

Instant Messaging and Social Networks — The Advantages in Online Research Methodology

Kazeem Oluwakemi Oseni, Kate Dingley, and Penny Hart

Abstract—The use of instant messaging and social networks in the world today is a concept with high esteem. The efforts of many researchers to merge it with various research methods is still a new trend of strong debate. This study will examine the advantages of instant messaging and social networks in online research methodology scenario. With the advent of web-based messaging applications, one now wonder the difficulties researchers face on a daily basis to schedule a one-on-one interview with the potential participants. Instant message apps are surging in popularity across the world as these apps encourage peer-to-peer communications and allow users to exchange instant messages online and through their mobile devices. This study is done using online focus group discussion consisting of five members expressing their views on this novel domain, the important of instant messaging and social networks on research methods as against the traditional one-on-one interview approach for data collection. The results obtained from the focus group discussions highlight the important of the instant messaging and social networks in research methodology as this indicate a new shift and direction in research advancement.

Keywords—Instant messaging, social networks, online research methodology, data collection.

I. INTRODUCTION

There is an increase in the use of social networking sites and instant messaging in the world today [1], [2]. From most of the recently published research studies, the trend have moved beyond the overall usage of the internet and now focusing more on the use of social media and its impact on our society. It is very imperative to note that the most important social platform for computer and mobile communication in the world today that promotes a quick exchange of messages are instant messaging and social networks [3]. They have been very useful networking resources since their conception and have attracted millions of users.

The instant messaging and social network platforms allow users to register and connect to one another for easy communication and continued attention are on them not only from the industry but also, the academia [3]. The use of social networks and the internet messaging within the community and by the young people has the potential to promote resilience as admitted by [4]. However, the good use of the

internet and the high level of literary complement in full benefits of what instant messaging and social networks contributes to the community. In the light of the above, section one of this paper focuses on the introduction while section two will provide some background and related works relevant to this work. Section three will focus on the research methodology and approach followed by section four analysing the result of the findings based on the online focus group session conducted for the purpose of this work. Section five will highlight briefly the future direction of instant messaging and social networks in online research methodology and section six of this study is the conclusion.

II. BACKGROUND

There is little existing research on the use of social networking sites and instant messaging as a research methodology [5]. However, this study has a background which is borne out of the personal experience faced by one of the researchers during a previous research study where he had scheduled a face-to-face interview with participants on the use of electronic services as a new shift in the local government administration in the developing countries.

Despite the fact that the research went through ethical review and consent form together with information sheet already signed, getting needed responses from the government officials on issues relating to electronic services is very difficult during face-to-face interviews especially when they realized that embracing electronic services platform in the government administration might reduce corruption in government. Part of the ethical review then was that researcher will protect the identity of the participants and despite this, the fear of unknown according to the researcher prevented most of the participants from giving honest answers especially with eyes contact involved and the fear of prosecution from their superior officers. The researcher felt there was a need to further collect data through another research methodology. The online research method was suggested and the participants were asked if they would like to participate further in an online research method for this study through the use of instant messaging and social networks, 29 participants out of the 30 participants interviewed agreed to participate, see the results above in **Table 1** using IBM SPSS statistics software. The message from the above is that the participants would be free to express themselves without favor or fear and with no eyes contact during the online interview session with the researcher. The advantage here is that using the instant messaging and social networks is more convenient for them either on websites or through having access via their mobile

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devices. They could respond to the questions posted by the researcher anytime they log on into their devices.

TABLE I: PARTICIPANTS FOR THE ONLINE INTERVIEW

Valid	Frequency		Percent		Valid Percent		Cumulative Percent	
	Yes	No	Frequency	Percent	Valid Percent	Cumulative Percent	Valid Percent	Cumulative Percent
	Yes		29	96.7	96.7	96.7	96.7	96.7
	No		1	3.3	3.3	3.3	100.0	100.0
	Total		30	100.0	100.0	100.0	100.0	100.0

Above all, the participant’s attitudes during the face-to-face interviews as described above by the researcher informed the need for online research methodology and to date, little research has been found relating to the use of instant messaging and social networks in online research methodology.

A. Related Work

There are related research papers on instant messaging and social networks [6]-[10]. However, most of the research papers are silent on the use of instant messaging and social networks in online research methodology. To this end, this study will examine the advantages of instant messaging and social networks in online research methodology scenario. The researchers will conduct online focus group discussion consisting of five members expressing their views on this novel domain, the important of instant messaging and social networks on research methods as against the traditional one-on-one interview approach for data collection.

B. Overview on Instant Messaging and Social Networks

Instant messaging enables users to communicate effectively and efficiently with one another. Despite the widespread, the potential of these platforms in collecting information is becoming extraordinary due to latest awareness especially from the academia [11]. Furthermore, [11] described instant messaging as “near-synchronous” one-on-one computer-based interaction.

Social network sites are defined according to [11] as web-based services that connect individuals on a public profile within a bounded system with a list of other users to share a connection. In a related development, [11] added that social network sites are a web-based service that enables individuals to construct a profile which could either be a public or semi-public where they share a connection. There is a medium through which the users can communicate, they can communicate through blogs, messages, video chatting and exchanging music files.

C. Online Research Method

There is no doubt that the arrival of digital technology has opened the opportunity for humanity in many ways. However, it has also created many challenges [11]. The benefit of this novel on education is enormous and in the wake of more digital revolutions, the researchers are still working round the clock to fully maximize more benefits for the educational sector.

Online research method could be explained as the medium by which researchers can collect data using the internet or web-based devices [12]. The numbers of internet users in the world today as shown in Fig. 1 is over 3 billion according to the International Telecommunication Union (ITU) source which is the United Nations specialized agency for

information and communication technologies (ICTs). However, the research studies carried out online till date are relatively very low compared to the figures emanated from the internet users in the world. The online research method is still new and progressing, the growth of social media in the world today will definitely help to encourage researchers to be more involved in collecting research data via online [12].

In the light of the above, the use of online research method especially with the online focus group adopted by this study will make an improvement to the research practice as well contributing to knowledge [13]. Online research methodology will also contribute to the study in the following ways:

- It will assist in exploring some of the key topics in greater depth than emerges from the surveys.
- It will assist the researchers understanding of the fear that “whistle-blowers” have in a climate of corruption, even when the government headlines is to reduce or eliminate corruption.
- It will contribute to advances in theory and practice; it will develop cognitive skills.

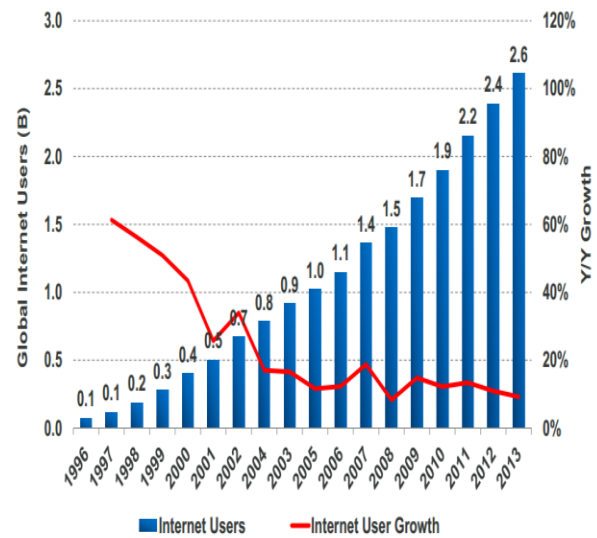


Fig. 1. Global internet users (1996 – 2013) Source: United Nations/ITU.

D. The Advantages and Disadvantages of Instant Messaging and Social Networks in an Online Research Method

This study finds that there are a number of substantial benefits related to the use of instant messaging and social networks in an online research method. Moreover, the use of instant messaging and social networks in educational sectors will facilitate the delivering educational outcomes, enabling supportive relationships, promoting a sense of belonging, identity formation and, self-esteem. The following are the **advantages** of using instant messaging and social networks in an online research method, they are:

- 1) It supports learning beyond the classroom based teachings or face-to-face interviews.
- 2) It contributes to advances in theory and practice; it will develop cognitive skills.
- 3) It supports the sharing of information, creating and maintaining relationships.
- 4) It facilitates peer-based and self-directed learning.
- 5) It is convenient and could be accessed from any location in the world. This saves the time involved in scheduling a face-to-face interview.
- 6) It helps to promote social inclusion.

As earlier discussed, despite the fact that the advent of digital technology which has opened many opportunities in all areas of human endeavors, it has also created many challenges [13]. The use of instant messaging and social networks in an online research method also has many **disadvantages**, they are:

- 1) There are problems associated with using instant messaging and social networks in developing countries where the access to the software or internet is limited.
- 2) Lack of communication etiquette and understanding of research ethical details will hinder data collecting through instant messaging and social networks.
- 3) There have been identified risks of bullying, harassment in the use of instant messaging and social networks [13].

E. Various Instant Messaging and Social Networks Apps

To make the study more interesting, the researchers are of the opinion that the study should examine a few and randomly selected instant messaging and social networks mobile or web-based apps that could be used as tools for online research methodology, they are:

- 1) **Facebook Messenger:** This is regarded as the most popular messaging app in the United States of America. The Facebook messenger app users currently estimated to be between 300 and 550 million by the KRDS, a Paris-based social media, and mobile agency. The features include text/video chat, group chat, video and voice call, photo sharing. These features could be used by the researchers during the online data collection.
- 2) **WhatsApp:** The app originates from the United States of America and has a registered users of 590 million but with active monthly users around 350 million according to KRDS. WhatsApp is the largest messaging App in Brazil, South Africa, and Indonesia (Source: KRDS). The features include text/voice chat, photo sharing and video sharing which are useful in an online data collection.
- 3) **Viber:** The app has around 200 million registered users in the world and it originates from Israel. The features include photo sharing, text/voice chat, video and voice calling, sketch and location sending.
- 4) **Skype:** This app and web-based technology is part of Microsoft. It has brought innovative technology to users around the world and enables connection among different people in order to transform their lives. It was founded in 2003 with the headquarters in Luxembourg.

It has roughly 299 million users based on the monthly active and connected users. The features include a phone call, text/video chat, group chat/call, video/voice call and, photo sharing.

- 5) **Snapchat:** The app originates from the United States of America and has around 100 million registered users. The features include a photo and video sharing among friends and has 25% of the smartphone users in the United Kingdom making use of the app.

III. RESEARCH METHOD

As there is little existing research on the use of internet messaging and social networking in online research methodology [14], the researchers decided to carry out an online focus group discussion consisting of five members expressing their views on this novel domain, the important of instant messaging and social networks on research methods as against the traditional one-on-one interview approach for data collection.

Although, the technological implementation aspect and ethical issues differentiate research methods and designs for most online/web-based data collection from the traditional and conventional qualitative method such as face-to-face interview [14]. As a result of this, the study went through ethical review from the faculty ethical committee at the University where the researchers are based specifically because of the sensitive nature of the topic.

A. Approach

The approach here for this study is to provide anonymity by allowing the five focus group participants to use a pseudonym of their own choosing. They will use typed text in the session so that the participants can see other's responses but will not be able to identify whose responses. They could be sitting in the same room as others in the focus group and not actually know they were participating in the same focus group. The researcher will know the identities, and pseudonyms initially for contact purposes and to ensure that anyone that need the follow-up information can get it.

This approach is important as the researchers are dealing with 5 senior officers at the local government in a developing country to hear their views on the use of internet messaging and social networking in online research methodology. This will prevent conflict of interest and be able to obtain honest answers. The five focus group members as earlier mentioned in the background section of this study were chosen from 30 participants earlier interviewed during a previous research work and their consent was further sought in their participation in the online interview. The consent form, participants information sheet and invitation letter were given to the participant prior joining the focus group. The 5 participants using the pseudonym chosen as Participant 1, Participant 2, Participant 3, Participant 4 and, Participant 5 will be required to register to be a member of the focus group at: <http://www.focusgroupit.com/groups/fc236ae6>

The focus group has been created by the researchers which are also the moderators and once the participants register their interest to be a member of the focus group by creating a username and password, they will be able to participate in the

focus group discussions and respond to the questions post by the researchers on the use of internet messaging and social networking in online research methodology. 10 questions were asked which took less than 30 mins to answer by the participants and the online focus group discussion was done on the 29th July 2016.

B. Advantages of the Online Focus Group for the Research Methodology

There are many advantages involved in using focus group chatting for this study. The researchers agreed to use focusgroupit website because of the following reasons, they are:

- Getting feedback - Participants will join the group and respond to the researchers/moderators topics in the order of posting.
- The moderator can ask questions before the participants sign in to join the discussion and you can always ask more questions after the real-time group discussions start.
- Participant’s personal identity is only known to the

moderators/researchers and hidden from focus group members, only the pseudonym chosen (i.e) Participant 1, Participant 2, Participant 3, Participant 4 and, Participant 5 will only be visible to members.

- Moderations to the topic posted are allowed and this can only be done by the researchers/moderators.
- Moderators/researchers could make further comment on participant’s suggestions.

IV. RESULTS

This section highlights the main findings from the online focus group conducted for the purpose of this study. The results provide indications from the participant’s opinions on the use of instant messaging and social networks in online research methodology. The analysis for this study was done using IBM SPSS Statistics 22.

TABLE II: PARTICIPANTS AGE ANALYSIS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	26-35	1	20.0	20.0	20.0
	36-45	2	40.0	40.0	60.0
	46-55	1	20.0	20.0	80.0
	56 and above	1	20.0	20.0	100.0
	Total	5	100.0	100.0	100.0

TABLE III: EDUCATION BACKGROUND

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor Degree	1	20.0	20.0	20.0
	Postgraduate Degree	4	80.0	80.0	100.0
	Total	5	100.0	100.0	100.0

TABLE IV: INSTANT MESSAGING AND SOCIAL NETWORKS USAGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	4	80.0	80.0	80.0
	No	1	20.0	20.0	100.0
	Total	5	100.0	100.0	100.0

TABLE V: INSTANT MESSAGING AND SOCIAL NETWORKS TYPES

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Facebook Messenger	2	40.0	40.0	40.0
	Yahoo Messenger	1	20.0	20.0	60.0
	MSN Messenger	1	20.0	20.0	80.0
	None	1	20.0	20.0	100.0

The use of Statistical Package for the Social Sciences (SPSS) is due to many research features the software has. It could be used as descriptive statistics finding the frequencies from the results, researchers can as well exploit other features such as reliability test for the questionnaires, regression and ANOVA test among others.

As shown in Table II below, age range 26-35 has 1 participant representing 20%, age range 36-45 with 2 participants representing 40%, age range 46-55 with 1 participant representing 20%, age range 56 and above with 1 participant representing 20%.

TABLE VI: RESEARCH METHODOLOGY USED

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Interview (Face-to-face)	3	60.0	60.0	60.0
	Interview (Telephone)	2	40.0	40.0	100.0
	Total	5	100.0	100.0	

TABLE VII: RESEARCH STUDY INVOLVEMENT

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	5	100.0	100.0	100.0

TABLE VIII: RESEARCH METHOD PREFERENCE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Online (Instant Messaging and social networks)	4	80.0	80.0	80.0
	Traditional (face-to-face)	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

TABLE IX: REASON FOR ONLINE RESEARCH METHOD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Convenient	1	20.0	20.0	20.0
	Faster	1	20.0	20.0	40.0
	Interactive	1	20.0	20.0	60.0
	Can be achieve at any location	1	20.0	20.0	80.0
	None of the above	1	20.0	20.0	100.0
	Total	5	100.0	100.0	

TABLE X: CASE PROCESSING SUMMARY

		N	%
Cases	Valid	5	100.0
	Excluded ^a	0	.0
	Total	5	100.0

TABLE XI: RELIABILITY STATISTICS TEST

Cronbach's Alpha	N of Items
.727	10

As shown in Table III above, the educational background, the focus group participants show that 4 participants already acquired a postgraduate degree and this represent 80% against the last participant with bachelor degree which represents 20%.

The result available in Table IV above on the instant messaging and social networks usage shows that 4 out of the 5 participants have used instant messaging and social networks before and this represent 80% and 1 participant representing 20% have not used instant messaging and social networks until now when he joined the online focus group through the link the moderators sent to the participants to register.

From the analysis available in Table V above, the participants were asked the type of instant messaging and social networks they have used before, 2 participants have used facebook messenger representing 40%, 1 participant

had used yahoo messenger in the past, this represent 20%, another participant used MSN messenger before now and this represent 20%. The last participant has never used any instant messaging and social networks before being involved in this online focus group and this represents 20%.

Furthermore, the participants were also asked about the types of research method they have been involved in the past, 3 participants representing 60% as shown in Table VI below have done face-to-face interviews and the other 2 participants representing 40% have done telephone interviews before. Hence, the results from Table VI shows none of the participants have done an online interview before. For the researchers, this is a striking result as the use of online interview will not only reduce cost, it also will improve the flexibility into the research data collection techniques.

The participants involvement in previous research study was asked also by the researchers, the result as shown in

Table VII below indicates that the whole 5 participants involved in this online focus group for this study have been involved in research studies before now. This represents 100% and it will make the data collection easier for the researchers due to the participant's prior and basic knowledge about the research study.

As a follow up question to research study involvement, the participants were further asked the type of research method they prefer between the online or traditional (face-to-face) and the result is presented below.

Hence, the results as shown in Table VIII above about the research method the participants will prefer to use stated that 4 participants representing 80% agreed to use online research methodology for their future research study. This corroborates with what the intention of the researchers on the need for online research methodology. This novel is a new shift in the research advancement as it will contribute to advances in theory and practice; it will develop cognitive skills [14].

The results obtained also from Table IX indicated that 1 participant representing 20% preferred to use traditional (face-to-face) interview. The choice of face-to-face is borne out of the complicated nature of technology, the participant is in the age range of 56 and above, and he added that it is always difficult for him adjusting to the new technology.

In the light of the above, the four participants who preferred the online research method as indicated in Table VIII above were for asked their reasons for the preferred method, the results from Table IX below shows that the 4 participants representing 80% adopted the online research methodology due the technology involved as the technology is convenient, faster, interactive and can be accessed from any location once you are connected to the internet.

V. RELIABILITY

The reliability of the questionnaires used in this study is the degree to which an instrument is measured under the same condition in the same way with the same subjects [15]. Cronbach's Alpha was used to test for reliability of the questionnaire for measuring the constructs as summarized in Tables X and XI respectively.

Case processing in Table X above indicates the total numbers of the participants that took part in the online focus group which is 5.

From the reliability test in Table XI below, the instrument met the required level of **0.70 for Cronbach's Alpha**, representing a universally acceptable level of reliability for the research study as explained by [15].

VI. FUTURE WORK

The findings in this study is a generalized one based on the views of the 5 focus group participants, future work will include involving a broader population as a whole. Future work will also include finding out if the use of instant messaging and social networks in online research methodology could maintain the social relationship between the researchers, participants and the entire community be it

educational or social communities.

VII. CONCLUSION

The aim of this study is to examine the advantages of instant messaging and social networks in online research methodology and from the results obtained, it is clearly shown that the participants will prefer to use online research methodology over the traditional face-to-face interviews in the future study because of the convenience, interactive features, access from any location in the world, faster and many other reasons.

Despite the disadvantages and risks that might be associated with the use of technology, we have seen that instant messaging and social networks are quite fashionable tools in online research methodology and this is the future of research methodological approach.

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