

Research supervision in distance learning: issues and challenges

Challenges in
research
supervision

Muhammad Zaheer and Saba Munir

*Department of Management Sciences, Virtual University of Pakistan,
Lahore, Pakistan*

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Abstract

Purpose – The purpose of this study is to explore and highlight the issues and challenges teachers face while supervising thesis and projects in distance/online learning mode.

Design/methodology/approach – This is a cross-sectional qualitative study. Grounded theory approach using Gioia methodology has been applied. Semi-structured interviews of 16 research supervisors have been conducted to explore the issues and challenges faced by the supervisors in guiding research students. Purposive sampling is used to select the subjects for data collection.

Findings – Results of the study reveal that the time constraints, official restrictions, irregular contacts and technology are the main issues faced by supervisors. Whereas student-supervisor interaction, diversity, perceptions, virtual communities and academic collaboration are the biggest challenges for the supervisors in distance learning. Lastly, it is found that students' attitude and supervisors' mindset are the key success factors in distance research supervision.

Practical implications – Findings of this paper will help institutions particularly in Asia, to strategically review their research programs to make these programs more effective. Effectiveness will encompass two things, timely completion and novel research. If these two things are addressed efficiently, comparison of distance learning with conventional learning will be more favorable for distance learning.

Originality/value – This study will be helpful for the top management of distance/online learning institutes to better equip their teachers and students to complete their research endeavors accordingly. This is an empirical research based on primary data collected from the research supervisors currently supervising thesis/projects at Virtual University of Pakistan.

Keywords Distance learning, Higher education, Research supervision

Paper type Research paper

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1. Introduction

Pakistan is a big country in terms of population as it is world's sixth-most populous country, to this large population, provision of education is a daunting task. Large population with small number of qualified faculty members resulted in shortage of institutional capacity to cater the needs of education. One of the solutions to this problem was establishing distance learning (DL) institutions and Government of Pakistan took the initiative in this regard. Currently two distance/online universities are working in Pakistan, Allama Iqbal Open University, established in 1974 and Virtual University of Pakistan established in 2002. Moreover, many conventional universities have also started DL programs.

DL improves the access to education for all the aspiring students. DL overcomes the issues of capacity, infrastructure and faculty. It provides standardized quality content to all the students without any discrimination.

Like conventional system, DL is also not free from certain shortcomings, for example, burden of learning is shifted on the learner (though flexibility is there), there is too much



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diversity in the same course, more importantly student and teacher are separated by time and space leading to asynchronous mode. Though, by using modern information and communication technology (ICT), universities are trying hard to be synchronous whenever possible. These issues of learning are exacerbated when students enter their research phase like research thesis or research project. Research requires a closer contact and frequent interaction between supervisor and the student. And the flexibility of DL can become an obstacle to complete research with quality within specific time period.

In research, supervisors' responsibility increases exponentially as each student is working on a different topic and requires customized mentoring. This poses a bigger challenge to the supervisors to take a student along the bumpy road of research with ease by maintaining quality and following the timeline given by the university.

This research is focused on exploring the issues and challenges faced by the research supervisors in DL. Numerous studies have been conducted to explore the problems and issues faced by the students in DL, while issues of supervisors need more attention.

Primary data have been collected from the teachers who are supervising research theses or projects in DL. Semi-structured interviews have been used for data collection with informed consent. Grounded theory has been used as qualitative technique for exploring the issues and challenges in research supervision.

2. Literature review

Students in higher education generally struggle to complete their research endeavor in specified time (Costa, 2018). This problem exacerbates when it comes to students studying in DL. Irrespective of the mode of education (DL or conventional), supervisors play a vital role in research supervision. Supervisors' motivation to supervise the students is very important (Askew *et al.*, 2016). According to Askew *et al.* (2016), four factors that affect research supervisors are workload agreements, time pressures, quality of students and recognition of the supervisors' contribution.

Supervision is a social interaction between two people who might have diverging views but same objectives. Supervision is defined as "intensive, interpersonally focused one-to-one relationship between the supervisor and the student" (Wood and Louw, 2018). Supervision plays vital role during thesis or research work and the relationship between the supervisor and the student determines the successful completion of the research thesis (Da Costa, 2016). Increasing the throughput of thesis students is the main focus of the universities these days due to certain time restrictions imposed by the Higher Education Commissions. On the other hand, it enhances the reputation of the institutions as well as provides the economic benefits in terms of more admissions. The completion rate and the quality of thesis can be increased by improving the processes associated with thesis in organization and among those factors supervisor–student interaction is the most important one (Aghae, 2015). In online and distance learning (ODL), the role of supervisor becomes even critical where a supervisor is required to build a culture of productive interaction with his/her supervisee (Easton, 2003).

In DL mode where student–teacher interaction lacks face-to-face interaction and physical absence of the supervisors hinders the quick relationship building. ODL poses various threats to the students as they might feel alone and dejected and physical distance from the supervisor may make them skeptical about the quality of their work. In such virtual mode, the responsibility of the supervisors increases in building an interactive setup where the students should feel confident and supported by the supervisor during the whole time period of research work (Donnelly and Fitzmaurice, 2013). The successful completion of research work or a thesis depends on multiple factors pertaining to supervisor and supervisee. These factors can be experience, attitude toward the completion of the thesis and the ability of the student.

A study conducted by [Guin \(2019\)](#) on the social work programs offered in Indira Gandhi National Open University (IGNOU) where it is mandatory for supervisor and the supervisee to meet, it was found that student–teacher interaction was the biggest challenge due to distance between the study center and students’ residence and socioeconomic background of the students.

A graduate class usually is a mix of diverse students in terms of age, culture, experience, ability, etc. ([Abiddin et al., 2011](#)). This diversity is even more noticeable in DL where a class may consist of a student from a metropolitan city or a far flung area, a full-time student or a job holder, a student with clear idea of his research topic or a student having no idea of his topic or the methodology he/she is going to adopt. These variations in the ability and knowledge of students make supervision more challenging for the supervisors teaching in distance education. Many studies have been conducted on the issues and challenges faced by students but lesser studies are available on the difficulties of the supervisors who are the key player of research process.

According to [Lessing and Schulze \(2002\)](#), a supervisor has to establish a balance among multiple factors like supporting students, having expertise in research, providing positive criticism and bringing creativity. He needs to work on various fronts to bring quality research work by providing guidance to the students in a way that leads to innovative ideas while keeping in mind the timelines and rules established by the organization. These tasks become even more horrendous in DL mode. Student persistence is a key element in ODL, [Au et al. \(2018\)](#) recommend that to enhance student persistence advisors should be appointed for proper guidance of students and lesson videos should be kept short for better attention.

According to [MacKeogh \(2006\)](#), distance teaching mode poses many challenges for the instructors including student’s access to the resources and increased chances of deception by students in their work as being distant it sometimes become difficult for a teacher to analyze that whether the work submitted by student is really done by him, in other words authenticity of student’s work cannot be ensured easily as compared to conventional mode. Lack of research skills, as [Lindner et al. \(2001\)](#) conceptualized that lack of on-campus interpersonal dimension can be a disadvantage for research students as face-to-face interaction helps them in acquisition of research knowledge.

Social presence and interaction is enhanced by the nonverbal gestures and cues that help students understand the point of discussion more effectively. In the absence of nonverbal communication, distance supervision becomes more challenging for the supervisors and they need to exert extra efforts to compensate it ([Lindlof and Shatzer, 1998](#)). In the same way, teacher cannot guess when student is bored, confused or frustrated. This makes the participants less social and more task-oriented. Moreover it takes long for a supervisor and student in DL to develop social relation as compared to conventional, face-to-face supervision. According to [Stacey and Fountain \(2001\)](#), power and status differences cannot easily be perceived in DL. Although it is considered good in building trusting social interaction, but in some cases it may distort the respect element associated with a teacher. Another issue faced by off campus students is the difficulty in accessing the appropriate resources like software, research tools or articles for literature review, that ultimately affect the quality of research work; the main focus of the instructor.

[Butcher and Sieminski \(2006\)](#) stated that face-to-face interaction between student and teacher is vital for the motivation, confidence building and knowledge enhancement of supervisee and distance supervision sometimes becomes passive due to lack of face-to-face interaction, causing dissatisfaction among the students that becomes the biggest challenge for the supervisors ([MacKeogh, 2006](#)). But, the effective and appropriate use of ICT can help providing a supportive environment to the thesis students and supervisors. According to study conducted by [Iwasaki et al. \(2019\)](#) no significant difference was found between face-to-

face tutoring and online tutoring using ICT. ICT can be of great assistance in providing frequent feedbacks and high level of interaction between supervisor and supervisee (Hansen and Hansson, 2015). Virtual meetings with supervisee can save the traveling time of supervisors and allow them to arrange meetings in flexible timings that ultimately increases the student-teacher interaction (Aghae et al., 2013). This interaction only depends on the preference of the supervisor, for example when and how often he/she wants to meet his/her supervisee (Karunaratne, 2018). So it can be concluded that with or without technology, the supervisor is the key element in the research process and universities should focus on resolving the issue and challenges faced by the supervisor if they want to provide quality supervision to the students or want to attain maximum satisfaction and motivation for them. Unfortunately most of the studies have focused on the issues faced by the students of DL while ignoring the supervisor or teacher end. This study particularly has focused on the challenges faced by the supervisors.

3. Methodology

This is a qualitative study and inductive approach has been used. Philosophical assumption is interpretivism, and grounded theory approach is used to collect and analyze the data.

As argued by Glaser and Strauss (1967) grounded theory is a methodology that is used to develop theory grounded in data, that is, data are the primary basis for prescribing any findings. Though, seminal work on grounded theory has been done by Glaser and Strauss, 1967, but their successors have also contributed a lot, for example, (Corbin and Strauss, 1990), (Charmaz, 2006) and (Gioia et al., 2013). Gioia et al. (2013) have included something that has been labeled as data structure and this methodology is now famous as Gioia methodology. In this study Gioia et al. (2013) methodology has been used. This methodology has gained popularity and many studies have been conducted using this for example (Nag and Gioia, 2012). Purposive sampling has been used in this study to identify the informants. In purposive sampling only those are included in the study who best serve the purpose and have the requisite information (Sekaran and Bougie, 2003). There are only two universities in Pakistan which are purely based on DL, namely, Virtual University of Pakistan (VUP) and Allama Iqbal Open University (AIOU). Some conventional universities also started DL programs, but Higher Education Commission of Pakistan (HEC) banned DL programs of 13 universities (Dawn, 2018). AIOU invites all the graduate and postgraduate students enrolled in thesis at their main campus for a two week workshop on synopsis development, where the students develop and present their synopses for approval, this is a mandatory activity for students (Majeed, 2019). Whereas teachers at VUP use ICT to guide the students and prepare them to present their synopses for approval. Most important task in research is the development of synopsis, in AIOU students develop their synopses while they are physically present at the campus and interact with their supervisors. But at VUP, process is different; generally, right from the start of research journey they are virtual. Therefore, data are collected from the full-time faculty members of VUP who are supervising research theses or projects and some faculty members of conventional universities who are supervising thesis in VUP. Semi-structured interviews were conducted with informed consent of the subjects. An interview guide was prepared for the interviews. An interview guide is helpful in conducting semi-structured interviews; it provides main questions or ideas to be discussed with the informants. As semi-structured interviews are flexible in nature, further probing was done where it was required. Following were the main questions asked:

- (1) How long have you been supervising thesis/research projects?
- (2) Please explain your supervision experience in DL.

- (3) Have you also supervised students in conventional system? If yes how was the experience?
- (4) What issues have you faced while supervising students in VU (both thesis and projects)?
- (5) In your opinion what are the biggest challenges of research supervision in DL?
- (6) How things can be improved? Suggestions.

Demographic data of the informants were also collected, which have been shown in [Table 1](#).

All the interviews were audio recorded with the permission of informants. 16 interviews were conducted, according to [Steinar \(2007\)](#) in qualitative research sample size ranging from 5 to 25 is sufficient. However, in grounded theory we follow theoretical sampling, which means data are collected till data saturation is achieved ([Glaser and Strauss, 1967](#)). In this study, data saturation was there after 10 interviews, six more interviews were conducted to validate the findings of the previous interviews. After each interview, audio recording was transcribed and main themes were extracted. [Gioia et al.'s \(2013\)](#) methodology was applied, in this methodology main ideas (themes) are called first-order categories, from these categories, second-order themes are developed and at the end aggregate dimensions are extracted from second-order themes. For each question data were analyzed and compared with other responses to have constant comparison ([Glaser and Strauss, 1967](#)). This adds to the validity of the data.

First-order categories are the initial codes generated from the responses of informants, these codes or categories resemble to what [Corbin and Strauss \(1990\)](#) termed as open coding, a large number of codes generally emerge in the beginning. As the data collection and analysis continues, similarities and differences among these initially developed codes are visible, similar categories are merged and this reduces the number of initially generated categories, these categories are second-order themes, similar to axial coding ([Corbin and Strauss, 1990](#)). Second-order analysis is more abstract and theoretical in nature, it is analyzed if the emerging concepts explain the phenomena under observation ([Gioia et al., 2013](#)). After second-order analysis, second-order themes are further explored to merge into aggregate

Informant #	Gender	Age	Workplace	Experience	Position
1	Female	38	Conventional	16 yrs	*AP
2	Female	33	*DL	11 yrs	Lecturer
3	Female	32	DL	12 yrs	Lecturer
4	Female	32	DL	11 yrs	Lecturer
5	Female	34	DL	08 yrs	Instructor
6	Female	42	DL	17 yrs	AP
7	Female	35	DL	12 yrs	Lecturer
8	Female	34	DL	10 yrs	Lecturer
9	Male	46	DL	10 yrs	AP
10	Male	40	DL	14 yrs	Lecturer
11	Male	49	DL	07 yrs	AP
12	Female	33	DL	10 yrs	Lecturer
13	Male	31	Conventional	04 yrs	AP
14	Male	32	Conventional	05 yrs	AP
15	Male	38	DL	15 yrs	AP
16	Male	51	Conventional	23 yrs	Professor

Note(s): *AP: Assistant professor, *DL: Distance learning

Table 1.
Information of
supervisors

dimensions. The pictorial representation of this process is called data structure. Figures 1-3 represent the data structures of the responses of the informants.

4. Data analysis

Table 1 shows the information of informants. VUP is just 17 years old institution and it has relatively young faculty members as compared to other universities. Out of 16 informants, 12 belong to VUP and rest four belongs to conventional universities. It is noteworthy that authors of this study have 12 years of experience in DL.

VUP has a good number of females working in the faculty, which is quite representative of Pakistan's population mix. Average age of the VUP informants is 37 years approximately, which shows that VUP has quite young faculty members.

Figure 1, represents the data structure of issues faced by the supervisors in DL. Five second-order themes emerged which made up an aggregate dimension "communication barriers".

Time constraints are the most frequently cited problem of the students in DL by the research supervisors. DL is an opportunity for those students who cannot attend regular

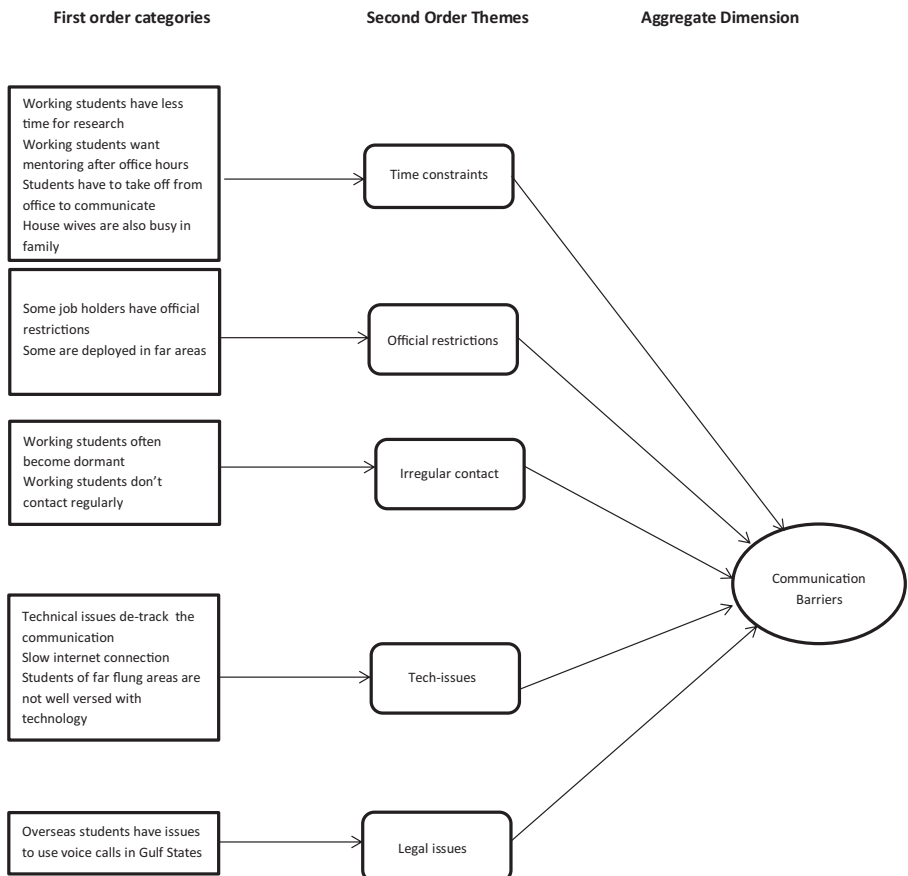


Figure 1.
Communication barriers

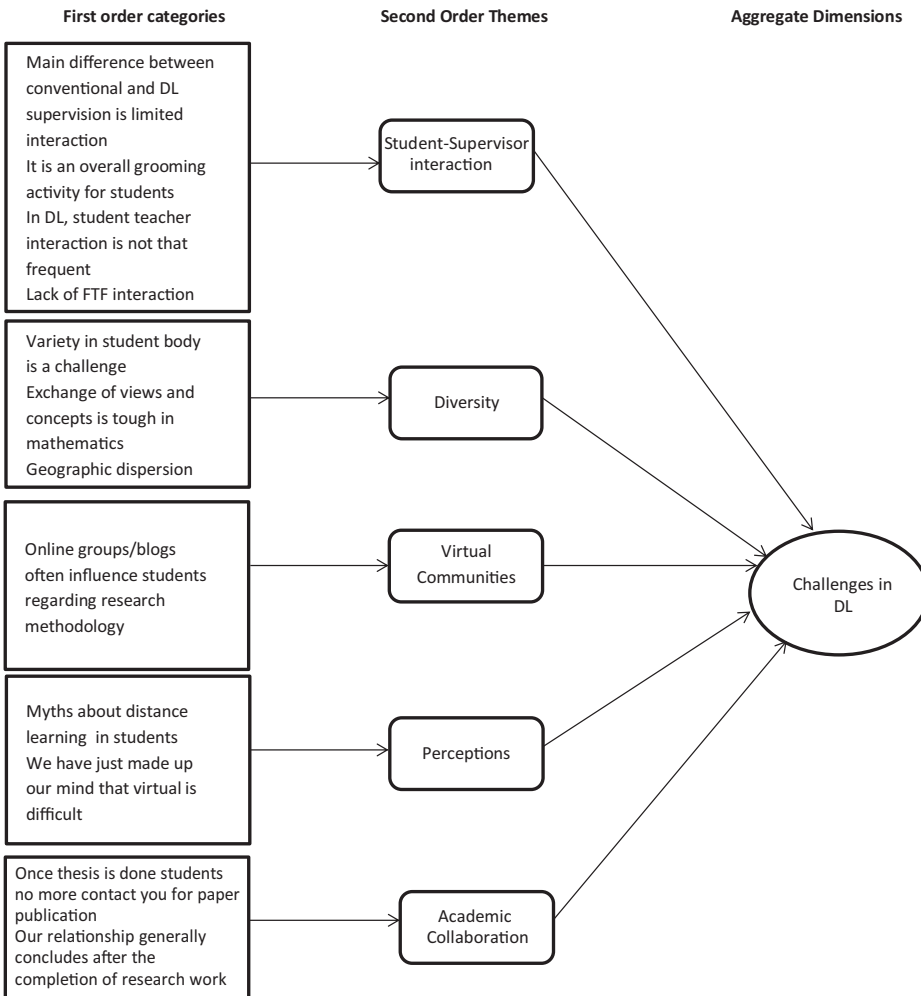


Figure 2. Challenges in distance learning

classes in conventional class room environment. So these students are either living in remote areas where they do not have the access to higher education institutions or they are working students. Working students have their own issues. Due to their time schedule in office they are unable to contact their supervisors as scheduled. This makes their research work a bumpy road to travel. As teachers/supervisors and students have the same working hours, so, there is a clash of time. As one of the supervisors reported “students have to take off from office to contact me for research discussion”. This is not always possible for the working students to take leave from the job, but some students do, according to one informant “my student always came for discussion on voice call whenever I had scheduled him”. These constraints prohibit students to contact their supervisors for mentoring; hence the result is delayed research.

Another factor is the official restrictions of the working students, some students are working in law enforcement agencies and have the official restriction on the use Internet and

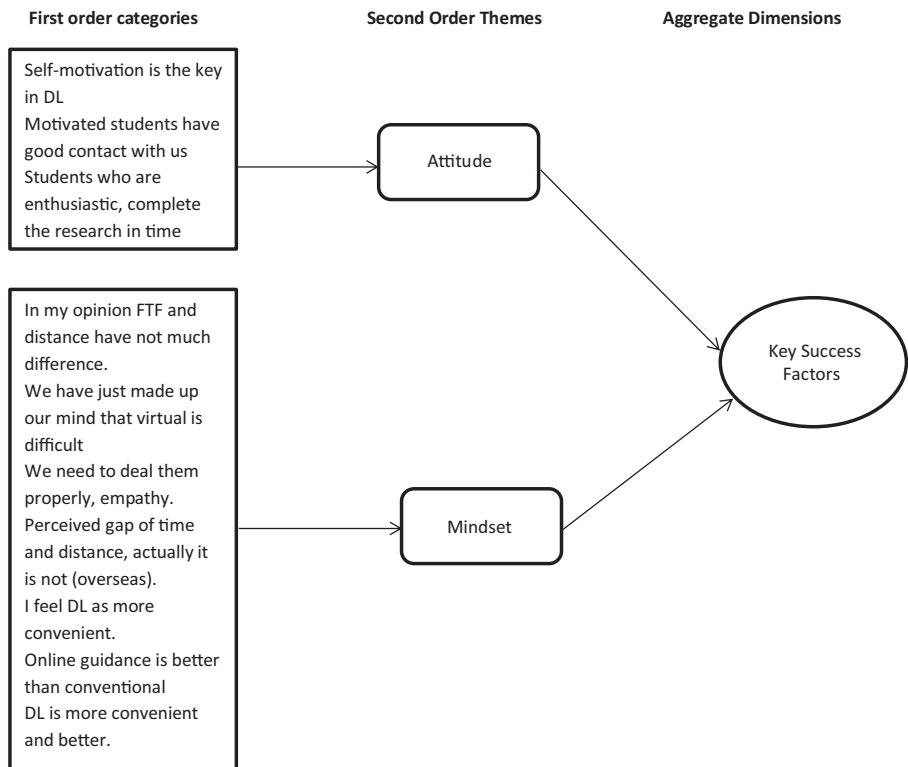


Figure 3.
Key success factors

even cell phones, this aggravates the communication gap. Sometimes they are deployed in far areas where they have no access to networks. So, this becomes a hurdle in the communication.

Irregular contact with the supervisor is yet another issue, students in DL are not bound to appear in class as they are in conventional mode, and attendance is not an issue (that's why they are in DL). This also becomes an unnecessary hurdle, students sometimes become complacent, they become dormant and lose contact with their superior as one professor told "one of my students did not appear for 2 yrs then came and asked for extension, in conventional system you find student who is slow you ask him/her what's going on so you may say something, in DL it is not possible" this professor is basically teaching in conventional system and also supervising thesis in DL. Remaining away for some time has some influence on the supervisors as well, irregular contact results in dissatisfaction of the supervisor, one supervisor explained "when any student remains away for quite some time, even I forget what I had suggested and what was in my mind, I have to start from scratch and this is really depressing". There are some genuine reasons for remaining dormant including marriage, pregnancy and official deployment in any mission.

Technological issues also restrict contact which has been termed here as tech-issues. These issues include non-availability of Internet, Internet speed, interrupted power supply and students' expertise to use IT devices and applications. Due to infrastructure issues, provision of Internet services is not up to the mark in certain areas which becomes a hurdle in contacting the supervisor. This leads to interrupted communication which damages the learning process. According to one supervisor "when they (students) come online there are issues of technology like Internet speed or students' understanding of technology".

Sometimes students are unable to use the application effectively which is being used for communication, as one supervisor complained “we are stuck in tech issues then on research, initial interactions are just focused on training the students on how to use this application for voice or video calls”. Sometimes there are issues of electricity supply, though university is well equipped to cater such issues but students in far areas face problems of irregular power supply.

Another aspect is the official restriction on the use of certain user applications by some countries especially in Gulf. This becomes a big barrier and restricts student–teacher interactions. Students use proxies to bypass these restrictions but these proxies sometimes work and sometimes not. Overall academic interaction is severely affected by these restrictions.

These second-order themes, time constraints, official restrictions, irregular contacts, tech and legal issues make up an aggregate dimension “Communication Barrier”. Communication barrier is a major issue in DL, though flexibility has its own benefits but in research endeavors distance can make a difference. If student–supervisor interactions are regular without any delays, this can foster this relationship and let students finish their research projects/theses well within time.

Figure 2 shows the data structure of challenges faced by the research supervisors during their supervision in DL mode. Five second-order themes have emerged from the data, which are discussed here.

Student–supervisor interaction is at the very heart of research endeavor in any mode. Higher the number of effective interactions, greater are the chances of good research output. Though, technology has overcome most of the issues and barriers of interactions, yet, according to some supervisors face-to-face interactions have to add value. According to one supervisor “thesis supervision is not just an academic activity it is more than that, it is an overall grooming activity for student in which student not only learns about research but other aspects of life as well.” This factor is quite peculiar and needs to be addressed for example according to another supervisor “lack of physical contact does not let student teacher relationship build, we cannot motivate them.”

Students in DL are quite diverse; Pakistan is a big country with cultural diversity and students from diverse background are present. Sometimes, this diversity is good and at times perplexing for the supervisor. Students from different regions require different levels of mentoring. Supervisors have to adjust accordingly. Moreover, this diversity is also found in the subjects, for example, Psychology, Management Sciences or Mathematics. One respondent explained “it is very difficult to explain the feedback on student’s work in my subject as it requires different software.”

This is quite common that students in distance/online learning join virtual communities and groups. Not everything found on the Internet is authentic; students discuss their research topics and methodologies there, and are influenced by the discussions on these forums and they then try to convince their supervisors. These suggestions unnecessarily affect the research process. Students unintentionally, sometimes, reveal their novel research ideas in blogs/groups which are then adapted by others. This is very serious matter. As reported by one supervisor “my student who was at data analysis stage of his thesis, innocently shared the data file on Internet, which was quickly used by someone else, and wrote a paper, moreover the paper was also uploaded, when we checked the plagiarism, my student’s original work was then plagiarized”. Such online communities pose an extra challenge to research supervision.

Students’ perceptions regarding DL and supervision also bring a hard challenge for the supervisors. There are certain myths among the students that research in DL is tough. As revealed by a respondent “negativity regarding DL is quite common that it is difficult to complete thesis in DL, students are influenced by such remarks so ultimately it takes more

time to complete.” Since there is lack of physical interaction, so supervisors feel they are not able to convince or motivate students at times. Students do spread positive and negative word of mouth about supervisors which also affects the minds of students and they request for supervisor change. Some students think that they cannot complete their research in DL, these are the students with low self-efficacy. Supervisors have to keep their students motivated that they can do it.

Research is a joint venture of student and supervisor, after successful completion of the project/thesis, next step should be the publication of the research paper. But this has been a rare phenomenon in DL as reported by the supervisors. There are some students who after the completion of their thesis got their papers published with their supervisors. But in general it does not happen. Generally, students do not remain in contact with the supervisor, according to one supervisor “once thesis is done students no more contact you, like I had a student whose work was good but he disappeared as soon as passed out, I urged him to present and publish his work, but he never did, which is really a drawback.” Student-supervisor academic collaboration is very important factor for research publications that needs to be addressed.

These five second-order themes, namely, student-supervisor interaction, diversity, perceptions, virtual communities and academic collaboration contribute to aggregate dimension challenges in DL.

These are not small challenges in a country like Pakistan where DL is still fighting for its recognition as the equally effective education mode like conventional mode.

Data structure shown in [Figure 3](#) depicts the key success factors in distance supervision. Two second-order themes attitude and mindset were discovered from the interviews.

According to supervisors, in DL students’ attitude is a critical factor. Students should be self-motivated and should have high self-efficacy. Students having internal locus of control are the best for DL as in DL burden of knowledge acquisition is borne by the learner in general, this mode requires a persistent motivational effort on the part of the students ([Zaheer, 2013](#)). Students who are ready to put more efforts finish their research work well within time, according to a senior research supervisor “some of my students who were motivated enough completed their research in one semester and they were position holders of their sessions”. This is important that whether a student is a full-time student or working student, enthusiasm and self-discipline are very important. As explained by another supervisor “my working students came on the scheduled time on voice call for guidance, I seldom had to wait”. It is clear that students’ own positive attitude is the key, when they follow the instructions and seek guidance they are able to complete their work accordingly.

Second important theme that emerged is the mindset of supervisors. If supervisors are of the view that supervising a research work from the distance is a difficult or uphill task they are less likely to motivate their students. As shared by one supervisor “in my opinion conventional and distance have not much difference, we have just made up our mind that virtual is difficult.” Positive mindset of the mentor is also critical; supervising from the distance may require different skills. Comments of another supervisor were “as instructors we should realize the limitations of students, our mindset needs to be changed.” And “if proper guideline is given to students they follow the supervisors”. It was also expressed “distance learning students are technically self-reliant on IT.” So it is very important to acknowledge that these students are self-confident and self-reliant. This quality of students is a quality that is hallmark of these students in general. According to another supervisor “online guidance is better than conventional face to face, you can give more time to students, they do not have to travel and bother too much, to meet the supervisor”.

Students’ attitude and supervisors’ mindset are the factors that are the key success factors in DL research. Positive student attitude and supervisor mindset are the factors that make DL a successful experience.

5. Conclusion and recommendations

The present study has focused on the issues and challenges of research supervision in DL. It was found that time constraints, irregular contact, technological issues, legal issues and official restrictions are the issues in DL that create communication barriers between students and supervisors. Whereas student-supervisor interaction, student diversity, virtual communities, students perceptions toward DL and academic collaboration are the main challenges in the DL supervision.

On the basis of supervisors' suggestions it is recommended that institutions should facilitate face-to-face interactions more frequently with the students who are involved in research. Though, technology has its advantages but it is not without issues. For example issues of bandwidth are always there in Asian countries, such distortions hinder communication. Institutions should adopt a two prong strategy to overcome these issues; they should increase the number of study centers where students can go and use technology to connect to their supervisors, since bandwidth of home users is not that good; and if possible, students who are geographically nearer to supervisors should be allocated to them so that more frequent face-to-face interaction may take place.

Institutions should invest more in gaining access to online research databases so that the access to online databases of students is also enhanced. Moreover, students should be facilitated to participate in research workshops, conferences and seminars to sharpen their research skills.

There is also a need of specific trainings for the teachers in DL, they are away from their students and at times they fail to exhibit empathy which may result in communication barriers. Special research initiatives are required to develop training modules for online/DL teachers and research supervisors. Similarly, at the start of study program, effective orientation sessions need to be arranged by the universities to acclimatize the students with DL environment and use of technology so that they learn how to work independently and effectively. Moreover, at the start of research projects/theses, students should be given effective orientations and refreshers regarding research, data analysis and related software.

Findings of this paper will help institutions particularly in Asia, to strategically review their research programs to make these programs more effective. Effectiveness will encompass two things, timely completion and novel research. If these two things are addressed efficiently, comparison of DL with conventional learning will be more favorable for DL.

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Corresponding author

Muhammad Zaheer can be contacted at: mzaheer@vu.edu.pk