Post Graduate Students' Technology Based Research Experiences, Challenges And Opportunities During Covid-19: A Case From Pakistan

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Abstract

The pandemic COVID- 19 mightily moved the mode of instructing and learning from traditional to online in all institutions including schools, colleges and universities. For research students, it was a challenge to conduct their research in Lock down but Online facilities provided them opportunity to continue their activities. The present research aims to investigate the post graduate research students' experiences, challenges and opportunities in Pakistani universities during Covid-19. Qualitative research design was selected to get in depth knowledge of phenomena. Purposively 12 post graduate students were selected who submitted their thesis in early 2022 from 4 universities of Lahore. Among them 3 were public and 1 was in private sector. 3 post graduate students from each university were accessed to conduct interview. Thematic analysis was carried out. It was found that first wave of Covid -19 badly affected their research activities, especially data collection and their mental health(stress, depression etc). Majority of students took it as challenge and found opportunities for themselves. They reported that Online mode like Monkey surveys, interviews on ZOOM/Whats app etc not only saved their time but equipped them with new technology skills too. Although Internet connectivity had been a big problem but personal hot spot resolved it.

Key Words: Covid-19, Post graduate students, Research, Challenges, Opportunities.

Introduction

The pandemic has shaken up the scene of higher education around the world, with reactions to the pandemic from higher education institutions by and large falling into three categories (Hodges, Moore, Lockee, Believe, & Bond, 2020; Smalley, 2020): keeping up in-class educating with social separating, making half breed models (mixed learning, restriction of students in campus) or moving to online instruction.Among victims of Covid -19 , Research Scholars /students faced challenges for Supervision and data collection phases of their research. Due to lock down and distancing it was hard to meet their supervisors, field work and data collection. But technology provided them opportunity to carry on their activities. More particularly, substance research frameworks, message sheets, email, pre-recorded recordings of supervisor for guidance– or synchronous e.g. chat, videoconferencing or real-time collaboration frameworks, moment messaging-apparatuses and may indeed include changes within the evaluation of data. On the

global scenario, Local governments strictly imposed social distancing and quarantine protocols during the COVID-19 pandemic. This act proved to be a big challenge for research students in the data collection phase of their researches through a traditional survey that requires individual interaction with a large number of respondents or participants. Individual interaction was strictly prohibited during the pandemic to prevent the possible spread of the coronavirus. As necessity is considered mother of invention, an online survey as a technique in data collection became inevitable within these restrictions. Online platforms were used for distribution of questionnaires to the participants of research studies. Sy and his co-researchers (2020) reported that online distribution was a very feasible adaptation in given current restrictions although for higher response rate , individual distribution of questionnaires is desirable. Various methods as adaptations in the conduct of online survey were used. Microsoft Office packages like access to Microsoft Forms and other tools that have been used by researchers such as Amazon Mechanical Turk and Survey Monkey for market surveys (Bentley et al, 2017), Survey Gizmo (Abd Halim et al., 2018), Research Now SSI, and Opinion Access (Kimball, 2019) among others. The dissemination of electronic research surveys can be done utilizing google shapes through the administrations of e-mail, courier, Facebook, WhatsApp, and other social media accounts. In this way, the respondents should get to a web overview through a connect included in posts from a Facebook page or an expecting message sent through mail, flag-bearer or WhatsApp particularly set up for the exploration (Barnes et al, 2020). As for qualitative data collection, traditional techniques like direct observation, individual interviews and Focus group interviews are considered as golden standards in qualitative research. Direct observation facilitates an ethnographic and case

study type of research wherein a qualitative researcher involves himself in the day-to-day activities of the participants. Face-to-face interview on the other hand enables the researcher to instantly acquire data from the participants in the exchange of conversation following the semi-structured questionnaire. Same case is with Focus group interviews. These methodologies were not feasible during the COVID-19 pandemic, instead of it adaptive versions of collecting qualitative data were employed like diaries, reflections, journals, phone interviews, Zoom Focus groups etc. Diaries or reflections from participants in the field can provide a first-hand insight about the experiences of the participant (Lupton, 2020). Further, diary data can be free-flow writing or structured writing in response to specific questions or prompts. Diary data can be free flowing writing or structures. Morell-Scott (2018) elucidated that the utilization of journals for subjective investigate can permit for a concurrent comprehension into the lived involvement of the member completing the journal. Amid the COVID-19 pandemic, utilizing journals to supplant the coordinate perception may be the foremost suitable for phenomenological or ethnographic investigates.Concurring to Drabble (2015), methodologies for victory in phone interviews incorporate developing compatibility and keeping up association, illustrating responsiveness to interviewee substance, concerns, and communicating respect for the interviewee and her commitment. Lord (2016) nevertheless emphasized that within the conduct of telephone interviews, analysts have to be touchy to the statistic characteristics of phone interviewees and the secrecy of phone interviews may be more conducive for examining touchy issues. COVID-19 widespread, video-conferencing can suffice to gather information on real-time, live, and face-to-face however farther. Video conferencing computer program permits two or

more individuals in several areas to communicate utilizing sound and video imaging in real-time (Gough and Rosenfeld, 2006). Transition in Research paradigm during pandemic need to be evaluated for coping similar situation in future. In this context, the present study is about to examine the research experiences of post graduate students ,use of technology in research process and challenges they faced and opportunities they found.

Research Questions:

1. How Post doc students took guidance from their supervisor during lock down in Covid-19?
2. How they conduct their research during lock down in Covid -19?
3. How they collected their data during lock down in Covid -19?
4. How Covid-19 effect their research activities?
5. What were challenges they faced when they worked online?
6. How research activities could be better during Covid-19?
7. Do you think online research is better than traditional?

Methodology

The study employed a qualitative research method; by using purposive sampling which is form of non-probability sampling in which researcher relay on their own judgment when choosing members of the population to participate in their surveys. Semi-structured interview protocol was develop based on the information collected through discussion and review related literature in the area. It was also deriving from research questions of the study and was valid by taking expert opinion. All the students enrolled in MS program of public universities in Lahore were considered as the population. Purposively 12 post graduate students were selected who submitted their thesis in early 2022 from 4 universities of Lahore. Among them 3 were public and 1 was in private sector. 3 post graduate students from each university were accessed to conduct interview. Interviews were semi structured, so the duration range was between 45 min to 1 hour and 30 minutes. Participants were requested to give time when they felt comfortable. All interviews were conducted in places where participants were in university, in the Library, in Café, in the common room etc. Interviews were recorded through recorder. Then transcribed and send participants to cross check. Final version of transcriptions was used to analyze the information.

Data Analysis

Transcriptions were analyzed by thematic analysis. Themes were derived and addressed the research questions.

1. How you took guidance from your supervisor during lockdown in Covid-19?

Supervisor Guidance

Sr.#	Major Theme	Probing /Sub theme	No. of Responses
1.	Supervisor Guidance	Guidance	RM1,RM2,RM5,RM8 RF1,RF2,RF6
		Mode of guidance	RM3,RM4,RM6,RM7, RF3,RF4,RF5,RF7
		Time commitment	RM1- RM8

		Feedback	RF1- RF7 RM1,RM2,RM3,RM5,RM7 RF1,RF3,RF4,RF5.RF6,RF7

The researcher asked about Supervisor guidance. (7 out of 12) RM1, RM2, RM5, RM8, RF1, RF2, RF6 responded that "Yes, able to guide properly". (8 out of 12)

RM3, RM4, RM6, RM7, RF3, RF4, RF5, RF7 responded that, "Mode of guidance was online". All the entire participant's RM1- RM8 and RF1- RF7 responded that, "Typical time commitment was required". (11 out of 12) RM1, RM2, RM3,

RM5, RM7, RF1, RF3, RF4, RF5, RF6, RF7 responded that "Did get appropriate response regarding it". (4 out of 12) RM4, RM6, RM8, RF2 responded that "unsatisfactory sometimes". After concluded all these responses, it seems that the supervisor guided well their student during Covid-19.

2. How you did your research during lockdown in Covid-19?

Research experience during Covid-19

Sr.#	Major Theme	Probing /Sub theme	No. of Responses
2.	Research experience during Covid-19	Experience	RM1, RM2 , RM3, RM6, RM8 RF1- RF7
		Qualitative research	RM2, RM3, RM5, RM8 RF1, RF4, RF5
		Quantitative research	RM1, RM4, RM6, RM7 RF2, RF3, RF6, RF7,

The researcher asked about Research experience during Covid-19. (7 out of 12) RM1, RM2, RM3,RM6, RM8, RF1- RF7 responded that "Experience was great" (7 out of 12) RM2, RM3, RM5, RM8, RF1, RF4, RF5 responded that "Worked on qualitative research" (8 out of 12)

RM1, RM4,RM6,RM7,RF2, RF3,RF6,RF7 responded that "Worked on quantitative Research". After concluded all these responses, it seems that research experience during Covid-19 was satisfactory and gratified.

3. How you collected your data during lockdown in Covid-19?

Data collection during Covid-19

Sr.#	Major Theme	Probing /Sub theme	No. of Responses

3.	Data collection during Covid-19	Kind of source	RM1,RM2,RM5,RM8 RF1,RF2,RF6
		Difficulties during data collection	RM3,RM4,RM6,RM7, RF1,RF3,RF4,RF5,RF7
		Spending time on each participant	RM1- RM8 RF1- RF7

The researcher asked about Data collection during Covid-19. (9 out of 12) RM1, RM2, RM3, RM5, RM8, RF1, RF2, RF4, RF6 responded that, "They used internet as a source (Google forms zoom meeting, WhatsApp and other social media applications)". (6 out of 12) RM4, RM6, RM7, RF3, RF5, RF7 responded that, "They used books and journals articles". (9 out of 12) RM3, RM4, RM6, RM7, RF1, RF3, RF4, RF5, RF7 responded that "Sometimes they Face difficulties during data collection because of internet issues, time

management and bad cooperation of participant" entire participant RM1 – RM8 and RF1- RF7 responded that "Time spend on each participant according to the demand of question". After concluded all these responses, it seems that data collection during Covid-19 should be problematic and exhausting for researcher.

4. How Covid-19 effect your research activities?

Effect of Covid-19 on research activities

Sr.#	Major Theme	Probing /Sub theme	No. of Responses
4.	Effect of Covid-19 on research activities	Material to use	RM4, RM6, RM7 RF2, RF6
		Technology skills	RM2, RM3, RM5, RM8 RF1, RF4, RF5

The researcher asked about Effect of Covid-19 on research activities. (5 out of 12) RM4, RM6, RM7, RF2, RF6 responded that " It was hard to collect data , we used online mode and changed strategies accordingly". (8 out of 12) RM1, RM2, RM3, RM5, RM8, RF1, RF4, RF5 responded that "Phones, written interviews, open ended surveys, online questionnaires were used for data collection" Further they said they learnt new technology skills. . After concluded all these

responses, it seems that research activities were adversely affect due to Covid-19 and tools could not utilized properly to collect data but technology use skills were developed.

5. What were the challenges for you while was working online?

Challenges for online working

Sr.#	Major Theme	Probing /Sub theme	No. of Responses
5.	Challenges for online working	Perceives the potential role Challenges	RM1- RM8 RF1- RF7 RM1,RM3,RM4,RM6,RM7, RF1,RF3,RF4,RF5,RF7

The researcher asked about Challenges for online working. Entire participant (12 out of 12) RM1 – RM8 and RF1- RF7 responded that "It gave them confidence and overcome their fear's through appreciation and encouragement". (10 out of 12) RM1, RM3, RM4, RM6, RM7, RF1, RF3, RF4, RF5, RF7 responded that "To find alternative ways to tackle challenges faced by participants, Internet issues and less interaction with supervisor's". (5 out of 12) RM2, RM5, RM8, RF2, RF6 responded that, "Over time, they overcame these challenges". After concluded all these responses, it seems that they have learned a lot from working online and they solved different online research challenges in different ways.

6. **How research activities could be better during Covid-19?**

Loopholes

Sr.#	Major Theme	Probing /Sub theme	No. of Responses
6.	Loopholes	Capable of producing research Use of technologies	RM1, RM2 , RM3, RM5, RM6, RM8 RF1- RF7 RM1,RM2, RM3, RM5,RM8 RF1,RF2, RF4, RF6, RF7

The researcher asked about Loopholes. (8 out of12) RM1, RM2, RM3, RM5, RM6, RM8, RF1- RF7 responded that "Contributing to developing knowledge in the field of research". (10 out of 12) RM1, RM2, RM3, RM5, RM8, RF1, RF2, RF4, RF6, RF7 responded that, Rapid advancement in technology have proven extremely capable to embrace the basics and complexities". After concluded all these responses, it seems that research activities could be better by using technologies that reduce the potential for human error and increased the speed of research process although technology increase the quantity and quality of skills and literacies needed to complete research, it also increases the efficiency of each step and effectiveness of the finished product.

7. **Do you think online research is better than traditional research?**

Online vs Traditional Research

Sr.#	Major Theme	Probing /Sub theme	No. of Responses
7.	Online vs Traditional Research	Motivate / convince participants	RM1- RM8 RF1- RF7
		Traditional preference	RM1,RM2,RM3,RM5,RM7 RF1,RF3,RF4,RF5.RF6,RF7
		Online preference	RM4,RM6, RM8 RF2

The researcher asked about online vs traditional research. All the entire participants (12 out of 12) responded that, "responded that, "Offer incentives to participants and focus on intended outcomes". (11 out of 12) RM1, RM2, RM3, RM5, RM7, RF1, RF3, RF4, RF5, RF6, RF7 responded that, "Imposed pace".(4 out of 12) RM4, RM6, RM8, RF2 responded that, "Support an independent learning style". After concluded all these responses, it seems that online research is convenient and reduce researcher time and effort but traditional research is better and easier than online research as the researcher can directly communicate with their participants and supervisors.

Conclusions

Results showed that the supervisor guided well their student during Covid-19 and online guidance and supervision modalities empower student for their independent research activities and they were effortlessly manageable during lockdown circumstances. The research experience during Covid-19 was satisfactory and gratified. Data collection found to be problematic and exhausting for researcher. Research activities were adversely affected due to Covid-19 and tools could not utilized properly to collect data. Students had learned a lot from working online and they solved different online research challenges in different ways. Research activities could be better by using technologies that reduce

the potential for human error and increased the speed of research process although technology increase the quantity and quality of skills and literacies needed to complete research, it also increases the efficiency of each step and effectiveness of the finished products. online research is reported as convenient and reduce researcher time and effort but they thought that traditional research is better and easier than online research as the researcher can directly communicate with their participants and supervisors.

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