CHALLENGES, SOLUTIONS, AND PROSPECTS OF COLLECTING DATA OFFLINE AND ONLINE IN SOCIAL SCIENCE RESEARCH IN NIGERIAN UNIVERSITIES

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ABSTRACT

This study examined literature related to the offline and online collection of data by scholars in Nigerian universities. Content analysis was used to identify and extract relevant literature that answers the research questions on offline and online data collection from 23 articles in the field of social sciences. Findings revealed that the scholars collected data offline in physical formats and through electronic databases. They also collected data through online databases, email, web resources, and internet services. The study concluded that scholars in Nigerian universities collected data offline and online. It recommends that university libraries should keep analytical accounts of the collection of data online and offline. It also recommends the use of electronic databases available offline in university libraries.

Keywords: Online data collection, Offline data collection, Social Science Research, University Libraries, Nigeria

INTRODUCTION

Academic communities across the World have become not only more interactive but collaborative since the emergence of the internet. With the use of the internet and other web-based technologies, the academic space has expanded and the impact has been great. Academic activities are now carried out online through the internet and other web-based technologies. Academic activities like lectures and tutorials that were previously carried out face to face have moved online with the aid of the internet in developed countries. Across various fields of studies such as the health sciences, arts, education, management, and social sciences, the use of the internet and web-based technologies have become commonplace in teaching and carrying out research. Social scientists now take advantage of the ability to collect data online to expand their

data-gathering approaches. In carrying out quantitative studies, social science scholars now collect data online through web surveys and emails while in carrying out qualitative studies, these scholars collect data online through content analysis, coding, and online interviews. With the rapid expansion of the internet, collecting data online during research or survey has become more popular (Griffiths et al 2014).

It appears that the collection of data offline is gradually being subsumed by the collection of data online in developing countries like Nigeria. This is because a growing number of scholars are embracing the collection of data online in their research due to the widespread of the internet. Studies have shown that a good number of scholars in the field of education expressed a positive perception of the value associated with the use of online (Nwokike & Ihekereonye, 2011). Although the collection of data online is known to come with the advantages of simplifying the work for the researchers, fast data processing, lower costs, and many others (Onwubiko, 2012), collecting data online within the Nigerian academic community has been hindered by a number of challenges such as lack of knowledge of information technology [IT] to effectively utilize the available resources (Egberongbe, 2016), epileptic power supply and inadequate institutional internet facilities (Bankole, 2013; Ogunbodede et al 2020).

A preliminary review of the literature revealed that a good number of scholars especially the social scientists within the Nigerian academic community still collect data offline from electronic databases (Onwubuiko, 2012; Bankole, 2013; Popoola, 2009; Okpokwasili et al, 2016; Ani et al, 2015; Egberongbe, 2016). Social science scholars carry out ethnographic studies. Many still use conventional methods like paper-based questionnaires, face-to-face in-depth interviews, and focus group discussions, among others. Could this be because these scholars are yet to develop a clear understanding of how to collect data online and are unable to proffer strategies to overcome the challenges collecting data online present in research? This leaves a potential gap in knowledge since literature documenting how Nigerian social science scholars collect data offline and online is scarce. This is surprising given the extent to which social science scholars contribute to the global academic community. Findings from this novel study will contribute to the practice of social scientists by improving data collection techniques that may be applied in every social science research context.

Aim and objectives of the study

The aim of this study is to explore how social science scholars collect data offline and online during research within the Nigerian academic community. The specific objectives include to:

- Describe how Nigerian scholars in social science collect data offline
- Describe how Nigerian scholars in social science collect data online
- Identify some challenges faced by Nigerian social science scholars in collecting data offline and online
- Proffer some solutions to the identified challenges.
- Identify some prospects in collecting data offline and online

Research questions

In this study, the following research questions would be answered:

- How do Nigerian scholars in social science collect data offline?
- How do Nigerian scholars in social science collect data online?
- What are the challenges faced by Nigerian social science scholars in collecting data offline and online?
- What are the solutions to the identified challenges?
- What are the prospects of collecting data offline and online?

LITERATURE REVIEW

Across the world, important academic activities like teaching and research that were previously carried out offline are now carried out online with the aid of the internet and other web-based technologies. The use of the internet and web-based technologies have become commonplace in teaching and carrying out research across various fields of studies like the health sciences, arts, education, management, and social sciences. Social science scholars now have and opt to access multiple entry points when collecting research data (Bolander & Locher, 2020; Tagg, 2016; Wargo, 2015). Working online with the aid of the internet, social science scholars now collect quantitative data through web surveys and emails and qualitative data through online content analysis, coding, and online interviews. These scholars appear to have taken advantage of the internet to expand their data collection beyond their immediate territorial boundaries and globally. Moreover, conceptual and theoretical explanations for the acceptance and use of online and offline data collection amongst scholars exist in the literature.

Offline data collection involves the collection of data or information without an internet connection from a mobile phone, computer compact disk and flash as well as locally through a library database. It involves the use of both electronic information resources and print-based resources such as books, articles, e-books, e-journals, tutorials in form of video/audio formats, and reference sources. The offline information content is prominent within several electronic databases that are used in many academic

institutions (Egberongbe, 2016). Online data collection is a contemporary research approach that seeks to convert the manual collection of data to electronic using the internet in delivering this function. It is a process of identifying and retrieving the information necessary for research from the internet. The internet is seen as a space in its own right (Orgad, 2009). Collection of data online can be done through email and the internet or the web. The web presents a rich source of data (Bolander & Locher 2020).

It appears that conceptualizing the internet as a space, in its own right may have led to the distinction between online and offline data (Orgad, 2009). However, this distinction between collecting research data online and offline seem blurred (Lee, 2011: Spilion, 2011). The distinction must have prompted social science scholars like Spilion (2011) and Lee (2011) to examine the collection of online and offline data in order to explain the blurred lines between them. Spilion (2011) examined both online and offline data collection methodically to explain the blurred lines between collecting research data online and offline by using direct contact with participants typically in the form of an online or face-to-face view. Lee (2011) adopted a virtual ethnographic approach that combined qualitative content analysis, observation, and online interviews in studying communicative function and language use. In their findings, both scholars indicated that the collection of data online was an extension of offline. Although there is a growing notion that the tendency to collect research data offline is rapidly being subsumed by the tendency to collect research data online, it is apparent that the collection of both offline and online data in research has increased tremendously (Bolander & Locher, 2020).

Theoretical explanations for the acceptance and usage or use behavior of social science scholars regarding the collection of data both offline and online also exist in the literature review Several theories and models have been developed and applied in studying technology acceptance and usage behaviors. But amongst these theories and models, the technology acceptance model (TAM) developed by Fred Davis in 1986 has been considered to be an appropriate theoretical framework to describe the acceptance and usage of technologies for the collection of data. The technology acceptance model is an information system theory that models how the users accept and use the technology. According to Davis (1986), the potential user's overall attitude towards using a particular information system is accepted to be a major determinant of whether or not he/she actually uses it. The attitude towards using the information system is a function of two major beliefs: perceived usefulness and perceived ease of use.

Perceived usefulness is the degree to which an individual believes that using a particular system would enhance his or her job performance. Perceived ease of use is the degree

to which an individual believes that using a particular system would be free of physical and mental effort. The actual information system usage is the end-point where people use the technology. Behavioral intention is a factor that leads people to use technology (Davis, 1986). The technology acceptance model appears to be an appropriate model for understanding conceptual issues related to online and offline data collection in research. In this study, the technology acceptance model is adapted to qualitatively explain the intent to use and use behavior of online and offline data collection amongst social science scholars. It is believed that a theoretically driven analysis would help identify literature content and guide data collection.

METHODOLOGY

This qualitative study involved reading through a large database of journals for similarities or differences and subsequently developing themes. Based on the objectives of this study, searches were carried out using Boolean "and" and "or" keywords combinations on Google scholar and SCOPUS. Articles were identified and selected for review by the investigators based on the strict protocol for inclusion. The protocol for inclusion includes that none of the selected literature was older than 2009; outside the focus area of study and without peer review. The 18 articles selected through snowballing met the criteria. Although this sample size is small, it represents the universe of peer-reviewed articles returned from the search and yielded theoretical saturation of the topic (Bowen, 2008; Creswell & Poth, 2012; Strauss & Corbin, 1990). Combining the data from the investigators allowed their approaches, biases, and findings to be directly compared for reliability and contrasted as well as further improved. This was necessary to reduce bias in gathering, analyzing, and reporting study findings (Peersman, 2010). The results of the analysis were consistent among the investigators.

DISCUSSION OF FINDINGS

As a result of the review process, related literature from the 18 articles that answered research questions on how scholars in Nigerian universities collect data offline and online, as well as the challenges and prospects were captured and presented in the findings.

How do Nigerian university scholars in social science collect data offline?

Findings revealed that many Nigerian university scholars in social science collect data offline through information resources that come in physical format (Bankole, 2013; Popoola and Haliso, 2009; Okpokwasili et al, 2016). Bankole (2013) investigated the extent and level of internet access and use among scientists at Olabisi Onabanjo

University (OOU) Ago Iwoye, Nigeria. Results show that less than one-third of the scientists still prefer getting information from the traditional library (offline). In their study, Popoola and Haliso (2009) investigated the relationships between teaching effectiveness research and the use of library information resources and services among 650 social scientists in thirteen federal government-funded Nigerian universities. The results suggest that the social scientist do prefer the utilization of library information resources and services (offline) and this may have contributed to the research and teaching effectiveness. Also, Okpokwasili, et al, (2016) investigated the influence of physical format on users' satisfaction with information resources in university libraries in the South-South zone of Nigeria using a survey research method with a sample of 36 library staff and 4627 lecturers from 6 universities in the zone. The results suggest that these library users used offline data collection in physical formats since they were satisfied with these information resources acquired in the university libraries.

Several other studies revealed that Nigerian scholars in social science collect data offline through electronic information resources (Ani et al 2015; Farouk and Yusuf, 2017). Ani et al found that accessibility and use of electronic databases and resources had a significant positive effect on research productivity at the surveyed Nigerian universities. These scholars explored the effect of accessibility and utilization of electronic resources on research productivity at Nigerian universities, adopting a quantitative research approach with a self-reporting questionnaire. Their study results suggest the access and use of offline data collection. Also, Farouk and Yusuf explored the awareness, access, and use of academic databases by faculty members of Bayero University Kano, Nigeria. It was revealed that the majority of the academic staff were aware of the electronic databases available in the library and their level of awareness varies according to the databases available.

Egberongbe (2016) investigated the use of digital/electronic information sources and services by faculty members of social sciences at three Universities in Nigeria, adopting a quantitative research method, using a questionnaire survey to physically collect data from 50 social scientists in each of the universities. The study revealed the non-availability of major sources of electronic information in university libraries and faculties. Electronic information resources are valuable research tools that complement print-based resources in conventional or paper type of library (Hassan et al., 2018). Hassan et al discussed the concept and significance of offline information content as well as the need for their utilization by students and researchers. They identified the types and contents of some offline information databases as well as challenges in their use. The results of these studies showed electronic information was used as offline data

collected in these universities.

How do Nigerian scholars in social science collect data online?

Findings revealed that many Nigerian scholars in social sciences used the internet to collect data online for research and teaching. Ogunbodede et al., (2020) revealed that the majority of the staff had access to internet services within the campus for teaching and research. It also revealed that the use of the internet had a positive impact on lecturers' academic activities. These scholars investigated internet usage among academic staff at the University of Africa in Toru-Orua in Bayelsa State, Nigeria. The study employed a descriptive research method using a structured questionnaire to collect data from a randomly selected sample of 75 academic staff at the University of Africa. Scholars like Idris and Dauda (2019) revealed that respondents were aware of all the Internet resources, including e-books, e-journals, and online databases. Their study also revealed that online databases and e-mail were the most Internet resources and services utilized by respondents. Their study investigated the awareness and utilization of Internet resources and services for academic activities by the academic staff of tertiary institutions in Adamawa State. It adopted a quantitative research method using a cross-sectional survey design to collect data from 292 respondents using a questionnaire.

In their study, scholars like Okafor et al (2011) revealed that the utilization of Internet services aided the respondents to publish their works, attend conferences and teach. About two-thirds of the respondents reported that the utilization of internet services had also improved the quality of teaching and research outputs of the academic staff of the Universities and had the potential for enhancing the teaching and research outputs of respondents in the future. The study investigated the utilization of internet services and their impact on teaching and research output in two selected private universities in South-Western Nigeria. It adopted both quantitative and qualitative methods for data collection. Questionnaires were administered to 214 academic staff, selected through a simple random sampling technique and In-depth interviews complemented the quantitative data.

Scholars like Yusuf and Farouk (2017) revealed that lecturers used online databases sometimes in their studies that explored the awareness, access, and use of academic databases by faculty members of Bayero University Kano, Nigeria. Bankole (2013) revealed that the use of the internet was widespread and many researchers used it daily. Their study also revealed that the researchers used the internet mostly for communication, research, and updating knowledge. The email was the most popular

internet service, while Google, followed by Yahoo and Scholar Google was the most used search engine. Eze and Aja (2019) revealed that the internet had a positive impact on the lecturers' lecture notes and research activities. These scholars investigated the impact of the internet on carrying out academic activities in higher institutions of learning. They adopted a survey research design and data were collected with questionnaires and interviews with a population of 250 students and lecturers at Ebonyi State University. The results of these studies suggest that data was collected online and this had a teaching and research impact on these universities.

However, several other scholars reported that data was collected online and this had no teaching and research impact on the universities. Opesanwo and Mabawonku (2016) revealed that the use of a web-based technology like social media had no significant influence on the research productivity of the sampled 194 lecturers at the University of Ibadan and the Tai Solarin University of Education using a questionnaire for data collection. Similarly, Onwubiko (2012) reported that internet use had no impact on the research efforts of lecturers. The study investigated the impact of the internet on the research effort of academics at Abia State University, Uturu using descriptive surveys and questionnaires to collect data from 452 lecturers. Olasupo (2017) revealed that there was no significant relationship between internet facilities and lecturers' research output in a study that investigated the influence of infrastructural facilities on the research output of academic staff of the University of Ibadan, Nigeria. The research adopted a descriptive survey design using 302 lecturers from seven faculties sampled out of the thirteen faculties, five institutes, and three centers in the University. The results of these studies suggest that although data was collected online, these lecturers believe its use had no research impact on these universities.

What are the challenges faced by Nigerian social science scholars in collecting data offline and online?

Findings revealed that several challenges were been faced by Nigerian scholars in social science in collecting data offline and online. Scholars like Egberongbe (2016) revealed that these challenges included the non-availability of major sources of electronic information, the poor state of telecommunication facilities in social science libraries and faculties, and the lack of information technology knowledge to effectively utilize the available resources. Ogunbodede et al (2020) and Bankole (2013) revealed that challenges like epileptic power supply, inadequate computers, and, slow internet connection speed posed major hindrances to effective internet usage. Several other challenges like the shrinking nature of library budget allocations, high cost, and irregular subscription of information resources were revealed (Bankole, 2013). Scholars like Idris

and Dauda (2019) revealed the weak awareness and utilization of internet resources and services by the academic staff. In the study, the academic staff was mostly aware of only the e-mail and online databases.

Onwubuiko (2012) revealed that many Nigerian academics still depended on manual and printed sources for their research activities which he believed are often not current and sometimes misleading, instead of the internet that has effective information sourcing or location (data collection). Other scholars point to the high cost of licensing databases, system failure, cyber insecurity, low bandwidth, lack of technical staff, technophobia (Osisanwo et al 2020) and lack of information search and retrieval skills among others were some of the challenges encountered in offline and online data collection (Kothari, 2012; Kpolovie & Awusaku, 2016). Nwokike and Ihekereonye (2011) revealed that personal challenges like time constraints, perceived usefulness, perceived ease of use, and low enthusiasm were relatively common in the academic community. Their study revealed that challenges like insufficient computers, insufficient electronic information resources, and insufficient internet access for teaching and research hindered online education.

What are the solutions to the identified challenges?

Findings revealed that a number of solutions to the identified challenges had been discussed in the literature. Several scholars had suggested that libraries should be stocked with updated and relevant information resources (online and offline databases) both in print and e-resources (Onwubiko, 2012; Bankole, 2013; Hassan et al 2018; Eze and Aja, 2019). While Onwubiko (2012) suggested that lecturers should get internet literacy and use available internet facilities, Idris and Dauda (2019) recommended that the libraries should provide increased awareness and information literacy training on the use of internet resources such as e-books and e-journals and other internet services online and offline information content especially electronic databases. Egberongbe (2016) recommended the adequate acquisition of digital resources; improved provision of sources of digital information resources; training and information literacy instruction and provision of campus-wide online library services to the faculties. Bankole (2013), Eze, and Aja (2019) recommended that higher education institutions should ensure that adequate internet services were provided in their libraries to ensure the lecturers' effective use.

Other scholars like Ani et al (2015) indicated in their recommendations that the development of effective digital libraries in Nigerian universities would ameliorate the problems of accessibility and utilization of electronic resources by academic staff in

research. Also, they recommended that Nigerian university libraries should develop an electronic collection department to enhance equitable access and use of electronic resources in the universities. Okpokwasili et al (2016) recommended that librarians should continue to take cognizance of the variable, and physical format when acquiring information resources for the libraries. Other scholars like Opesanwo and Mabawonku (2016) recommended that conferences and workshops should be organized for university lecturers at all levels on how to integrate social media tools, platforms, and other internet tools into academic research work. Nwokike and Ihekereonye (2011) and Olasupo (2017) recommended that all stakeholders in research and education should create a conducive environment for researchers, through awareness, funding, capacity building, and providing the necessary facilities.

What are the prospects in offline and online data collection?

Findings revealed that in spite of several daunting challenges pointed out in the collection of data offline and online, some prospects were also pointed out in the literature. Scholars like Okafor et al (2011), and Ogunbodede et al (2020) believe that the internet services and facilities have contributed to the increase in teaching and research output and also have the potential for enhancing the research output of the students. Eze and Aja (2019) noted that the internet has a positive impact on the student's performance in assignments and research projects as well as lecturers, and lecture notes. In academic and research activities, Okafor, et al (2011) pointed out that the utilization of internet services had improved the quality of teaching and research output. Bankole (2013) believed that the internet has enhanced academic activities by generally holding very positive opinions on the contribution of the internet to their job performance.

CONCLUSION

With today's technological advancements, scholars now collect data from offline and online databases. This study examined the challenges, solutions, and prospects of collecting data offline and online in social science research within Nigerian universities. It found that these scholars have been collecting data offline from the libraries in physical format and through electronic databases. These scholars have also been collecting data online through online databases, email, web resources, and internet services. It was revealed that the collection of data online and offline has been faced with challenges. Some prospects were seen in how online data collection has enhanced academic activities, especially in research thereby improving the job performance and career prospects of scholars. The study recommends that university libraries need to

keep analytical accounts of the data collected online and offline. Also, scholars should make use of offline data especially the e-journals, e-books, e-dissertation/thesis, and other repositories in electronic databases available in the library rather than depending only on online data collection through the internet, email, etc.

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