CHALLENGES OF ONLINE DATA COLLECTION IN NIGERIA

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ABSTRACT

The advancement of technology, which gave birth to online data collection, has created serious negative consequences in Nigeria's academia. This study examines the causal factors that hinder scholars from utilizing online data collection in their research in Nigeria. The study found that poor communication networks, high costs of GSM data, frequent power outages, a lack of reading culture and habits among Nigerians, insufficient digital knowledge, and poverty are the major factors discouraging researchers from using online data collection in Nigeria. The study recommends that research institutions should mobilize and create more awareness of usefulness of digital knowledge. Also, the government in collaboration with GSM companies, should provide and expand qualitative network infrastructure as well as to revisit economic policies to reduce inflation and poverty rates in the country.

Keywords: Digital, online, offline, network, technology

1. Introduction

Data collection is a pivotal step in any type of primary study, either qualitative or quantitative research. It is a method of gathering information aiming to employ them in the data analysis, and gain answer of research questions or hypothesis (Taherdoost, 2021). Data collection involves numerous choices depends on a type of research design, sampling procedures and control variables used in research and how to manage missing data (Aguinis, Hill, & Bailey, 2019). Data collection is an imperative step in conducting a study. Scholars wish to obtain valid and accurate data. Therefore, researchers must design a well-structured plan to anticipate every challenge faced in the field where researchers take place to produce valid and accurate data (Aiyub, Sri Novitayani, 2020). Data collection can be offline or online. 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. While, 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 (Eunice, Obinna, & Nnamdi, 2023).

The advancement of technology has broken old research ethics whereby people are excluded because of their technological or material situations. This technology provides a new form in online research by widening access to data through elating geo graphic boundaries, and reduce the burdens of time and cost of participating in research, increasing methodological consistency, control, increasing accuracy and efficiency of data entry and analysis, and stimulate the ability to follow-up with participants among others (Carter, Shih, Williams, Degeling, & Mooney, 2021). Also, online samples has advantage of the availability and relatively low cost of data collection (Zickar & Keith, 2023). Though, technology has eased the collection of large quantities of data through online platforms, it has also emphasized potential data quality issues for many of samples (Zickar & Keith, 2023). However, many authors have cautioned researchers on having serious negative consequences due to reliance on the web data collection, this may affect the validity of study findings (Cantrell & Lupinacci, 2007). Initially, online studies were once peripheral in qualitative research, and restricted often to those researchers who were interested in online worlds such as social media. The COVID-19 pandemic has driven much of everyday life into cybernetic worlds. Recently, online qualitative research has opened up a world of options for accessing participants and creating new types of data. Therefore, qualitative researchers need to respond to these new circumstances and opportunities in methodologically and ethically sound ways (Carter et al., 2021).

In Nigeria, studies have indicated an increase in online data collection among researchers because of the widespread of the internet. This leads growing number of scholars who have embraced the collection of data online in their research (Eunice et al., 2023). Nevertheless, many Nigeria academics are complaining about the online data collection due to a lack of knowledge of information technology [IT], epileptic power supply and inadequate institutional internet facilities (Bankole, 2013; Ogunbodede, Odewusi, & Oniovosa, 2020). This study attempts to explore the causal factors that are hindering scholars from utilizing online data collection in their research.

2. Literature Review

Although different studies were conducted to investigate the online data collection challenges. Similar studies were less in developing countries. Equally, there is disparity in findings between developed and developing countries. For instance, Aguinis et al., (2019) simplified authors, and reviewers' best practices in data collection. The study offered inflexible data on research methodological best practices, and a best way to enhance transparency in research. Taherdoost, (2021) examines different methods of data collection, the trials researchers can

face during conducting these processes, and the study reviews the ethical of data collection. Abubakar, Tafida, and Umar, (2024) examine the challenges in employing representative samples, the impact on generalizability, and practical strategies. Zickar and Keith, (2023) reviewed different sampling techniques, and discussed strengths and weaknesses of each approach as well as provides clear advantages of online samples. These include among others, ease the collection of large quantities of data, potential data quality issues. Also, the study identifies best practices that researchers can use to improve the quality of their samples. Novitayani, (2020) investigate the challenges of research data collection in Indonesia. The respondents were issued questionnaire and a total of nine (9) enumerators involved in a community-based survey about mental disorders and diabetes in the districts were involved. Also, a qualitative method with Focus Group Discussion (FGD) as data collection method was employed. Data were analyzed using the qualitative content analysis method to identify themes, categories, and sub-categories was employed. The study found that researchers in developing countries like Indonesia face both the internal challenges (questionnaire design, research status, sample selection, and enumerators) and external challenges (research permit, respondent, and research location).

Moreover, Efriana, (2021) analyzed online learning problems faced by EFL teachers and students, and students' parents during the Covid-19 pandemic. Data was collected from periodical journal websites, articles, textbooks or online form, law regulations, and other sources. The data was analyzed using qualitatively with an interactive model. The findings indicates that the implementation of the online learning during the Covid-19 pandemic, especially in EFL learning, caused several problems for teachers, students, and parents. Umoh et al., (2023) investigates the challenges of medical data collection during the COVID-19 pandemic in developing countries, a case study of Nigeria. Qualitative research utilizing purposive sampling was employed and questionnaires were administered to 73 samples. Results of the study shows that among 74 potential participants, only 23 valid responses were collected. Majority of the participants preferred paper questionnaires. This is associated with the connectivity issues stalled timely data uploading and interrupted virtual meetings. Thysen et al., (2021) describe the process of identifying, implementing a multi-site survey using electronic data collection in five INDEPTH health and demographic surveillance system sites. The study concludes that electronic data collection in multi-site household surveys stress advantages of cost minimization and technical support. However, using electronic data collection in multi-site surveys, there is a need to ensure adaptations to the local context, piloting the questionnaire in one site first, buying power banks to avoid power interruption and to give special attention to technical issues as GPS tracking and synchronization, particularly in settings with poor internet. Eunice et al., (2023) examined literature related to the offline and online collection of data by scholars in Nigerian universities. 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. Carter et al., (2021) discussed process of conducting qualitative research online: challenges and solutions. Their assertions emphasized the consideration of both ethical and technological challenges in conduction online research. To adapt ethical challenges, researchers should especially consider participant privacy, and ways to build relationship and supporting consent. To adapt to technological challenges, research plans should choose between online modalities and platforms based on a clear understanding of their particular affordances and the implications of these. Finally, successful research in virtual social environments requires new protocols for engagement before data collection.

3. Methodology

This study administered questionnaire to academic staff of six (6) universities and research institutions, and employed interview and a Focus Group Discussion (FGD) approach in collecting data. Samples size of the study comprises a total of sixty (60) participants. This comprises thirty (30) participants categories of those who are in used of online data, and thirty (30) participants of those who are in used of off- line data collection. Also, the study employed purposive sampling technique where only participants who are only engaged in researches at various disciplines were involved. A probit

4. Results and Discussions

Out of thirty (30) paper questionnaires administered to participants, only 24 (80%) were returned. While from the other thirty (30) online questionnaire administered to the other category, only 16 (53%) were completely responded and returned. The study found that 84% responses even though, they acknowledged the merits of online over offline data collection, yet, they believed limited internet access, high cost of GSM data, incessant epileptic power supply and poor network problems are the major constraints of online data collection. Likewise, 62% participants believed that lack of reading culture and habits as well as daily commitments of many households in Nigeria and poverty are other factors responsible of online data collection. While 47% participants believed that insufficient of digital knowledge is associated to the failure of many people to respond online questions. 52% participants preferred offline data collection due to presence or face of interviewer or questionnaire administer may likely influence participants to respond easily on timely unlike online, people use to neglect and forget easily. In fact, offline data collection is useful for long questionnaire with complex questions.

5. Conclusion and Recommendation

5.1 Conclusion

The advancement of technology provides a new form in online research by spreading access to data and addressing challenges of time burdens and cost of participating in research. Nevertheless, this advancement has created serious negative consequences due to reliance on the web and online data collection. In Nigeria, even though there is an increase in online data collection among researchers as many are complaining on the online data collection due to epileptic power supply and possibilities of breaking the research ethics and standard, and poor results in the study. This study explores the causal factors that are hindering scholars from utilizing online data collection in their research in Nigeria. The study found that incessant epileptic power supply, poor communication networks in companies, high cost of GSM data, lack of reading culture and habits among the Nigerians, insufficient of digital knowledge as well as poverty are the major factors that discourage researchers from using online data collection in Nigeria.

5.2 Recommendations

The study recommends that the government and research institutions should mobilize and create more awareness of digital knowledge, as well as to provide and expand qualitative network infrastructure as well as to revisit economic policies in the country to reduce the inflation rate and poverty rate in the country.

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