for academic research regularly. The findings

of this study support the findings of a study conducted by Wilson and Lawan (2015) who conclude that internet in spite of the issue of finance posing a major challenge to Internet access and use, female undergraduates still spend time using the Internet, mostly for research purposes.

Objective Two: To find-out if the Students of Kaduna State owned Tertiary Institutions use Online Media Technologies in conducting Academic Research.

To answer this question, the data on table 3, 4, 5 and 10 were analyzed, table 3 shows that 194 respondents (41.3%) use online media technologies for academic research regularly, 50 respondents (10.6%) rarely use them, 190 respondents (40.4%) use them sometimes, while 36 respondents (7.7%) never use them at all. This signifies that majority of the respondents (41.3%) use online media technologies for academic research regularly, followed by 190 respondents (40.4%) who use them sometimes. This is a clear indication that the highest number of the students of tertiary institutions (81.7%) in Kaduna State harness the potential of online media technologies in their academic researches.

The findings of this study also corroborate the findings of a study conducted by Wilson and Lawan (2015) who examine Internet Access and Use among female undergraduates at the University of Maiduguri, Nigeria. The study finally concludes that internet in spite of the issue of finance posing a major challenge to Internet access and use, female undergraduates still spend time using the Internet, mostly for research purposes. Furthermore, table 4 indicates that 211 respondents (44.9%) use Google Scholar most frequently for academic research, 58 respondents (12.3%) use Research Gate most frequently, 122 respondents (26%) use Social Media most frequently, 39 respondents (8.3%) use Digital Libraries most frequently, while 40 respondents (8.5%) use other online media technologies for academic research. This reveals that majority of the respondents (44.9%) use Google Scholar most frequently for academic research than other online media

technologies. On this note, Adeyi, Annie and Tsegba (2024) conclude that postgraduate students in universities have access to a range of social media platforms, with Google+ being the most utilized to enhance their research productivity. The findings of this study contradicts the findings of a study conducted by Buhari and Yahaya (2020) in which their study reveals that new media has contributed positively in improving journalism education and the new media platform patronized most by the respondents was social media.

Table 5 also shows that 139 respondents (29.6%) primarily use online media technologies for literature review, 175 respondents (37.2%) use them for data collection, 62 respondents (13.2%) use them for collaboration, 64 respondents (13.6%) use them for data analysis, while 30 respondents (6.4%) use them for other purposes. This clearly signifies that majority of the respondents (37.2%) use online media technologies for data collection. This happens because online media technologies now make data collection easier, faster and cost effective among students of tertiary institutions particularly in the aspect of their academic research. Contrary to the findings of this study, Buhari and Yahaya (2020) in a study reveal that New media was mostly used for general information, research and assignment.

Further explanation on table 10 reveals that as many as 426 respondents (90.6%) said they will continue using online media technologies in their academic research, while 44 respondents (9.4%) said no. This is a clear indication that majority of the respondents (90.6%) said they will continue using online media technologies in their future academic researches. This is a very good assurance that these new technologies have come to stay and they have been embraced by many students, which will definitely continue to improve students' academic researches. Oluwaferanmi (2017) argues that today's students are the luckiest because they have easy access to modern technology. In the past, students relied mainly on their books and what they could find in libraries. Scholars believe that the internet can boost students' academic work by improving its quality.

Objective Three: To know the Contribution of Online Media Technologies in conducting Academic Research among the Students of Kaduna State owned Tertiary Institutions.

To answer this question, the data on table 6 and 9 were analyzed, table 6 reveals that as many as 290 respondents (61.7%) said the benefit they experienced from using online media technologies in their academic research was improved access to information, 70 respondents (14.9%) said increase productivity, 100 respondents (21.3%) said information sharing, while 10 respondents (2.1%) indicated other benefits. This clearly indicates that majority of the respondents (61.7%) said the most important benefit they gain from using online media technologies in their academic research was improved access to information. This also implies that online media technologies have made access to information easier and faster among students' researchers than what was obtainable in the past. Oluwaferanmi (2017) also argues that today's students are the luckiest because they have easy access to modern technology. In the past, students relied mainly on their books and what they could find in libraries.

Further explanation on table 9 indicates that 262 respondents (55.8%) strongly agreed that online media technologies have improved the quality of their academic research, 168 respondents (35.7%) agreed with the above opinion, 20 respondents (4.3%) disagreed, 10 respondents (2.1%) strongly disagreed, while 10 respondents (2.1%) were undecided. This signifies that majority of the respondents (55.8%) have strongly agreed that online media technologies have improved the quality of their academic research. This also confirms that these new technologies have not only improved access to information among the students of Kaduna State tertiary institutions, but they have also improved the quality of their academic researches. Oluwaferanmi (2017) still support that today's students are the luckiest because they have easy access to modern technology. In the past, students relied mainly on their books and what they could find in libraries. Scholars believe that the internet

can boost students' academic work by improving its quality.

Objective Four: To examine the Challenges faced by the Students of Kaduna State owned Tertiary Institutions in using Online Media Technologies for conducting Academic Research.

To answer this question, the data on table 7, 8 and 11 were analyzed, table 7 shows that 171 respondents (36.4%) said the major challenge they experienced when using online media technologies for academic research is information overload, 124 respondents (26.3%) said technical issues, 62 respondents (13.2%) said inappropriate content, 100 respondents (21.3%) said lack of facilities, while 13 respondents (2.8%) indicated other challenges. This reveals that majority of the respondents (36.4%) said the major challenge they experienced when using online media technologies for academic research was information overload. This has to do with too much information given by these new technologies, which sometimes are irrelevant. This also reveals another major challenge from the part of the students, which the target institutions need to provide proper orientation/guidance, adequate support and good training to the students in their various categories.

In line with this, Adeyi, Annie and Tsesgba (2024) in a study note that undermined privacy of research, security issues, copyright and intellectual property issues and lack of institutional support were the challenges faced by postgraduate students in utilizing social media for research productivity. Adeyi, Annie and Tsegba (2024) further recommend that universities should organise workshops and training sessions for postgraduate students in order to familiarize them with social media platforms features, benefits and best practices for enhancing research productivity and universities should invest more in upgrading Internet facilities and infrastructures on campus to ensure seamless and affordable access to the Internet for all postgraduate students.

Table 8 also highlights another major obstacle in which 195 respondents (41.5%) said they have received training or support on how to use online

media technologies for academic research, at the same time as many as 275 respondents (58.5%) said no. This is a clear indication that majority of the respondents (58.5%) have never received any training or support on how to use online media technologies for academic research. This reveals a very critical challenge among the students of Kaduna State tertiary institutions because the students need proper orientation/guidance, adequate awareness, good training and support to succeed in their academic researches.

In line with this, Adeyi, Annie and Tsegba (2024) in a study noted that undermined privacy of research, security issues, copyright and intellectual property issues and lack of institutional support were the challenges faced by postgraduate students in utilizing social media for research productivity. Adeyi, Annie and Tsegba (2024) further recommend that universities should organise workshops and training sessions for postgraduate students in order to familiarize them with social media platforms features, benefits and best practices for enhancing research productivity and universities should invest more in upgrading Internet facilities and infrastructures on campus to ensure seamless and affordable access to the Internet for all postgraduate students.

Table 11 further reveals another serious challenge in which 191 respondents (40.6%) said their institutions have provided them with adequate support for the use of online media technologies in their academic research, while as many as 279 respondents (59.4%) said no. This clearly shows that majority of the respondents (59.4%) said their institutions haven't provided them with adequate support for the use of online media technologies in their academic research. This support could be in terms of provision of facilities like ICT/computer centers, laptops and smartphones, free data/wireless networks to students, which the findings of this study reveals was inadequate. In line with this, Ruzgar (2005) notes that it was interesting to discover that the school-sponsored e-mail played a small role with only 7.5 percent of the respondents using it. This finding perhaps suggests that the universities in Turkey should invest more in Internet infrastructure. Udoudo and Ojo (2016)

in a study further identify the extent of use of new media and the challenges experienced while using new media for learning in schools.

The findings of the study reveal that some of the schools were truly new media based but under-utilized by the students in learning. The challenges experienced by the students differed from one school to another. The study recommends that teachers should be retrained. Adequate new media facilities should be made available in school curriculum to include new media practice in all subjects.

Conclusion

This study concludes that majority of the students of Kaduna State owned tertiary institutions were aware of online media technologies that can aid academic research like Google Scholar, Research Gate, Digital Libraries etc, and the level of awareness was very high and most of them have access to online media technologies, with most of them using them for academic research regularly. The study also discovers that most of the students use Google Scholar most frequently for academic research and further reveals that majority of them use online media technologies for data collection and most of them promised to continue using online media technologies in their future academic researches. The study also discovers that the most important benefit the respondents gain from using online media technologies for academic research was improved access to information and most of them strongly agreed that online media technologies have improved the quality of academic research. However, the study also discovers that the major challenge experienced by most students when using online media technologies for academic research was information overload and most of them have never received any training or support on how to use online media technologies for academic research, with most of them indicating that their institutions haven't provided them with adequate support for the use of online media technologies for academic research.

Recommendations

The following recommendations were offered based on the findings of the study:

- i. There is the need for the tertiary institutions in Kaduna State to put more effort on providing adequate/proper orientation to the students on the benefit of using online media technologies in academic research as the findings of this study indicate was inadequate. In line with this, the institutions should come up with policies/ethical guidelines guiding how students use online media technologies in a responsible way.
- ii. There is the need for the various tertiary institutions in Kaduna State to embark on constant training and retraining for students particularly on how to use online media technologies in academic research as the results of this study indicate was also inadequate.
- iii. There is also the need for the institutions concerned to provide good and adequate support to students, which include provision of facilities like ICT/computer centers, free data/wireless network, smartphone, laptops etc.
- iv. There is also the need for the tertiary institutions concerned to provide stable network/power supply. Providing constant and stable network/power supply in the institutions will definitely help in improving the quality of academic research conducted by students.

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